EST · 1912
MORAINE PARK
TECHNICAL COLLEGE

morainepark.edu

2012~2013
CATALOG

MPTC Academic Calendar

2012 *Summer Semester (June 1 - August 11)	
June 4 - June 21	3-Week Session
June 18 - August 9	8-Week Session
June 4 - August 9	10-Week Session
June 13	*Open Registration for Fall Semester
July 4	Holiday - College Closed
July 20	Fall Tuition and Fees Due
August 1-2, 6-7	Book Buyback
June 8 - August 12	Fridays - College Closed

2012 Fall Semester (August 20 - December 14)	
August 20	Start of Fall Semester and Term 1
September 3	Holiday - College Closed
October 15	End of Term 1
October 16	Start of Term 2
November 6-8	Returning Student Registration for Spring Semester
November 13	New Student Registration for Spring Semester
November 21	No Classes - College Closes at 6:00 pm
November 22-23	Holiday - College Closed
November 27	Pre-Core and Certificate Student Registration for Spring Semester
November 29	*Open Registration for Spring Semester
December 14	End of Fall Semester and Term 2
December 17-20	Book Buyback
December 20	Spring Tuition and Fees Due
December 21	College Closes at 6:00 pm
December 24 - January 1	College Closed for Winter Break

2013 **Winterim (January 2 - January 11)	
January 2	Start of Winterim
January 11	End of Winterim

2013 Spring Semester (January 21 - May 17)	
January 21	Start of Spring Semester and Term 3
March 15	End of Term 3
March 18-22	Spring Break
March 25	Start of Term 4
March 29	Holiday - College Closed
April 9	Registration for Summer Semester
April 11	*Open Registration for Summer Semester
April 16-18	Returning Student Registration for Fall Semester
May 6	New Student Registration for Fall Semester
May 14	Pre-Core and Certificate Student Registration for Fall Semester
May 16-17, 20-21	Book Buyback
May 17	End of Spring Semester and Term 4
May 18	Graduation Ceremony - 10:00 am

*Students can continually register after scheduled time begins. Semester (16 weeks) and Term (8 weeks) dates referenced above reflect commonly scheduled courses. Other courses can be offered at various scheduled times during the year.

**For Financial Aid and Enrollment Verification purposes the Winterim Session is considered part of the Spring Semester. Please refer to the Registration section of the Student Information Handbook for detailed information regarding semester designations.

Mission Statement

Innovative education for an evolving workforce and community.

Vision Statement

Moraine Park Technical College will be a respected and preferred educational leader.

Value Statements

Collaboration: We value collaboration and communication among students, staff and community partners to strengthen our district and communities.

Lifelong Learning: We value learning as a lifelong journey in the pursuit of personal and professional growth.

Innovation: We value innovation and creativity to remain a leader in global technical education.

Integrity: We value fair, honest, respectful and ethical behaviors.

Inclusiveness: We value inclusiveness and respect for all, providing accessible education to diverse learners. We believe that team work is critical, that each member is important to accomplishing our mission.

Student-Centered: We value a responsive and supportive environment providing the rigor and relevance necessary to advance student learning, development and success.

Accountability: We value individual and shared responsibility for our actions and ensuring the future of Moraine Park, both academically and fiscally.

Continuous Improvement: We value informed decisions which promote sustainability, continuous improvement and effective and efficient use of resources.

2011 - 2016 Goals and Goal Statements

Enhance Student Success: Promote a learning environment dedicated to student achievement.

Strengthen Community Connections: Seek and develop opportunities that positively impact our communities.

Achieve Performance Excellence: Promote an environment of continuous improvement and sustainability.

Moraine Park Technical College Is Accredited By:

The Higher Learning Commission of the North Central Association of Colleges and Schools
30 N. LaSalle Street, Chicago, IL 60602, 1-800-621-7440

Moraine Park Technical College Is Approved By:

Wisconsin Technical College System, Wisconsin Educational Approval Board for Veteran's Training

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MORAINE PARK
TECHNICAL COLLEGE

Moraine Park Technical College does not discriminate on the basis of race, color, national origin, sex, disability or age in employment, admissions or its programs or activities. The following person has been designated to handle inquiries regarding the College's nondiscrimination policies: Equal Opportunity Officer, Moraine Park Technical College, 235 North National Avenue, PO Box 1940, Fond du Lac, WI 54936-1940, 920-924-6459 or 920-924-3232.

Welcome to Moraine Park Technical College

Greetings from the president

Dr. Sheila Ruhland
President

As president of Moraine Park Technical College, I want to thank you for selecting us to assist you in achieving your educational goals. Our mission is your future, and our vision is your success. We are determined to add value to your educational experience by providing you with quality instructional staff, innovative learning environments and extensive support systems.

The hands-on education you will receive at Moraine Park will prepare you for success in your chosen career and provide you with numerous opportunities to enhance your learning experience. We offer more than 100 associate of applied science degrees, technical diplomas, apprenticeships and certificates delivered in a variety of formats — classroom, online and blended (a combination of classroom and online).

Moraine Park is driven to give you the flexibility you need to achieve your educational goals by offering internal support services such as our career center, diversity resource center, academic advising, career placement assistance, disability services, counseling and more. We offer a learning environment designed for students to realize big dreams. We are proud of our three beautiful campuses, located in Fond du Lac, Beaver Dam and West Bend, and our two regional centers, conveniently situated in Ripon and Hartford.

We also understand that education isn't just about what happens in the classroom; it includes what takes place outside of the classroom. That's why Moraine Park provides a wide array of Student Life opportunities. Students can see national entertainers, including musicians and comedians; join friends for a Milwaukee Bucks, Brewers or Timber Rattlers game; or just kick back in the game room and relax with friends. Plus, our more than 30 student clubs and organizations give you what you need to get involved!

Interested in studying abroad? We offer that, too. Students travel annually with our faculty to Germany, England, Mexico and beyond. These international experiences enhance our students' learning by exposing them to business, industry and education outside of Wisconsin and the United States.

This year, Moraine Park celebrates 100 years of providing educational excellence. I am proud to be a part of the long-standing traditions of both Moraine Park and the Wisconsin Technical College System. We are futuremakers! I look forward to seeing you on one of our Moraine Park campuses!

Sincerely,

Sheila K. Ruhland, Ph.D.
President

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MORAINE PARK
TECHNICAL COLLEGE

Moraine Park District Board

Jodine Deppisch
Chairperson
Employer Member –
Ripon

Dr. Richard Zimman
Vice-Chairperson
School District
Administrator – Ripon

Lisa Mader
Treasurer
Additional Member –
Fond du Lac

Vernon Jung Jr.
Secretary
Additional Member –
Kewaskum

Mary Kerrigan
Employer Member –
Colgate

Shirley Kitchen
Employee Member –
Beaver Dam

Mike Miller
Elected Official –
West Bend

Lowell Prill
Additional Member –
Brandon

Donna Goetz
Employee Member –
West Bend

100 YEARS OF INNOVATION

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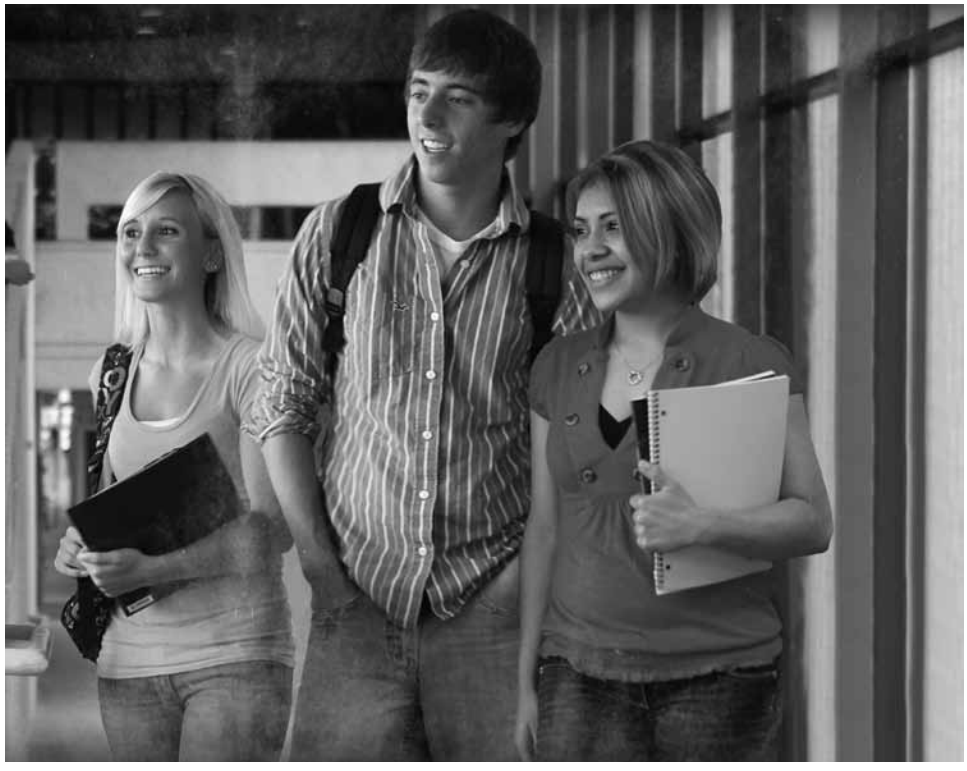

■ HINT
Some programs have limited space and great interest and only accept applications during specified fall and spring application windows. The fall application window is September 15 until October 15 and the spring application window is February 15 to March 15. Please check with the Admissions Office for program availability and application windows.

■ INDIVIDUAL CAMPUS TOURS
College representatives provide a personalized opportunity to see the campus and classrooms, to explore program offerings, and to learn about the admissions process. Call 1-800-472-4554 to set up your appointment with a Recruitment Specialist.

■ FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)
Educational records are protected under the provisions of the Family Educational Rights and Privacy Act of 1974. Students wishing to withhold public information under this law can obtain information from the Registrar's Office.

Admissions Policy

Moraine Park Technical College maintains an open course enrollment policy for all prospective students.

Admissions Procedure

Applications will be processed after the following steps are completed:

A. Associate of Applied Science Degree and Technical Diploma Programs
   1. Complete and forward an application to any Moraine Park campus.
   2. Include a one-time $30 nonrefundable application fee.
   3. Submit **official** high school transcript and if applicable, all **official** postsecondary transcript(s).
   4. Take the college placement test* or submit ACT scores. Allow three hours for testing time. There is a $15 nonrefundable fee for the test.
   5. Additional admission steps may be required for some programs. Students will be notified of any additional steps.

B. Certificate Admissions
   1. Complete and forward an application to any Moraine Park campus.
   2. Include a one-time $30 nonrefundable application fee.

*ACCUPLACER is a placement tool that assists in determining your skill level in reading, writing and mathematics. Your score on the ACCUPLACER does not affect acceptance to Moraine Park. It is a tool designed to assist us in determining the appropriate level of coursework for you.

High school students may apply for admission after July 1 following their junior year. (Certain programs have specific application windows.) Please contact admissions to verify if applications are being accepted. An acceptance letter is issued once all application requirements have been completed.

Applications for admission may be obtained online, in person or in writing at:

Moraine Park Technical College

Student Services Call Center
920-924-3207 or 1-800-472-4554

Beaver Dam Campus
700 Gould Street
Beaver Dam, WI 53916-1994

Fond du Lac Campus
235 North National Avenue
PO Box 1940
Fond du Lac, WI 54936-1940

West Bend Campus
2151 North Main Street
West Bend, WI 53090-1598

Moraine Park Web admission information is available at **morainepark.edu/admission-and-registration**.

Student ID and Password

A student must have a Network LoginID and password to use any Moraine Park Technical College computer.

*my*MPTC

Prior to the start of your first class, you need to open your *my*MPTC account. This is required to access any of your student information including grades, add/drop, registration, course information and more. This process also assigns you a Network LoginID, which is required to access computer resources. To open your account, go to morainepark.edu , click on ***my*MPTC** , under "**How Do I Get Access**," click on "**Open Your Account**."

Your Network LoginID is based on your name.
Example:
Name: Joe Smith

Network LoginID: jsmith (your password is set when you open your *my*MPTC account)

Note: If there are multiple jsmiths, a number will be appended to the end of your Network LoginID.

When finished using a computer in a lab, you must log off the computer to protect your private information and to prevent another student from acting maliciously using your log in information. You are responsible for all activities that take place under your login.

For more information, go to mymptc.morainepark.edu.

Student E-Mail

All students are issued a student e-mail account. **This account is your official means of communication with the College.** All communications from the College will be sent to your Moraine Park issued student e-mail account, including eCollege communications, notifications for availability of grades, add/drop, registration information, faculty communications and more. This e-mail account is yours for life.

You are required to activate your *my*MPTC account before activating your e-mail account.

You will need the following information to activate your e-mail account:
- Network LoginID
- Student ID

E-mail address = Network LoginID@student.morainepark.edu

Default password = First three letters of your last name in UPPERCASE + last five digits of your Student ID.

Financial Information/Financial Aid

Costs for Full-Time Programs (2012-2013)

Fee Type	Cost	Description
Student Program Tuition – State Resident Program Tuition – Out-of-State	$116.90 per credit $175.35 per credit	Online students are not charged out-of-state fees. Charged for all associate of applied science degree, technical diploma, and State Resident apprenticeship credits and adult and continuing education credit equivalence. By act of the Wisconsin State Legislature [Wisconsin Statute 38.24(3)], Nonresident students who are not Wisconsin residents nor subject to reciprocal agreements with the Wisconsin Technical College System Board must assume liability for the nonresident fee of $58.45 added to the base tuition established by the Board. In all cases, the student is responsible for providing proof of residency.
Material	$4.00 minimum	Instructional materials consumed by students and instructors.
Supplemental	5% of program fees	Partially subsidizes districtwide programs in student health, student development and student life.
Security Fee	$.50 per credit	Supplemental fee charged for courses that meet in a Beaver Dam, Fond du Lac or West Bend campus classroom.
Student Accident Insurance (SAIF)	$7.50 per semester	Charged for mandatory accident insurance plan.
Online Course Access	$45.00 per course	
Category **Testing** NLN Anatomy and Physiology NLN Microbiology Placement Test GED HSED	 $25.00 $25.00 $15.00 $15.00 per test $15.00 per test	
Other Program Application Avocational Uniform Service	 $30.00 one-time nonrefundable $195.00 $19.00 per credit	 Charged for uniforms in the Automotive Technician program.
Credit for Prior Learning - Exam Credit for Prior Learning - Occupational Experience	$30.00 processing fee 30% of tuition value rate per credit $30.00 processing fee 30% of tuition value rate per credit	Charge for administration of challenge exams for advanced standing credit, nonrefundable if credit is not awarded; exam can be taken one time. Processing fee is charged to initiate the occupational credit evaluation. Once awarded per credit fee applies. No fee is charged for transfer of credit.
Official Transcript	$6.00/$10.00 (on-demand) nonrefundable	
Graduation Application Processing Fee	$30.00 per requested degree nonrefundable	
Replacement Diploma Fee	$15.00	Fee assessed for replacement of lost or damaged diploma documents.
Deferred Tuition Plan	$35.00 per term	Fee assessed each semester tuition plan is established, an application is required.
Criminal Background Check	$30.00	Costs associated with acquiring a criminal background check from the Wisconsin Department of Justice and Department of Health and Family Services for all the programs listed under Liability Insurance Fee.
Motor Vehicle Record Check	$20.00	Costs associated with obtaining proof of valid driver's license for Electrical Power Distribution program students for CDL training purposes.
Books/Materials	Varies due to fluctuating costs of books and instructor requirements	Includes items such as the tool kit and mannequin required in Barber/Cosmetology, kitchen knives required in the food programs, tool kit rental/deposit and special materials such as safety equipment required in manufacturing programs. Textbooks and materials are available in the Moraine Park Bookstores. Some programs also require uniforms.

All fees are subject to change annually.
Costs for the first-year programs range from $1,500* to $5,000* per year for tuition and fees depending on the number of credits taken.
Books and supply costs range from $350* to $2,100* depending on the program. Contact Student Services for updated costs per program.
*Estimate
These costs are provided by the Registrar's Office and are subject to change without notice.
They are not to be considered as contractual guarantees or absolute costs in each program.

■ CONTACTS
For more information on specific financial aid programs or assistance with applying for financial aid, please contact:
Student Services Call Center 920-924-3207
or
1-800-472-4554

■ HINT
Apply for financial aid early. It generally takes four to six weeks to review and process financial aid requests. Once everything is completed, you will receive an award notice detailing your aid package. You can accept or decline any portion of this package.

■ MONEY FOR COLLEGE
College is an investment in your future. Choosing Moraine Park is a wise investment. Our tuition is economical, and career opportunities for graduates offer a good return on your dollar. Almost half of our program students receive financial aid.

Budget

Budget estimates for the academic year are constructed for information and financial aid purposes. Not all figures represent direct student expenditures (i.e., parents of commuting students usually assume room and board costs and some personal expense).

Shown below is a typical breakdown of costs for a full-time student based on 2012-13 costs.

Student Costs	Living With Parents	Living on Own
Tuition	$3,516	$3,516
Fees	291	291
Room and Board	2,962	6,459
Books/Supplies	1,472	1,472
Personal Expenses	1,822	1,822
Transportation	1,733	1,733
	$11,796	$15,293

Moraine Park's net price calculator can be found at morainepark.edu.

Payment, Withdrawal and Refund Overview

Students are responsible for all tuition and fees. Moraine Park will **not** drop students from courses automatically for nonattendance. Official withdrawals must be done before a course begins or during the refund period to qualify for a refund.

Students

> Are responsible for all tuition and fees.

> Are responsible for meeting semester payment deadlines.

> Must choose to pay in full, set up an electronic payment plan, complete Financial Aid or have an employer/agency paid contract on record by payment deadline to guarantee a seat in class.

> Are responsible for all fees not covered by Financial Aid or employer/agency contracts.

> Can check their account information 24/7 on myMPTC under the Student tab, My Current Account Status.

Important Withdrawal Information

> Moraine Park will **not** drop students from courses automatically for nonattendance.

> Students are responsible for completing an add/drop form and submitting it to Student Services or withdrawing via self-service on *my*MPTC if they no longer plan to attend. *Students are considered enrolled and responsible for all tuition and fees until withdrawal forms are submitted.*

> Students must withdraw before a course begins or during the refund period to qualify for a credit to their accounts.

> Students who do not complete a withdrawal form when discontinuing a credit class will receive an F grade on their transcript. Students can repeat the course to have this grade removed from their cumulative grade point average.

> Courses can be dropped before 67 percent of the potential hours of instruction are completed. After the 67 percent time frame, a course withdrawal is not allowed and an F grade is awarded.

> Moraine Park reserves the right to withdraw students from courses for nonpayment. **However, nonpayment does not automatically result in withdrawal.**

Refund/Withdrawal Policy

Refunds are processed according to the Wisconsin Technical College System refund policy. Refund amounts are based on the date of official withdrawal, the course start date **and** course duration.

Refunds for:

100%
1. Moraine Park cancels or discontinues a class.
2. Course withdrawal is officially completed before the first class meeting.
3. Course withdrawal is officially completed before 10 percent of the course's potential hours have been completed **and** another class is added or "swapped" on the same day. One hundred percent of the dropped course's fees will be credited to the added course. If there is a fee difference between the dropped and added courses, students are credited or billed the difference. (This option **cannot** be done on *my*MPTC. Students must go to Student Services.)

80% Course withdrawal is officially completed before 11 percent of potential class hours are completed.

60% Course withdrawal is officially completed when 11 percent of the hours are completed but before 20 percent of potential class hours are completed.

0% Course withdrawal is officially completed after more than 20 percent of the class's total potential hours.

Refund Appeals

> Refund appeal requests are considered on rare occasion for legitimate extenuating circumstances at the discretion of the Registrar and the Student Services Associate. Extenuating circumstances are those situations outside of a student's control.

> Consideration of an exception requires students submit the **Request for Refund Appeal** form and official supporting documentation (i.e., medical notes, military activation orders) for review to Student Services no later than sixty (60) calendar days after the class start date.

> Refund requests made after the 60 day grace period will not be accepted, and students are responsible for payment.

Financial Aid

Financial aid helps make your education affordable. Funding is available in the form of grants, loans, scholarships and work-study programs.

The financial aid process starts with the Free Application for Federal Student Aid (FAFSA) to determine your "financial need." You will need to:

1. Complete the FAFSA application after January 1 for the following school year. Priority date for filing applications is April 15. Applications are available at Moraine Park's Financial Aid office or online at **www.fafsa.gov**. (The FAFSA asks for a school code. Moraine Park's code is 005303.)

2. Complete the Financial Aid Supplemental form and return it to Moraine Park's Financial Aid Office.
3. Complete the program admissions process. (Certificates and apprenticeships are not aid-eligible.)

Note: Applicants for Financial Aid must make satisfactory academic progress for continued aid eligibility. Federal law deems the portion of federal funds that must be repaid to the college for any student who withdraws or drops out.

Federal Title IV Return of Funds Policy

1. In general, federal regulations assume that students "earn" federal financial aid in direct proportion to the percentage of the term they complete. Federal law requires schools to calculate how much federal financial aid a student has earned if that student: completely withdraws, stops attending before completing a semester, or does not complete all modules (courses that are not scheduled for the entire semester) for which he/she has registered at the time those modules began.
2. The amount of federal financial aid assistance that a student earns is determined on a pro rata basis. Once the student has completed more than 60 percent of the days they were scheduled to attend, all federal financial aid is considered to be earned.
   - **Percent earned** = Number of calendar days completed up to the withdrawal date.** Divide total calendar days in the scheduled days of enrollment with an allowance for any scheduled breaks that are at least five days long.
   - **Percent unearned** = 100 percent minus percent earned.
3. When a student receives federal financial aid in excess of earned aid,
   - **The school returns the lesser of:**
     > Institutional charges multiplied by the unearned percentage (determined by the calculation in #2),

   or

     > Title IV federal financial aid disbursed multiplied by the unearned percentage (determined by the calculation in #2).
   - **The student returns:**
     > Any remaining unearned federal aid not covered by the school.
     > Additional loan funds are repaid in accordance with the terms of the promissory note; that is, scheduled payments to the holder of the loan over a period of time.
     > The grant amount the student must return is a grant overpayment; arrangements must be made with Moraine Park to return the funds.
4. Moraine Park will invoice the student for the funds that are required to be repaid, and accounts not paid within 10 days are turned over to the U.S. Department of Education.

* Federal financial aid includes the federal Pell Grant, federal Supplemental Educational Opportunity Grant (SEOG), federal Stafford Loans (subsidized and unsubsidized), federal PLUS Loans for parents, and Academic Competitiveness grant.

** Withdrawal date is defined as the actual date the student begins the institution's withdrawal process, the student's last date of academically related activity, or the midpoint of the payment period for a student who leaves without notifying the institution.

Withdrawal from all courses before aid checks are available will cancel all financial aid.

For more information regarding financial aid, go to **morainepark.edu/financial-aid** and click on the Award Guide link.

Veterans

Programs Approved for Veterans

Most programs of study at Moraine Park Technical College have been approved for veterans' benefits by the Veterans Administration under the Montgomery GI Bill-Active Duty, Post 9/11, Selected Reserve, VEAP, REAP, Vocational Rehabilitation and Veteran Educational Assistance for Survivors and Dependents programs. For more information concerning eligibility and the period of eligibility, contact the nearest VA office or your County Veterans Service Office.

Eligible veterans can apply for educational benefits through their local County Veterans Office. To receive maximum benefits, a veteran must be enrolled full-time in an associate of applied science degree or technical diploma program. Further information is available from the Financial Aid Office.

Printed course listings by semester are available for all programs from the Admissions Office.

Veterans' Benefits

Associate Degree and Technical Diploma

Benefits	Credits
Full-time	12 or more
Three-fourths	9-11
One-half	6-8
Less-than-one-half	5 or less

Veteran Standards of Progress All veterans must continue to make satisfactory progress in their program. As required by the Veterans Administration Regulations, Moraine Park Technical College will report unsatisfactory progress in accordance with the information under **Academic Standards** in this catalog (see page 11-13).

A veteran may be certified only for courses and electives required for their specific program. Credit from other higher education institutions must be evaluated for advanced standing. **It is the responsibility of the student** receiving veteran educational benefits to notify the Veterans' certifying official of enrollment, changes in enrollment and withdrawal.

Wisconsin Veterans Tuition Programs

Wisconsin G.I. Bill Wisconsin veterans may be eligible for a 100 percent waiver ("remission") of program (tuition) and material fees for themselves and for qualifying dependents of a Wisconsin veteran with a service-connected disability rating of 30 percent or greater. For additional information, eligibility criteria and application instructions, please go the WDVA Web site at **www.dva.state.wi.us** or visit your County Veterans Service Office for assistance.

VetEd Reimbursement Grants Wisconsin veterans may be eligible for partial tuition reimbursement following successful completion of full- or part-time coursework. Pre-applications must be submitted no later than 180 days after the semester, term or course start date. Reimbursement grant applications must be completed no later than 60 days following the end of the course. To apply online, please go to the WDVA Web site at **www.dva.state.wi.us** or visit your County Veterans Service Office for assistance.

Moraine Park Foundation and Scholarships

Moraine Park Foundation Scholarships are awarded to students enrolled in at least six credits at Moraine Park. The scholarship application is available online at morainepark.edu/scholarships from February through June. Applications are reviewed by a team of volunteers and are rated based on the following criteria: academic standing, extracurricular involvement/employment history, letters of recommendation and a personal statement describing education and career goals. Scholarship recipients will be notified in August, and awards will be disbursed evenly between the fall and spring semesters. All students are encouraged to apply, and the Moraine Park Foundation office staff is available to help you complete the application if need be—just call 920-924-3225.

In 2011-12, the Moraine Park Foundation awarded over $134,000 in scholarships, to roughly 120 students. Next year, one of those recipients could be YOU—so apply today!

Student Life

Getting involved in Student Life at Moraine Park provides students an opportunity to meet people, make new friends, develop leadership skills, network among other technical college students, have fun while attending school and more! Student government, student clubs, statewide and national skill competitions and many different types of activities and events on our campuses allow you to gain even more from your college experience.

Student Government

Student government at Moraine Park Technical College provides students a place to share their opinions on college issues and provides opportunities to get involved in college life. Participation encourages the development of leadership skills, as students work with each other, act as liaisons amongst the student body and interact with faculty and the administration in the promotion of student rights. A Student Senate and Activities Committee is established at each of Moraine Park's campuses to provide individualized attention to campus issues and activities. The District Student Government (DSG) consists of members from each of the campus senates and meets to address college-wide student issues. The Student Senates and District Student Government both work to promote the formation of student clubs throughout the College. Using supplemental fee dollars, all levels of student government provide social, cultural and educational opportunities for students using activities and programming concepts. Moraine Park Technical College is also a member of the Wisconsin Student Government (WSG) and Career and Technical Student Organizations (CTSO). WSG consists of student representatives from all 16 of Wisconsin's technical colleges. CTSO provides opportunities for students to participate in leadership activities and skill competitions specific to their program career field. It also enables students to network with other students throughout the state.

Through participation in Student Government, students gain a working knowledge of Parliamentary Procedure; however, a very personal atmosphere is maintained.

Student Senate Advisors/Student Involvement Specialists

Beaver Dam Advisor: Lisa Manuell, K-330
lmanuell@morainepark.edu

Fond du Lac Advisor: Samantha Saeger, A-107
ssaeger@morainepark.edu

West Bend Advisor: Adam Ninmann, L-160.2
aninmann@morainepark.edu

District Student Senate (DSG) and Wisconsin Student Government (WSG), Dean of Students: Scott Lieburn, slieburn@morainepark.edu

Consisting of representatives from each of the campus clubs, as well as members-at-large, the Student Senates provide a voice for the Moraine Park student body on important issues facing students and coordinate social, cultural and leadership activities for the campuses.

Student Clubs

Student clubs are available to any student attending Moraine Park and offer you amazing opportunities to explore your field, while getting to know fellow students at Moraine Park. Attending conferences, participating in competitions and working on service projects are just a few of the ways joining a club can add to your college experience. Have a question about any of the groups listed below, or want to know how you can start up a new club? Send an e-mail to the respective club advisor, or get in touch with the Student Involvement Specialist on your campus today!

Accounting Club
Fond du Lac Advisor: Julie Dilling
jdilling@morainepark.edu
West Bend Advisor: Carrie Kasubaski
ckasubaski@morainepark.edu

ADA (Alcohol and Other Drug Awareness) Club
Fond du Lac Advisor: Jerome VanKirk
jvankirk@morainepark.edu

Auto Technician Club
Fond du Lac Advisor: Frank Corrente
fcorrente@morainepark.edu

BPA (Business Professionals of America) Club
West Bend Advisors: Cynthia Bernhard and Carrie Kasubaski
cbernhard@morainepark.edu and
ckasubaski@morainepark.edu

Business Professionals Club
Fond du Lac Advisor: Amy Harmsen
aharmsen@morainepark.edu

CET (Civil Engineering Technology) Club
Fond du Lac Advisor: James Olson
jolson1@morainepark.edu

CT (Chiropractic Tech) Club
West Bend Advisor: Elizabeth McLean
emclean@morainepark.edu

Clinical Lab Technicians Club
Fond du Lac Advisor: Linda Bau
lbau@morainepark.edu

Corrections Science Club
Fond du Lac Advisor: Christine Jaglowski
cjaglowski@morainepark.edu

Student Life (cont.)

Collegiate DECA Club
Fond du Lac Advisor: Robin Rodee-Schneider
rrodeeschneider@morainepark.edu

Cosmetology Apprenticeship Club
West Bend Advisor: Eileen Bouchard
ebouchard@morainepark.edu

Cosmetology Club
Fond du Lac Advisor: Danielle Domenosky
ddomenosky@morainepark.edu

Culinary Arts Club
Fond du Lac Advisors: Tom Endejan and James Simmers
tendejan@morainepark.edu, and
jsimmers@morainepark.edu

Electricity Club
West Bend Advisors: Mike Melaney and co-advisor Mark Wamsley
mmelaney@morainepark.edu and
mwamsley@morainepark.edu

EPD (Electrical Power Distribution) Club
Beaver Dam Advisor: Mark Theyerl
mtheyerl@morainepark.edu

Graphics Club
West Bend Advisor: Dan Wangerin
dwangerin@morainepark.edu

IA (Instructional Assistant) Club
Fond du Lac Advisor: Gretchen Gall
ggall@morainepark.edu

IAAP (International Association of Administrative Professionals)
West Bend Advisor: Cindy Bernhard
cbernhard@morainepark.edu

IT (Information Technology) Club
Fond du Lac Advisor: Lisa Pollard
lpollard@morainepark.edu

IT Web Developer Club
West Bend Advisor: Dominic Garofalo
dgarofalo@morainepark.edu

Metal Fabrication Club
Fond du Lac Advisor: Larry Clark
lclark@morainepark.edu

Multicultural Club
Fond du Lac/West Bend Advisor: William Green
wgreen@morainepark.edu
Beaver Dam Advisor: Amy Edwards
aedwards@morainepark.edu

NTO (Non-Traditionalist Occupations) Club
Beaver Dam/Fond du Lac/West Bend Advisor: Renae Fischer
rfischer@morainepark.edu

Radiography Club
Fond du Lac Advisor: Dyan Hannam
dhannam@morainepark.edu

SME (Society of Manufacturing Engineering) Club
Fond du Lac Advisor: Tom Roehl
troehl@morainepark.edu

SNA (Student Nurses Association) Club
Beaver Dam/Fond du Lac/West Bend Advisor: Melissa Rodriguez
mrodriguez36@morainepark.edu

STEM (Science, Technology, Engineering and Math) Club
Beaver Dam/Fond du Lac/West Bend Advisor: Lisa Pollard
lpollard@morainepark.edu

Welding Club
Beaver Dam Advisor: Jeremiah Johnson
jjohnson10@morainepark.edu
Fond du Lac Advisor: Jeffrey Beach
jbeach@morainepark.edu

General Education

As indicated in Wisconsin Technical College System documentation, General Education provides a core of knowledge that supports common skills, intellectual concepts, and professional attitudes that an educated person should possess. General Education provides instruction in essential skills required for success in careers, at home, in a community and in society. Employers, employees and educators identify particular skills, concepts and attitudes that are evident in an educated person through a variety of academic, social and personal indicators. These attributes include responsibility for self, effective communication skills, applied critical thinking and problem-solving abilities, ethical decision-making processes, global awareness, inclusive actions, awareness of mathematical principles and knowledge of scientific and technological advancements.

To fulfill this expectation as stated through the Wisconsin Technical College System, Moraine Park Technical College requires 21 hours of general education for those students completing the Associate of Applied Science degree. Depending on the program, a combination of the following content areas will apply to the degree. Please consult with an academic or program advisor to ensure enrollment in the appropriate program-related general education courses. These courses offer analysis and application in relation to an educated individual functioning in both occupational and community settings. The categories that apply to the program requirements include these general education areas.

Communication: Written communication, oral/interpersonal communication, technical reporting, speech, etc. - 6 credits required

Social Science: Sociology, economics, political science, contemporary American society, social problems, race/ethnic/diversity studies, marriage and family, etc. (MPTC recognizes the humanities courses of Ethics and Critical and Creative Thinking as social sciences for degree purposes.) - 3 credits required

Behavioral Science: Psychology, psychology of human relations, developmental psychology, abnormal psychology, adolescent psychology, etc. - 3 credits required

Math and/or Science: College mathematics, college technical math, intermediate algebra with applications, chemistry, general anatomy and physiology, etc. - 3+ credits required

General Education electives: From any general education category - 6+ credits required

Note: Ethics (809-166) is an institutional requirement for all Associate of Applied Science degrees. Additional institutional requirements housed in the General Education division and required for graduation include a first-semester, one-credit student success course (890-125) and a final-semester, one-credit career development (890-130) course. In addition to information related to general education requirements, the dean of general education can also provide information related to service-learning and transfer opportunities.

For questions related to General Education, please contact the Dean of General Education at 920-924-3163.

International Education

Moraine Park Technical College is committed to providing international education opportunities for its students. In alignment with its Core Abilities, the College encourages students to experience international cultures through study abroad opportunities. These experiences place students in environments where they adapt to change, communicate clearly, and think critically and creatively as they engage not only in possible coursework but also common, day-to-day activities in other cultures. Students interested in learning more about International Education or Study Abroad opportunities should contact the Dean of General Education at 920-924-3163, review the International Education blog accessible through the Blogger link on the Moraine Park Technical College home page, or visit the International Education website at http://www.morainepark.edu/programs-and-courses/study-abroad/.

Study Abroad

Study abroad is available to students. Visit with any of our students who have traveled, and they will share experiences that changed their views. Study abroad gives students the chance to learn educational, historical and social systems of another culture.

Study abroad supports workplace competencies.

Benefits of International Education

- Interact with people who hold different world views
- Identify and relate to differences in the workplace
- Gain knowledge of other cultures while seeing one's home culture differently
- Adapt to change and new systems, from transportation to markets, menus and customs
- Prepare for a workforce where companies have offices on other continents

Examples of Opportunities

- Over spring break, students can tour London and possibly gain college credit.
- In May, students travel to Germany where German families host the students. The trip may include Italy or France in some years.
- In June, faculty travel to China to learn about manufacturing. When possible, students have the chance to travel to China also.
- In October, College staff and students host German students in their home.

Tours are available through the Wisconsin Technical College System and other agreements. For information, contact the Dean of General Education at 920-924-3163.

Grading and Academic Standards

Grades Used in GPA Computation

Grade	Definition	Grade Points Per Credit
A	The student has excelled in meeting all the competencies established for the course.	4 points per credit
B	The student has more than adequately met all the competencies established for the course.	3 points per credit
C	The student has adequately met all the competencies established for the course.	2 points per credit
D	The student has met the competencies, but not at an acceptable proficiency level established for the course.	1 point per credit
F	The student failed to meet one or more competencies established for the course.	0 points per credit

Symbols Not Used in GPA Computation

Symbol	Indication
I	Incomplete
W	Withdrawal
WN	Withdrawal for Nonattendance
AU	Audit
E	Credit for Examination
O	Credit for Occupational Experience
M	Advanced Standing Credit at MPTC
T	Advanced Standing Credit - Transfer
P	Pass
PC	Partially Completed
Continuing and Community Education	
S	Satisfactory
U	Unsatisfactory

Incomplete Procedure

The grade of Incomplete "I" may be given only when the completed portion of a student's work in the course is of passing quality and due to extenuating circumstances the student is not able to complete all of the course requirements. A student's desire to avoid a low grade is not a legitimate reason to award an incomplete. The student requesting an Incomplete should be able to complete the outstanding course requirements with minimal assistance from the instructor. An "I" does not count as hours attempted. The student has until October 15 (summer term), March 15 (fall term) or July 15 (spring term) or earlier to complete the course requirements. If the instructor does not remove the "I" grade, the "I" grade will change to an "F" grade. Students cannot register for the same course while an "I" is outstanding.

Withdrawals

Withdrawals that occur prior to 11 percent of the potential hours of a course having been completed will be treated as a drop in which the courses will not appear on an official transcript. Withdrawals that occur when 11 percent or more of the potential hours of a course have been completed will be documented on an official transcript as a withdrawal. Students are not allowed to withdraw from a course if 67 percent or more of the potential hours of the course have been completed. Administrative withdrawals can occur at any time throughout a semester at the discretion of the College.

Withdrawal for Nonattendance

Students who register for a class but fail to attend will receive a grade of WN indicating a withdrawal due to nonattendance. The WN is treated as a withdrawal in that it does not impact a student's GPA; however, it does count as attempted

credits and the student does not receive a refund for the course.

Auditing a Course

A student may audit a course to gain a general understanding of a subject matter. The student must submit a completed Audit Course Intent Form at the time of registration. A student may not change his/her registration status from audit to credit or vice versa once the course has started. All course prerequisites must be met at the time of registration. Only undergraduate (UG) level courses can be audited.

A student auditing a course must pay the same tuition and fees as a student enrolled for credit. Per the 1999 Wisconsin Act 154, individuals who are 60 years of age or older are exempt from paying tuition when auditing a course. Any age 60+ auditor must be a resident of Wisconsin and will be required to pay course material fees and all other applicable student fees.

Auditing a course requires a student to meet attendance requirements, participate in classroom activities and complete all assignments required for the course; however, they do not complete examinations. Students who complete these course requirements are assigned a grade of AU (audit). Students who fail to complete these course requirements receive a grade of W (withdrawn).

A student does not earn course credit for auditing a course. Audited courses may not be used to satisfy the prerequisites or requirements for other courses. Courses taken on an audit basis are not part of the student's credit load for financial aid, veterans' benefits, or for any other purpose for which the college is asked to certify a student's enrollment status.

The college administration reserves the right to restrict the auditing of any course. Audit options are provided on a space-available basis. Students auditing a course may be administratively withdrawn (with a full refund) in the event that the course fills and students seek to enroll for credit.

Advanced Standing (Credit for Prior Learning)

Advanced standing (credit for prior learning) is the granting of credit in an associate of applied science degree or technical diploma program for knowledge or skills directly related to the program curriculum. Credit may be granted based on proficiency gained through work experience, military experience or training, business/industry training, coursework completed at other institutions (including high schools with articulation agreements in place) or other prior learning experiences. Advanced standing (credit for prior learning) is awarded based on the following methods:

- **Credit by Examination –** Proficiency examinations allow students to demonstrate knowledge and skills related to a particular course. Upon successful completion and payment (see fee schedule), students are awarded credit. Students may also be awarded credit for a course(s) by achieving an acceptable score on an exam with nationally recognized standards including Advanced Placement (AP) and College Level Examination Program (CLEP). Official test scores must be submitted for credit to be awarded. Credit awarded by examination is recorded with a grade of E (examination).
- **Credit for Occupational Experience** – Students seeking credit for experience gained from occupations, military service and other learning experiences must request an evaluation and pay a processing fee for each request made (see fee schedule). Documentation must be provided to the appropriate academic dean for review. If approved by the academic dean and with payment (see fee schedule), students are awarded credit with a grade of O (occupational experience).
- **Credit for Advanced Standing and Articulation Agreements** – Students are awarded credit based on successful completion of high school courses for which an articulation agreement exists with the College. Credit is awarded after a student submits an official high school transcript documenting completion of the courses as outlined in the articulation agreement. For students transferring from another technical college district, credit awarded for high school coursework covered by an articulation agreement at the originating technical college shall be accepted as credit toward completion of a comparable course or courses. Credits awarded for advanced standing receive a grade of M (Moraine Park advanced standing).
- **Transfer Credit** – Students are awarded credit for coursework completed at postsecondary institutions meeting accreditation requirements. Students are required to submit official transcripts for review. Students may be asked to obtain a course description and/or a course syllabus as needed to evaluate transfer credit. Transfer credit awarded is given a grade of T (transfer) along with the grade earned at the original institution. For example, if a student earns a 'B' in a transfer course, a grade of 'TB' will show on the Moraine Park transcript.

Students can earn no more than 75 percent of the total required credits required by a program through advanced standing (credit for prior learning). A minimum of 25 percent of the total program credits required in a degree or diploma program must be completed at Moraine Park Technical College.

Pass

The student successfully completed the competencies for the course. This symbol counts as hours earned.

Partially Completed

The student completed required hours but did not meet all competencies for the course and is considered partially completed.

Satisfactory

The student successfully completed all required activities for the course.

Unsatisfactory

The student did not successfully complete all required activities for this course.

Repeat Courses

Students are allowed to repeat courses at Moraine Park. Health and nursing-related courses can be repeated once – all other courses can be repeated twice. All attempts remain on the student's official transcript; however, only the most recent attempt will be used in GPA calculations and to determine credits earned and attempted. Note: All attempts are considered when determining eligibility for financial aid.

Phi Theta Kappa

Phi Theta Kappa is an international honor society that recognizes two-year college students and encourages scholarship participation. Eligible candidates for induction to this honor society are invited and can continue membership if they achieve and maintain an overall 3.5 cumulative GPA and have 12 or more credits completed in an associate of applied science degree program. Further

information is available in student activities or registration.

Additional awards and recognition are listed in detail in the Student Information Handbook.

Official Transcript of Grades

> Official transcripts of all levels of the academic record must be requested in writing with signature to the Registrar's Office at the Fond du Lac campus.

> There is a $6 fee for each official transcript requested. A $10 fee applies for on-demand official transcript requests.

> Transcripts are not released to students with financial obligations to Moraine Park Technical College.

> Transcripts can be viewed via Banner Self-Service, Student Records, View Your Academic Transcript.

Grade Reports
Grades can be viewed via self-service Banner via the Student Records>View Final Grades links. If official grades are needed, please request an official transcript from the Registrar's Office.

Academic Standards

> A C grade must be attained in all courses required for program graduation.

> Students in all programs are required to maintain an overall cumulative grade point average of 2.0 (C average) to graduate in the program.

> Failure to maintain standards will place students on academic probation until the proper level of achievement has been attained.

Academic/Attendance Requirements

The following criteria is used to evaluate a students' academic progress:

1. Good attendance
2. Completing assignments to make satisfactory progress toward course completion
3. Completing all program requirements
4. Meeting set standards in assigned projects and reports
5. Where applicable, demonstrating practical hands-on skills

If the instructor feels a student is not making satisfactory progress or is not regularly attending the class, he or she will work with advisors and/or Student Services. Recommendations may include a plan to improve study habits and/or attendance, to reduce class credit load, and/or to reduce the hours of employment. If recommendations are not followed, a student may be dropped from the class.

Probation

> Students who do not maintain an overall 2.0 grade point average (GPA) will be placed on probation for the next term.

> During probation, the student may be contacted regarding available college resources to discuss academic options available to them.

> Students on probation may be suspended if their cumulative GPA falls below a 2.0.

> If a student achieves a 2.0 GPA during the probation semester/term, probation status continues until a cumulative GPA of 2.0 is attained.

Standards of Admission

Moraine Park Technical College has an open course enrollment procedure. Most courses are open to all students who complete prerequisite course requirements with passing grades or meet specific program admission requirements such as criminal background checks or requirements set by state statutes. Moraine Park has remedial and developmental courses to assist those students who do not have the prerequisite requirements.

Assessment of Student Learning (Exit Assessment)

Assessment is the ongoing process aimed at monitoring and improving student learning by carefully looking at how learners apply knowledge by demonstrating skills and abilities. In order to graduate from a program, Moraine Park requires students to complete an exit assessment that demonstrates their competence in outcomes. Some examples of exit assessments are: capstone projects or experiences, portfolios, internship, clinical evaluations and/or standardized tests.

Colleges across the country recognized that grades do not give the true picture of what students know and are able to do. Today's assessment strategies are designed to measure the results of learning (what students can do!), evaluate programs and provide the basis for improving teaching and learning processes. Assessment of student learning is also needed to maintain Moraine Park's accreditation assuring the quality of education meets or exceeds acceptable standards set by the Higher Learning Commission of the North Central Association of Schools.

Students may obtain more exit assessment information by accessing Student Resources on the Student tab of *my*MPTC.

Core Abilities, as defined by Moraine Park, are transferable skills, knowledge and/or attitudes essential to an individual's success regardless of occupation or community setting. All occupational programs and General Education courses integrate core abilities into their curriculum. Students develop these seven "core abilities" and are responsible for their application. Graduates have a greater chance of success, because employers prefer to hire and promote individuals who: Work Productively, Demonstrate Integrity, Adapt to Change, Communicate Clearly, Act Responsibly, Think Critically and Creatively and Work Cooperatively.

Graduation Requirements / Graduate Training

Graduation Requirements

Exit Assessment Students accepted into a program after August 2000 will complete an exit assessment for graduation to demonstrate proficiency of program outcomes. Exit assessment requirements vary by program.

Residency Students must earn 25 percent of the total program credits toward the program sought at Moraine Park Technical College.

Graduation Application and Fee A graduation application form shall be completed during the last semester to identify graduation intent, for every program requested. A $30 non-refundable processing fee is charged for each program requested which covers the cost of graduation related activities, diploma and cover and graduation apparel.

GPA Students in all programs are required to achieve a cumulative grade point average of 2.0 or better or a 2.0 grade point average in all attempted credits required in the program. Failure to do so will prevent the student from graduating until such time as the proper level of achievement has been attained.

Honors Recognition of academic excellence will be determined by the cumulative grade point average achieved at the time the degree is awarded. Students who achieve **cumulative grade point averages** (GPA) between 3.75 and 4.0 will receive **High Honors**. Students who achieve cumulative grade point averages between 3.5 and 3.74 will receive **Honors**. Cumulative GPA includes grades for all courses completed. Prior to January 2009, cumulative GPA calculations were frozen each time a degree was achieved. Current cumulative GPA calculations will no longer reflect this status. Previously awarded honors designations will be retained on the transcript. Honors designations will not be retroactively awarded.

All financial obligations to Moraine Park Technical College must be fulfilled in order to obtain certificate, diploma or degree documentation. An all-College graduation ceremony is conducted once per year in May at the conclusion of the term. Students are encouraged to attend.

A student must meet graduation requirements as published in the official Moraine Park catalog at the time of matriculation but within five (5) years of matriculation. In the event that a student does not complete graduation requirements within the five-year limit, the student's program curriculum changes to that of the current catalog in effect. Students who are not enrolled in at least one (1) program-required course at Moraine Park for twelve (12) continuous months are required to meet the graduation requirements of the Moraine Park catalog in effect at the time the student resumes enrollment.

Graduate Training

Moraine Park Technical College guarantees up to six credits of additional coursework to graduates of Moraine Park that do not become employed in their program or related area within six months after graduation or whose employer verifies that the graduate does not have entry-level job skills.

A graduate of an associate of applied science degree program or technical diploma program who is a resident of Wisconsin is exempt from tuition and fees for up to six credits within the same occupational program for which the degree or diploma was awarded if the graduate applies for the exemption within six months of graduation and any of the following applies:

- The graduate must provide written verification to the Registrar that certifies all of the following apply:

1. The graduate has not secured employment in the occupational field in which he or she received the degree or diploma.
2. The graduate has actively pursued employment in that occupational field.
3. The graduate has not refused employment in that occupational field or in a related field.
4. The graduate has actively sought the assistance of the College's Employment Services Office.

- Within 90 days after his or her initial employment, the graduate's employer certifies to the Registrar that the graduate lacks entry-level job skills and specifies, in writing, the specific areas in which the graduate's skills are deficient.

Agreements

Moraine Park Technical College Credit Transfer to Other Higher Education Institutions A transfer or articulation agreement means that one college agrees to accept courses in transfer from another college as equivalent to specific courses or as meeting specific degree requirements. This agreement is worked out in advance of transfer and applies to any student who meets the transfer agreement requirements. The college or university you wish to attend determines the number of credits that will transfer and if and how they will apply toward your baccalaureate degree. **View additional transfer information online at morainepark.edu/transfer.**

Moraine Park's Liberal Arts Collaborative Program is for students who want to begin college at Moraine Park and transition to Madison College (MATC-Madison), Nicolet College or Milwaukee Area Technical College (MATC-Milwaukee) to earn an Associate in Arts or an Associate in Science degree. Students who select this degree option have the goal of transferring to a four-year university to complete a bachelor's degree. A maximum of 30 transferable Moraine Park credits may be applied toward Madison/Milwaukee/Nicolet's Liberal Arts programs. Please consult with Moraine Park's Transfer Specialist for additional information or visit the Liberal Arts Collaborative Program page at morainepark.edu/programs-and-courses/programs-of-study/Liberal+Arts+Collaborative+Agreement/.

Transfer Credit to University of Wisconsin Green Bay (UWGB) and University of Wisconsin Oshkosh (UWO) Moraine Park's General Studies Transfer Certificate is designed to provide direct transfer between Moraine Park and these universities of Wisconsin. The courses in this certificate also apply to Moraine Park general education requirements. Graduates of this certificate with a 2.5 overall grade point average may qualify for sophomore status at various University of Wisconsin colleges. Graduates desiring to continue their education at Moraine Park could apply all of the credits earned to a Moraine Park associate of applied science degree program. **View additional transfer information online at morainepark.edu/transfer.**

Transfer of Moraine Park Credit to UW System Schools Students enrolled at Moraine Park Technical College who wish to continue their education in the University of Wisconsin System may be eligible to transfer credits toward a bachelor's degree in several ways.

1. Students may be eligible to transfer up to 21 credits of General Education coursework.
2. Students who have successfully completed an associate or applied science degree may be eligible to transfer technical credits when there is a direct relationship between the associate of applied science degree program and a program offered at the UW System Institution.
3. Students transferring from Moraine Park may be eligible for credit by earning appropriate scores on national standardized examinations (e.g., College Level Examination Program) or examinations developed by the UW System transfer institution.
4. Students may take advantage of articulation agreements between Moraine Park and specific UW institutions for some programs.
5. Students may also have individual courses evaluated for transferability by UW System staff.
6. Transfer Information System (TIS): The UW Transfer Information System (TIS) provides program and credit transfer information between the University of Wisconsin and the Wisconsin Technical College System. Although the information is intended to be current and accurate, it should NOT be considered a substitute for formal admission or transfer procedures to the individual university. Access TIS online at **www.uwsa.edu/tis**.

■ Student Handbook

Moraine Park publishes the "Student Information Handbook" yearly. The information contained in the handbook covers a broad range of topics including:

- Academic Calendar
- Student Services
- Student Conduct
- Appeals Process
- Student Activities
- Discrimination Grievance Procedure
- Family Education Rights & Privacy Act (FERPA)
- Safety & Security Information

Copies of the Student Information Handbook are available at the campus main desks, in Student Services and in the Student Success class or via *my*MPTC.

Campus and Community Information

Beaver Dam

700 Gould Street • Beaver Dam, WI 53916-1994
For class information, call 920-887-4444.
Student Services Call Center 920-924-3207.
To register, call 920-887-1101 or 1-800-472-4554.

Campbellsport • New Holstein

JoAnn Hall • Executive Dean of Economic and Workforce Development
235 North National Avenue • PO Box 1940
Fond du Lac, WI 54936-1940
920-924-3289 • Fax 920-924-3391
E-Mail jhall@morainepark.edu
For class information, call 920-924-3207.
Student Services Call Center 920-924-3207.
To register, call 1-800-472-4554 or 920-922-8611 - Fond du Lac.
Information about classes will be mailed before classes begin.
Campbellsport classes are held at Campbellsport High School, 114 West Sheboygan Street.

Fond du Lac

235 North National Avenue • PO Box 1940
Fond du Lac, WI 54936-1940
For class information, call 920-924-3207.
Student Services Call Center 920-924-3207.
To register, call 920-922-8611 or 1-800-472-4554.

Fox Lake • Horicon • Hustisford Juneau • Lomira • Mayville Neosho • Waupun

Karen Coley • Campus and Community Partner
700 Gould Street • Beaver Dam, WI 53916-1994
920-887-4426 • Fax 920-887-4454
E-Mail kcoley@morainepark.edu
For class information, call 920-887-4444.
Student Services Call Center 920-924-3207.
To register, call 1-800-472-4554 or 920-887-1101.
Students are encouraged to purchase books online or at a campus bookstore.
Fox Lake classes location, call 920-887-4426.
Horicon classes are held at Horicon High School, 841 Gray Street.
Hustisford classes are held at Hustisford High School, 845 South Lake Street.
Juneau classes are held at Dodgeland High School, 401 South Western.
Lomira classes are held at Lomira High School, 1030 Fourth Street.
Mayville classes are held at Mayville High School, 500 North Clark Street.
Neosho classes are held at Neosho School, 201 Center Street.
Waupun classes are held at Waupun High School, 801 East Lincoln Street.

Hartford • Jackson Kewaskum • Slinger

Laurie Barz • Economic and Workforce Development Representative
Hartford Union High School • 805 Cedar Street
Hartford, WI 53027 (Room 175B)
262-335-5828 • Fax 262-673-2587
E-Mail lbarz@morainepark.edu or mbauer@morainepark.edu.
Please refer to the MPTC map, displayed on the wall adjacent to the main entrance, for the room location.
For class information, call 262-335-5828.
Student Services Call Center 920-924-3207.
To register, call 1-800-472-4554 or 262-334-3413 - West Bend.
Students are encouraged to purchase books online or at a campus bookstore. To purchase books in Hartford, call 262-335-5828 seven to ten days in advance.
Classes are held at stated community schools unless otherwise noted.
Hartford Regional Center classes are held at Hartford High School, 805 Cedar Street.
Jackson classes are held at Living Word Lutheran High School, 2230 Living Word Lane.
Kewaskum classes are held at Kewaskum High School, 1510 Bilgo Lane.
Slinger classes are held at Slinger High School, 209 Polk Street.

Ripon • Berlin • Brandon • Green Lake Markesan • Princeton • Rosendale

Cindy Diemer • Economic and Workforce Development Representative
Ripon High School
850 Tiger Drive • Ripon, WI 54971-0313
(Room 161) • 920-748-3290 or 920-924-3290
Fax 920-748-3346
E-Mail cdiemer@morainepark.edu or mgerner@morainepark.edu
For class information, call 920-748-3290 or 920-924-3290.
Student Services Call Center 920-924-3207.
To register, call 1-800-472-4554 or 920-922-8611 - Fond du Lac.
Students are encouraged to purchase books online or at a campus bookstore. To purchase books in Ripon, call 920-748-3290 seven to ten days in advance.
Classes are held at stated community schools unless otherwise indicated.
Berlin classes are held at Berlin High School, 222 Memorial Drive.
Brandon classes are held at Brandon Elementary School, 200 West Bowen Street.
Green Lake classes are held at Green Lake High School, 612 Mill Street.
Markesan classes are held at Markesan High School, 100 Vista Boulevard.
Princeton classes are held at Princeton Schools, Hwy. 23/73.
Ripon Regional Center classes are held at Ripon High School, 850 Tiger Drive. Please refer to the Ripon High School building map displayed on the wall of the main entrance area on Dynamic Drive (the first hallway to the right) for the room location.
Rosendale classes are held at Laconia High School, 301 West Division Street.

West Bend

2151 North Main Street • West Bend, WI 53090-1598
For class information, call 262-334-3413.
Student Services Call Center 920-924-3207.
To register, call 262-334-3413 or 1-800-472-4554.

Student Success Centers

Student Success Centers offer free courses to help you:

- Earn a GED or HSED.
- Improve reading, writing or math skills.
- Qualify for a job or a better job.
- Prepare to go to college.
- Get help with college courses.
- Learn to speak, read and write the English language (ESL/ELL).

Call a Student Success Center (listed below) to sign up for a registration session.

Beaver Dam Campus 920-887-4436
Fond du Lac Campus 920-929-2108
Fond du Lac Job Center 920-926-1241
West Bend Campus 262-335-5775

Policy Statement

Moraine Park Technical College is committed to compliance with the Civil Rights Act of 1991; the Americans with Disabilities Act of 1990, as amended; Titles VI and VII of the 1964 Civil Rights Act, as amended; the Age Discrimination Acts of 1967 and 1973; the Equal Pay Act of 1973, as amended; the Civil Rights Restoration Act of 1987; Title IX of the 1972 Education Amendments; Section 504 of the 1973 Rehabilitation Act; the Wisconsin Fair Employment Law; Federal and Wisconsin Executive Orders; Wisconsin Administrative Code; the Carl D. Perkins Vocational Education Act; and the Office for Civil Rights Guideline stating that no person shall be denied benefits, excluded from participation, or subjected to discrimination because of race, color, religion, national origin, ancestry, creed, sex, disability, arrest record, conviction record, age, veteran status, membership in National Guard, State Defense Force, or other reserve component of the military forces of Wisconsin or the United States, marital status, pregnancy, sexual orientation, political affiliation, parental status, genetic testing and the use or nonuse of lawful products off the employer's premises during nonworking hours.

It is the policy of Moraine Park Technical College to maintain an Affirmative Action and Equal Opportunity Program. This program includes equal opportunity and nondiscrimination for all employees, applicants for employment and students.

Harassment Policy Statement

Moraine Park Technical College is committed to compliance with present law and guidelines prohibiting harassment in education and employment.

Harassment by employees, non-employees or students, on the basis of race, color, sex, national origin, age, disability or other protected status is an illegal practice prohibited by Moraine Park Technical College.

Unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature constitutes sexual harassment when the following occurs:

1. Submission to such conduct is made either explicitly or implicitly, a term or condition of an individual's employment, or academic success.

2. Submission to or rejection of such conduct by an individual is used as the basis for employment decisions or academic standing affecting such individuals.

3. Such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile or offensive work environment.

Harassment based upon race, color, sex, national origin, age or disability includes ethnic or racial slurs or other verbal and/or physical conduct relating to a person's race, color, sex, national origin, age or disabling condition which interferes with an individual's work performance or creates an intimidating, hostile or offensive environment. Moraine Park Technical College will not tolerate harassment by its employees, non-employees or students. Any person who engages in harassment will be subject to disciplinary action and/or termination.

The college has established policies and procedures to protect students, staff, and others from harassment and discrimination. Any person who believes that their affirmative action rights have been violated has the right to file a grievance. The grievance should be filed within 300 days. The Moraine Park Discrimination Grievance Procedure should be used. Copies are available in all campus school offices as well as the District Office. This action does not preclude the grievant from seeking additional recourse through an appropriate outside agency.

Alleged acts of discrimination that are in violation of the equal employment or education opportunity policies under which the Moraine Park Technical College District operates shall be filed directly with:

Equal Opportunity Officer – Student
920-924-6459
235 North National Avenue
PO Box 1940
Fond du Lac, WI 54936-1940

Equal Opportunity Officer – Staff
920-924-3232
235 North National Avenue
PO Box 1940
Fond du Lac, WI 54936-1940

Notice to Applicants, Parents or Guardians
Services, financial aid and other benefits available through the Wisconsin Technical College System are provided on a nondiscriminatory basis as required by Titles VI and VII of the Civil Rights Act of 1964, as amended.

Individuals applying for or receiving assistance through this agency who believe that discrimination is being practiced by Moraine Park Technical College or the Wisconsin Technical College System may file a written complaint with the appropriate state or federal agency or both.

Any written complaint is to be signed by the complainant; shall give in detail the time, place, pertinent facts and circumstances of the alleged discrimination; and shall be submitted to the:

State Director
Wisconsin Technical College System
PO Box 7874
Madison, WI 53707-7874

Programs of Study

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Accounting 37
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Artisan Baking Certificate 46
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Early Childhood Preschool Credential Certificate 51
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Electricity 26
Electronic Publishing Certificate 27
Emergency Medical Technician 55
Emergency Medical Technician – Paramedic 55
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Health Care Leadership Certificate 40
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Information Technology – Technical Support Specialist 53
Information Technology – Web Designer/Developer 53-54
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Legal Administrative Professional 33
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Technical Studies – Journeyworker 22-23
Tool and Die Technologies Apprenticeship 23
Wastewater Treatment Plant Operator Apprenticeship 23
Water Quality Technology 20
Web Site Coordinator Certificate 54
Welding 60-61
Wind Energy Technology 20

Leading Online Education

Moraine Park students are finding success with their online courses and continue to come back for more. Moraine Park currently has:

> more than 5,000 online students per year.

> 22 online programs/certificates.

> more than 350 online courses per year.

> a simple online orientation tutorial.

> technical support 24 hours a day, 7 days a week.

> dynamic curriculum.

Are you ready for online?

There are several resources available to Moraine Park students to prepare them for online learning. Find links to Frequently Asked Questions (FAQs), checklists and system requirements by visiting **morainepark.edu**, click on Programs & Courses, Online Learning and then the Online Learning subtitle.

Minimum Software Requirement

> Microsoft Office Suite (Word, Excel, PowerPoint and Access)

Note: All software requirements are subject to change. Additional specialized software may be required for some courses. See course-specific requirements.

2012-2013 Online Programs and Certificates

Program Number	Title	Type
10-101-1	Accounting	Associate of Applied Science Degree
31-101-1	Accounting Assistant	Technical Diploma
50-502-1	Barber/Cosmetology (hands-on instruction at salon)	Apprenticeship
10-102-3	Business Management	Associate of Applied Science Degree
97-809-1	General Studies	Certificate
97-196-4	Health Care Leadership	Certificate
10-530-1	Health Information Technology (clinicals required)	Associate of Applied Science Degree
97-196-1	Human Resource Development Certificate	Certificate
10-152-5	Information Technology – Applications Developer (Business)	Associate of Applied Science Degree
31-152-7	Information Technology – Web Designer/Developer (internship required)	Technical Diploma
10-522-2	Instructional Assistant (clinicals required)	Associate of Applied Science Degree
97-522-2	Introduction to the Instructional Assistant Career	Certificate
10-196-1	Leadership Development	Associate of Applied Science Degree
97-106-4	Legal Office Skills	Certificate
31-530-2	Medical Coding Specialist	Technical Diploma
97-196-3	Organizational Management	Certificate
97-196-2	Principles of Management	Certificate
97-522-1	Supporting Children's Learning	Certificate
50-527-1	Wastewater Treatment Plant Operator Apprenticeship	Apprenticeship
10-527-2	Water Quality Technology (internship required)	Associate of Applied Science Degree
97-152-1	Web Site Coordinator	Certificate

All program-required General Education courses are online.

Notice The programs offered by Moraine Park Technical College, in large part, are based on labor market needs. As labor market needs change, courses within the programs may also change, new program offerings are developed and less in-demand programs may be discontinued in order to respond effectively to business, industry and the community. As a result, information in this catalog is correct at the time of printing but may change. Prospective students are advised to verify information with the Admission's Office at Moraine Park before enrolling or completing admission.

This catalog is not to be considered, in any way, a contractual agreement between the Moraine Park Technical College District and the student. The District administration reserves the right to change curricula, regulations and course offerings as published in this catalog during the period of any student's attendance.

Water Quality Technology

Associate of Applied Science Degree: 10-527-2

Moraine Park's Water Quality Technology program provides students with the skills and training to perform testing, analysis and treatment to community and industrial water supplies. Water Quality technicians are responsible for ensuring that the water we use is safe and that discharge water is processed effectively. Their work combines the precision and accuracy found in the biochemical laboratory with operational aptitude and troubleshooting skills. Each day, municipalities and industries generate billions of gallons of wastewater that must be collected, analyzed and treated.

Program graduates also have employment opportunities as environmental technicians and field service technicians at companies that design and install water treatment equipment for municipalities and manufacturing companies.

This associate of applied science degree offers targeted instruction and practical experience through online Internet-based courses and an on-the-job internship. Geographical location of the student does not matter, as long as the student can access the Internet. Completion of the degree can occur from anywhere on the globe.

Course Number	Course Title	Credits
Term 1		
527-100	Introduction to Wastewater Treatment	3
527-130	Groundwater Supply and Distribution	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**12**
Term 2		
527-103	Conventional Wastewater Treatment	3
527-111	Water Chemistry	4
527-131	Surface Water Supply and Treatment	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**16**
Term 3		
527-105	Advanced Wastewater Treatment Processes	4
527-120	Hydraulics of Water and Wastewater	3
527-136	Equipment Maintenance and Instrumentation	4
527-129	Utility Management	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**17**
Term 4		
527-171	Water Quality Internship	3
527-125	Industrial Wastes	3
527-150	Advanced Water Treatment	3
809-195	Economics	3
809-196	Introduction to Sociology	3
	Total	**15**
Required Elective Credits		3
	Total Program Credits	**63**

Exit Assessment
The Water Quality Internship includes an exit assessment, which is a graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Wind Energy Technology

Associate of Applied Science Degree: 10-482-1

The wind energy industry is the fastest growing segment of renewable energy production. The U.S. and Canadian commercial wind farms are experiencing annual growth of 25 percent. Employers seek skilled technicians for operation and maintenance activities in local wind farm settings. There is also intense demand for upper-level technicians within U.S. and international wind turbine manufacturers; these include installation technician, quality control technician, and warranty and commissioning technicians. Operation and maintenance positions remain with a given wind farm location; other technicians travel extensively with the development of new wind farms and repair/retrofitting of wind farms around the world.

Students are able to complete their general studies courses and a number of core program courses at Moraine Park and enroll in the Wind Energy Technology courses at Lakeshore Technical College (LTC). LTC's Wind Energy Technology courses focus on applying knowledge and skills to install, test, service and repair wind turbine components and Supervisory Control and Data Acquisition (SCADA) systems. They also focus on applying safety practices required on the job and learning safe wind turbine tower climbing skills.

Course Number	Course Title	Credits
MPTC Courses		
103-159	Computer Literacy - Microsoft Office	1
620-101	DC Circuits	3
620-102	AC Circuits	3
620-105	Industrial Hydraulics and Pneumatics 1	2
620-110	Integrated Manufacturing Planning - Mechatronics	2
620-111	Integrated Manufacturing Production - Mechatronics	2
620-115	AC-DC Machinery	4
620-133	Mechatronics Controls	3
620-135	Programmable Controllers	3
620-136	Advanced Programmable Controllers	3
620-151	Servomechanisms	3
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
804-113	College Technical Math 1A	3
804-114	College Technical Math 1B	2
806-137	Comprehensive Technical Physics	4
809-166	Introduction to Ethics: Theory and Application	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
Lakeshore Courses		
413-110	Introduction to Energy	2
449-113	Wind Technician Health and Safety	2
482-101	Introduction to Wind Systems	3
482-120	Wind Technician 1 Lab	1
482-122	Wind Technician 2	1
482-124	Wind Technician 3	1
482-126	Wind Technician 4	3
482-128	Wind Technician 5	2
482-103	Wind Farm Internship	2
	- OR -	
482-130	Wind Site Assessment	1
	- AND -	
482-132	Wind (Small) Turbine Maintenance	1
620-130	Introduction to Mechanisms Mechanics	3
	Total	**70**

What is an apprenticeship?

An apprenticeship combines on-the-job training, under the supervision of a skilled trade worker, with related classroom instruction aimed at providing the apprentice with a comprehensive knowledge of the trade. Apprenticeships are offered for both union and nonunion workers.

Apprentices are paid throughout their training period on a progressive wage scale that averages at least 60 percent of the journey-level worker's wages in that trade. The farther along the apprentice is in training, the higher the wages.

The employer/sponsor, the apprentice and the state sign an "indenture." This formal contract indicates the apprenticeship, wages and subjects to be covered in the classroom and on the job. Employers and apprentices have recourse if either party does not live up to the contract.

To get started in an apprenticeship:

1. Decide the field or trade you would like to pursue. High school students are encouraged to take courses in reading, writing, math, science and other trade courses related.
2. A person that wants to become an Apprentice is required to obtain an employer willing to sponsor them. Applicants may look for employment in the yellow pages, online and/or by contacting their trade committee.
   a. If you are interested in an Associated Builder & Contractors (ABC) Apprenticeship, contact them at 608-244-6056, Ext. 306.
      - ABC Electrician
      - ABC Carpentry
3. After an employer agrees to sponsor you, both you and your employer will need to complete an application from the Bureau of Apprenticeship Standards. **NOTE:** *We do not use the WI Technical College System applications for apprenticeship programs.*
   a. Applications can be found on www.dwd.state.wi.us/dweappr/ or you can call 608-266-3332.
4. Take the needed test—not all trades require the same testing and application process—and process all the required paperwork.
5. Once your application is approved by the state, you, your employer and the technical college will receive a copy of the contract. Moraine Park will then notify you and your employer when your classes will begin.
   - Only contracted apprentices are allowed to take apprenticeship classes at Moraine Park.
   - Fees for books and tuition are the responsibility for the apprentice, although some employers may assume these expenses.
   - Students enrolling in apprenticeship programs are not eligible for financial aid.

ABC Carpentry

Apprenticeship: 50-410-9
4 years/6,416 total hours

Carpentry includes residential, commercial and industrial buildings and structures such as bridges and dams. In this trade, you will be involved with layout; concrete forming; wood and metal framing of walls, floors and roofs; window and door installation; and a wide variety of interior and exterior finish applications. You will also learn to use a variety of hand and power tools. Physically demanding indoor and outdoor work with variable weather conditions. Work may involve being below ground or working at various heights. The carpentry program will include the use of green and sustainable construction practices.

Course Number	Course Title	Credits
Year 1		
410-531	ABC Carpentry 1	2
410-532	ABC Carpentry 2	2
Year 2		
410-533	ABC Carpentry 3	2
410-534	ABC Carpentry 4	2
Year 3		
410-535	ABC Carpentry 5	2
410-536	ABC Carpentry 6	2
Year 4		
410-537	ABC Carpentry 7	2
410-538	ABC Carpentry 8	2
	Total	**16**

Required paid instruction hours - 576.

Suggested Related Electives (unpaid related)		
410-302	Advanced Roof Framing	1
410-305	Advanced Stair Construction	1
410-306	Wisconsin Uniform Dwelling Code	1
410-307	Construction Measurement and Layout	1
410-311	Construction Trades Blueprint Reading	1
410-456	Rigging for Building Trades	.45
410-557	Estimating and Scheduling for Building Trades	.75
413-500	*OSHA 10	.50
442-322	Welding for Apprentices	1
455-455	*Transition to Trainer, Your Role as a Journeyworker	.20
531-465	*Heartsaver First Aid/CPR	.20

Other unpaid-related courses may be taken with the approval of the Advisory Committee.

*Required

Required unpaid related hours - 120

For apprenticeship application information, please contact Barbara Robakowski, Bureau of Apprenticeship Standards Representative at barbara.robakowski@dwd.wisconsin.gov or 262-335-5849.

For schooling information, please contact Fred Rice, Dean of Public Services & Health Sciences at frice@morainepark.edu or 920-924-3330.

Exit Assessment
A Checklist and Final Exam are the exit assessment graduation requirements for the program.

ABC Construction Electrician

Apprenticeship: 50-413-9
5 years/8,640 total hours

Electricians plan, diagram, install and repair electrical fixtures, apparatus and control equipment such as switches, relays and circuit breaker panels. They measure, cut, bend, thread, assemble and install electrical conduit (pipe or tubing), and pull wire through conduit. They test continuity of circuits to ensure compatibility and safety of components, using instruments such as the ohmmeter and electrical test meter.

Electricians assemble, install and wire electrical systems that operate heating, lighting, power, air conditioning and refrigeration components; electrical machinery; electronic equipment and controls; and signal and communications systems. Electricians need to be knowledgeable on the latest technology dealing with energy conservation and green sustainable work processes.

For safety, electricians must be able to master the more than 800 detailed sections of the National Electrical Code designed to protect persons and property from hazards arising from the use of electricity. This job also requires electricians to have the ability to distinguish colors.

(continued)

ABC Construction Electrician (cont.)

Course Number	Course Title	Credits
Year 1		
413-540	ABC Construction Electrician 1	2
413-541	ABC Construction Electrician 2	2
Year 2		
413-542	ABC Construction Electrician 3	2
413-543	ABC Construction Electrician 4	2
Year 3		
413-544	ABC Construction Electrician 5	2
413-545	ABC Construction Electrician 6	2
Year 4		
413-546	ABC Construction Electrician 7	2
413-547	ABC Construction Electrician 8	2
Year 5		
413-548	ABC Construction Electrician 9	2
413-549	ABC Construction Electrician 10	2
	Total	**20**

Based on Moraine Park's curriculum design, actual program hours will be delivered at 720 hours. The state has required a minimum of 700 hours paid-related instruction. Additional 200 unpaid-related hours are also required.

413-369	Electrical Maintenance and Troubleshooting	1
413-371	Electrical Estimating for Construction Trades	1
413-374	Advanced NEC, Construction Trade Apprentices	1
413-375	Basic Electrical Blueprint Reading for Construction Trades	1
413-381	Building Trades National Electric Code	2
413-390	Industrial Electricity 1 (Motor Control-JATC)	2
413-394	Basic Programmable Logic Controls	2
413-405	Electrical Code Update	.60
413-500	*OSHA 10	.50
442-322	Basic Welding Applications for Construction	1
455-455	*Transition to Trainer, Your Role as a Journeyworker	.20
531-465	*Heartsaver First Aid/CPR	.20

Other unpaid-related courses may be taken with the approval of the Advisory Committee.

*Required

For apprenticeship application information, please contact Barbara Robakowski, Bureau of Apprenticeship Standards Representative at barbara.robakowski@dwd.wisconsin.gov or 262-335-5849.

For schooling information, please contact Fred Rice, Dean of Public Services & Health Sciences at frice@morainepark.edu or 920-924-3330.

Exit Assessment
A Final Assessment Test and Checklist are the exit assessment graduation requirement for the program.

Barber/Cosmetologist

Apprenticeship: 50-502-1
2 years/4,000 total hours

Barbers/cosmetologists cut, trim, shampoo and style hair. They advise patrons on how to care for their hair, straighten, permanent wave and apply color. In addition, most cosmetologists are trained to give manicures, pedicures, and scalp and facial treatments; provide makeup analysis; and clean and style wigs and hairpieces. Barbers/cosmetologists generally work in clean, pleasant surroundings with good lighting and ventilation. Good health and stamina are important because much of the workday will be spent standing. The barber/cosmetologist works with current fashion trends to create a total look for today's men, women and children. Barbers/cosmetologists also need to stay current with the laws and regulations governing business operation, sanitation and safety.

Barber/Cosmetologist Program is accredited or approved by the State of Wisconsin Department of Safety and Professional Services.

Course Number	Course Title	Credits
Required courses:		
Three-semester program; one class per semester		
502-501	Shampooing, Cutting, Styling and Permanent Waving	3
502-502	Relaxing, Coloring, Nails and Skin	3
502-503	Health, Image, Structure and Law	3
	Total	**9**

Online delivery - Directed but not limited to students that may not have access to a school providing Cosmetology. A pre-online learning inventory is required prior to acceptance.

A state of Wisconsin Licensing Exam is required.

Based on Moraine Park's curriculum design, actual program hours will be delivered at 324 hours. The state has required a minimum of 288 hours paid-related instruction.

Students will begin the semester directly following their indenture date. There are no prerequisites.

Related Electives (unpaid related)

455-455	*Transition to Trainer, Your Role as a Journey Worker	.20

*Required

For apprenticeship application information, please contact Barbara Robakowski, Bureau of Apprenticeship Standards Representative at barbara.robakowski@dwd.wisconsin.gov or 262-335-5849.

For schooling information, please contact Fred Rice, Dean of Public Services & Health Sciences at frice@morainepark.edu or 920-924-3330.

Exit Assessment
The Mock State Board Exam is the exit assessment graduation requirement for the program.

Technical Studies - Journeyworker

Associate of Applied Science Degree: 10-499-5

This associate of applied science degree program is designed for journeyworkers from various trades who are interested in continuing their education and earning a degree customized to their career interests. Thirty-nine credits are granted toward the degree, based upon completion of a Wisconsin Journey certificate that includes 400 or more hours of instruction.

With a college advisor, the journeyworker identifies the knowledge and skills required achieving specific career goals. Existing courses become components of the journeyworker's program of study.

Selected coursework may be taken during the duration of the apprenticeship.

The 21-credit general studies required coursework is transferable to many 4-year institutions.

Course Number	Course Title	Credits
39 credits of advanced standing are granted for 400 hours of apprenticeship-related training. Based on 6,048 hours of on-the-job training.		39
General Studies Courses (see below)		21
Math		3
Communications (select 801-195 Written Communication and one additional communications course)		6
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting (Prerequisite: Written Communication)	3
	- OR -	
801-198	Speech	3
Social Science (select 809-166 Introduction to Ethics and one additional social science course)		6
809-166	Introduction to Ethics: Theory and Application (required)	3
809-195	Economics	3
	- OR -	
809-196	Introduction to Sociology	3
	- OR -	
809-197	Contemporary American Society	3
Behavioral Science (select one)		3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	
The remaining three General Education credits to be determined with academic advisor.		3
	Total Program Credits	**60**

(continued)

Technical Studies - Journeyworker (cont.)

NOTE: A minimum of 25 percent of total program requirements must be earned at the technical college from which you will receive your degree.

Exit Assessment
A Checklist Project is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Tool and Die Technologies

Apprenticeship: 50-439-4

3-4 years/10,400 total hours

Work in the machine tool trades incorporates a high degree of precision in the creation of various parts, fixtures and products utilized in the industry. Once primarily a metalworking trade, tool and die machining is now included in the plastics and wood industries. Almost all products used today have been influenced by the tool and die industry. From design specification and drawings, skilled workers in the tool and die/machine trades utilize power machining tools, hand tools, and computer-driven machines to create desired products.

Course Number	Course Title	Credits
First Semester - Fall 2012		
420-520	Mold Making	1
420-563	Machine Technology	1
420-580	2D CAD	1
804-582	Mathematics 1	1
	- OR -	
804-584	Mathematics 3	
Second Semester - Spring 2013		
420-579	Introduction to Computer-Aided Manufacturing	1
420-586	Die Making	1
422-505	Metallurgy	1
804-583	Mathematics 2	1
	- OR -	
804-585	Mathematics 4	
Third Semester - Fall 2013		
420-561	Jigs and Fixtures	0.5
420-572	3D CAD	1.5
421-555	Blueprint Reading	1
804-582	Mathematics 1	1
	- OR -	
804-584	Mathematics 3	
Fourth Semester - Spring 2014		
420-565	CNC	1.5
420-571	Sinker/Wire EDM	1.5
804-583	Mathematics 2	1
	- OR -	
804-585	Mathematics 4	
	Total	**16**

Required state paid instruction hours - 576.

Related Electives (unpaid related)

455-455	*Transition to Trainer, Your Role as a Journey Worker	.20
531-465	*Heartsaver First Aid/CPR	.20

*Required

For apprenticeship application information, please contact Barbara Robakowski, Bureau of Apprenticeship Standards Representative at barbara.robakowski@dwd.wisconsin.gov or 262-335-5849.

For schooling information, please contact Fred Rice, Dean of Public Services & Health Sciences at frice@morainepark.edu or 920-924-3330.

Exit Assessment
Comprehensive tests are the exit assessment graduation requirement for the program.

Wastewater Treatment Plant Operator Apprenticeship

Apprenticeship: 50-527-1

3 years/6,000 total hours (Online Only)

Wastewater treatment plant operators monitor, maintain and adjust a wide variety of systems used in the treatment of wastewater. They control plant processes to ensure the plant operates effectively. Operators monitor laboratory data, charts and computer control systems, which indicate performance status of a wide variety of biological nutrient and chemical removal. These workers operate various systems and processes, including activated sludge wastewater treatment systems; biological nutrient removal systems, digester gas system pressures and gas compressor operations; digester operating temperatures; heat exchangers; digester circulation pumps, pressures and flows; boilers and engine generators; influent rate and pumps; sludge and primary sedimentation levels and pumps; and sewage de-gritting systems. Personnel employed in these positions monitor and adjust sludge thickness on flotation thickeners and monitor and adjust the quantity of sludge in the thickener hopper and rate of pumping to digesters. Operators will back flush, clear and purge pumps and monitor and adjust flow rates. Plant operators operate and control sludge dewatering centrifuge and all associated systems. Operators also collect various samples and plant information, including composite samples; disinfection system samples; effluent samples, bay samples; and daily major industrial user samples. Personnel collect, record and maintain records as necessary for state and federal regulations. Advanced certifications exist in the industry.

Course Number	Course Title	Credits
Term 1		
527-100	Introduction to Wastewater Treatment	3
804-107	College Mathematics	3
	Total 1st Term Credits	**6**
Term 2		
527-103	Conventional Wastewater Treatment	3
527-111	Water Chemistry	4
	Total 2nd Term Credits	**7**
Term 3		
527-105	Advanced Wastewater Treatment Processes	4
527-120	Hydraulics of Water and Wastewater	3
527-136	Equipment Maintenance and Instrumentation	4
	Total 3rd Term Credits	**11**
	Total Program Credits	**24**

Related Electives (Unpaid Related)

455-455	*Transition to Trainer, Your Role as a Journey Worker	.20

*Required

Additional Requirements:

An employer may require an apprentice to complete First Aid, CPR, Confined Space Entry, (527-130) Groundwater Supply and Distribution, and applicable OSHA requirements. An employer may also require an apprentice to obtain a Commercial Driver License (CDL).

For apprenticeship application information, please contact Barbara Robakowski, Bureau of Apprenticeship Standards Representative at barbara.robakowski@dwd.wisconsin.gov or 262-335-5849.

For schooling information, please contact Fred Rice, Dean of Public Services & Health Sciences at frice@morainepark.edu or 920-924-3330.

Exit Assessment

Comprehensive tests are an exit assessment graduation requirement for the program.

Air Conditioning, Heating and Refrigeration Technology

Associate of Applied Science Degree: 10-601-1

The rapid regulation of the air conditioning, heating and refrigeration industry means high demand for qualified and certified technicians for residential and commercial applications.

The Heating, Ventilating, Air Conditioning and Refrigeration (HVAC/R) program teaches students how to install, repair and perform preventative maintenance for heating, air conditioning and refrigeration equipment. Coursework emphasizes efficient operation of equipment to ensure the lowest possible energy cost that the design allows. Students integrate the electronic controls from the equipment to the building or computer-operated environmental network. In addition, students study how to make the indoor living environment comfortable, air balancing, occupant comfort conditions, and indoor air quality testing.

This program offers extensive hands-on training. Students work with residential furnaces and air conditioning units and learn about commercial heating and cooling and building equipment, such as chillers, and refrigeration equipment, such as icemakers, walk-in freezers and many other pieces of equipment.

HVAC/R technicians should be good analytical thinkers and problem solvers.

Course Number	Course Title	Credits
Term 1		
601-107	Electricity and Electronics HVAC	3
601-118	Air Distribution	2
601-120	Fundamentals of Refrigeration	2
601-121	Refrigeration Service Techniques	2
801-195	Written Communication	3
804-107	College Mathematics	3
	- OR -	
804-113	College Technical Math 1A	3
	Total	**15**
Term 2		
419-105	Introduction to Pneumatic and Programmable Logic Controllers	2
601-108	Heating, Ventilation and Air Conditioning (HVAC) Schematics	2
601-122	Residential Air Conditioning	3
601-126	Residential Energy	3
601-127	Fundamentals of Building Controls	2
809-196	Introduction to Sociology	3
	Total	**15**
Term 3		
601-109	HVAC/R Code	1
601-123	Residential Heating Systems	3
601-128	Building Control Systems Applications	3
601-129	Commercial Food Service Refrigeration	3
801-196	Oral and Interpersonal Communication	3
809-195	Economics	3
	Total	**16**
Term 4		
601-116	Hydronic Environmental Systems	3
601-130	Supermarket Refrigeration	3
601-134	Commercial Heating and Air Conditioning	4
809-166	Introduction to Ethics: Theory and Application	3
809-199	Psychology of Human Relations	3
	Total	**16**
Required Elective Credits		6
	Total Program Credits	**68**

Exit Assessment
Capstone Projects or Troubleshooting Hands-on Application Investigations are an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Building Trades Construction Worker

Technical Diploma: 31-475-2

The Building Trades Construction Worker technical diploma program provides theoretical and hands-on applications in development skills needed to successfully enter the construction/building trades industry. This program goes through the entire process of building a residential and commercial building. Areas of emphasis include building fundamentals; framing and finish carpentry; print reading; thermography; trade-specific mathematics; estimating; building and site layout; plumbing, HVAC, and electrical applications; masonry; carpentry; tool use; computer literacy; first aid; safety; and green practices in the construction field and communications. Graduates may consider entering a state-approved apprenticeship program coordinated through the Department of Workforce Development, Bureau of Apprenticeship Standards or directly enter the construction industry.

Course Number	Course Title	Credits
Term 1		
461-321	Job Site Small Engine Maintenance and Repair	1
475-350	Safety Applications	2
475-351	Building Trades Fundamentals	5
475-352	Framing Construction	5
475-356	Concrete Masonry Applications	2
804-360	Occupational Mathematics 1	2
	Total	**17**
Term 2		
475-353	Exterior Finish	5
475-354	Interior Finish	5
475-355	Building Trades Mechanical Systems	3
801-310	Occupational Communication	2
	Total	**15**
	Total Program Credits	**32**

Exit Assessment
A checklist and interview are the exit assessment graduation requirements for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

Civil Engineering Technician - Structural

Associate of Applied Science Degree: 10-607-5

The Civil Engineering Technician - Structural program develops the knowledge and experience in planning and design skills to support the construction industry. Students apply computer-aided design and drafting (CADD) as it relates to architectural, structural and related design. Students are also introduced to concepts and requirements relating to green design (LEED) and construction practices. In addition to strong computer skills, students need strong math, spatial and analytical skills to meet the demands of the engineering coursework. (See the program outcomes.)

(continued)

Civil Engineering Technician - Structural (cont.)

Graduates work for civil engineering firms, architectural firms, contractors, surveyors, municipalities and public utilities.

Course Number	Course Title	Credits
Term 1		
607-112	Architectural Drafting	5
607-176	AutoCAD I	3
801-195	Written Communication	3
804-113	College Technical Math 1A	3
804-114	College Technical Math 1B	2
	Total	**16**
Term 2		
607-110	Civil Drafting Fundamentals	4
607-135	Construction Surveying	3
801-196	Oral and Interpersonal Communication	3
804-116	College Technical Math 2	4
809-195	Economics	3
	Total	**17**
Term 3		
607-114	Structural Drafting	4
607-122	Mechanical Construction	3
607-131	Structural Analysis 1	3
607-138	Soils	2
809-166	Introduction to Ethics: Theory and Application	3
809-199	Psychology of Human Relations - OR -	3
809-198	Introduction to Psychology	3
	Total	**18**
Term 4		
607-123	Construction Estimating	3
607-132	Structural Analysis 2	3
607-137	Site Investigation	3
607-150	Technical Problems	3
	Total	**12**
Required Elective Credits		6
	Total Program Credits	**69**

Exit Assessment
A Capstone Project is an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Commercial HVAC Certificate

Certificate: 97-601-4

Moraine Park's Commercial HVAC (Heating, Ventilating and Air Conditioning) Certificate provides students with the hands-on training to do a variety of work in air conditioning, ventilation, air balancing, indoor air quality testing and heating systems. As graduates, they perform installations, make repairs and perform other maintenance functions in rooftop units, building controls, DDC energy management systems, package HVAC equipment, chillers and air conditioners.

Successful people in the field are in good physical condition, are neat in appearance, have good customer skills, have good mechanical and electrical aptitude, and possess good analytical skills.

Graduates of this certificate may directly transfer their credits into Moraine Park's Air Conditioning, Heating and Refrigeration Technology associate of applied science degree if they wish to continue their education.

Course Number	Course Title	Credits
Term 1		
419-105	Introduction to Pneumatic and Programmable Logic Controllers	2
601-108	Heating, Ventilation and Air Conditioning (HVAC) Schematics	2
601-109	HVAC/R Code	1
601-116	Hydronic Environmental Systems	3
601-118	Air Distribution	2
601-126	Residential Energy	3
601-128	Building Control Systems Applications	3
601-134	Commercial Heating and Air Conditioning	4
	Total	**20**

Must have completed the prerequisites below or have advanced standing:

601-107	Electricity and Electronics HVAC
601-120	Fundamentals of Refrigeration
601-122	Residential Air Conditioning
601-123	Residential Heating Systems
601-127	Fundamentals of Building Controls

Commercial Refrigeration Certificate

Certificate: 97-601-2

Moraine Park's Commercial Refrigeration Certificate provides students with the theory and hands-on training in the operation, system design and component application, installation and start-up, preventative maintenance, and service repair of commercial refrigeration systems and equipment.

Graduates may work in the commercial refrigeration industry in one or more of the following areas:

- Service and installation of food and beverage refrigeration equipment
- Service and installation of supermarket equipment
- Service and repair of special refrigeration systems

Successful people in this field are in good physical condition, are neat in appearance, have good mechanical and electrical aptitude, and possess good analytical skills.

Graduates must pass the EPA refrigerant-handling certification and the Industry Competency Exam (ICE).

Graduates of this certificate may directly transfer their credits into Moraine Park's Air Conditioning, Heating and Refrigeration Technology associate of applied science degree if they wish to continue their education.

Course Number	Course Title	Credits
Term 1		
601-107	Electricity and Electronics HVAC	3
601-108	Heating, Ventilation and Air Conditioning (HVAC) Schematics	2
601-109	HVAC/R Code	1
601-120	Fundamentals of Refrigeration	2
601-121	Refrigeration Service Techniques	2
601-129	Commercial Food Service Refrigeration	3
601-130	Supermarket Refrigeration	3
	Total	**16**

Electrical Power Distribution

Technical Diploma: 31-413-2

The Electrical Power Distribution program provides theoretical and hands-on training in all phases of power line construction and maintenance. Individuals must have: the ability to work in a diverse work environment, the ability to work at heights and in all weather conditions, good eyesight and hearing, and manual dexterity to be successful in a career as a line mechanic. A Class A Commercial Driver's License (CDL) is included in the program.

This technical diploma program prepares students for entry-level employment as line technician trainees for electrical utilities, telephone companies and related businesses. Graduates of the program may enter their employer's apprentice program.

(continued)

Electrical Power Distribution (cont.)

Course Number	Course Title	Credits
Term 1		
413-103	Commercial Driver's License (CDL) Preparation	1
413-307	Electrical Theory and Safety 1	3
413-309	Line Technician 1	5
413-310	Line Technician 2	5
804-363	Algebraic Applications for Electrical Trades	2
809-300	Occupational Success Strategies	2
	Total	**18**
Term 2		
413-311	Line Technician 3	5
413-312	Line Technician 4	5
413-317	Electrical Theory and Safety 2	3
413-142	Introduction to Electrical Substation	3
806-375	Applied Science	2
	Total	**18**
	Total Program Credits	**36**

Exit Assessment
A Capstone Project/Demonstration is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

Students will need a physical prior to beginning this program.

A Commercial Driver's License Skill Test (413-403) is highly recommended for this program.

All 413-xxx EPD courses listed above are restricted to EPD program students.

Electrical Substation Certificate

Certificate: 97-413-1

The Electrical Substation Certificate offers students the opportunity to enhance their skills, enabling them to inspect and maintain electrical substations. Coursework introduces students to a basic understanding of the theories, process, systems and equipment used in electrical substations. The coursework equips students with the skills to compete in today's industry.

This certificate allows the student to take associate of applied science degree level courses without the time commitment of a full-time program. A portion of the credits can be applied toward the Electrical Power Distribution diploma if the student desires. If you have any questions on which courses will transfer, please contact Moraine Park Technical College.

Course Number	Course Title	Credits
Term 1		
413-142	Introduction to Electrical Substation	3
413-144	Substation Control and System Protection	3
413-146	Substation Testing and Diagnostics	3
413-307	Electrical Theory and Safety 1	3
	Total	**12**

Electricity

Technical Diploma: 31-413-1

Moraine Park's Electricity program provides students with the concepts of and extensive hands-on training in general electrical applications. Coursework develops basic knowledge and skills in residential, commercial and industrial electricity to prepare them for a career path in any of the three areas. In addition, students learn trade-specific mathematics, safety, electrical code, electrical theory, construction trades blueprint reading, basic programmable logic controls, and they will investigate the theories and principals of renewable energy and conservation.

The program is designed to help graduates enter the State Electrical Apprenticeship program through the Department of Workforce Development, Bureau of Apprenticeship Standards. Graduates are also prepared for employer-sponsored training programs.

Course Number	Course Title	Credits
Term 1		
413-350	Beginning Electrical Concepts	2
413-355	Residential and Commercial Wiring Concepts	3
413-360	Introduction to National Electrical Code	2
413-361	Intermediate National Electrical Code	2
413-363	OSHA Safety Construction Trades	1
413-370	Construction Trades Blueprint Reading	2
804-113	College Technical Math 1A	3
804-360	Occupational Mathematics 1	2
	Total	**17**
Term 2		
413-351	Advanced Electrical Concepts	2
413-365	Basic Motor Controls	3
413-380	Industrial Wiring Concepts	3
413-385	Electrical Fabrication	2
413-386	Trends in Electricity	1
801-310	Occupational Communication	2
	Total	**13**
	Total Program Credits	**30**

Exit Assessment
A Program Assessment Checklist is an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

3-D Animation Design Certificate

Certificate: 97-207-1

The 3-D Animation Design Certificate offers students the opportunity to enhance their skills, enabling them to design, develop, and author 3-D animation. Coursework introduces students to design software and development processes to support the 3-D animation design functions. The coursework combines technical skills with creativity and equips students with the skills to compete in today's industry.

This certificate allows the student to take associate of applied science degree level courses without the time commitment of a full-time program. A portion of the credits can be applied toward the Interactive Media Design associate of applied science degree if the student desires. If you have any questions on which courses will transfer, please contact Moraine Park Technical College.

Course Number	Course Title	Credits
Term 1		
207-126	Introduction to 3-D Animation	2
207-128	3-D Animation 2	3
207-138	Introduction to Maya	3
207-140	Texture Mapping	3
207-142	Lighting and Rendering	3
	Total	**14**

Animation Certificate

Certificate: 97-207-2

The Animation Design Certificate offers students the opportunity to enhance their skills, enabling them to design, develop, and author 2-D animation. Coursework introduces students to vector base animation, ink and paint, effects, lip-sync, sound, as well as compositing. The coursework combines technical skills with creativity and equips students with the skills to compete in today's industry.

This certificate allows the student to take associate degree level courses without the time commitment of a full-time program. A portion of the credits can be applied toward the Interactive Media Design Associate Degree if the student desires. If you have any questions on which courses will transfer, please contact Moraine Park Technical College.

Course Number	Course Title	Credits
Term 1		
207-122	Basic Drawing for Animation	3
207-124	Animation 1	3
207-130	Animation 2	3
207-134	Figure Drawing	3
207-136	Advanced Image Manipulation	3
	Total	**15**

Audio-Video Certificate

Certificate: 97-206-1

The Audio-Video Certificate offers students the opportunity to enhance their skills, enabling them to design, develop, and edit digital films. Coursework introduces students to a solid understanding of the theories, process, systems, and equipment used in digital video production. The coursework combines technical skills with creativity and equips students with the skills to compete in today's industry.

This certificate allows the student to take associate of applied science degree level courses without the time commitment of a full-time program. A portion of the credits can be applied toward the Interactive Media Design associate of applied science degree if the student desires. If you have any questions on which courses will transfer, please contact Moraine Park Technical College.

Course Number	Course Title	Credits
Term 1		
206-108	Motion / Visual Effects	2
206-110	Video / Sound Editing	3
206-122	Video Camera and Lighting Techniques	3
206-124	Pre-Production	3
206-126	Post Production	3
	Total	**14**

Electronic Publishing Certificate

Certificate: 97-204-2

This certificate helps students develop beginning-level electronic publishing skills. Students learn the software functions of Adobe Photoshop, Adobe Illustrator and InDesign software. Basic typographic and graphic design techniques are presented as well as an overview to the graphic communications field. This certificate is designed for individuals who are interested in acquiring entry-level skills for the graphic communications field. The coursework appeals to people who enjoy working with computer software and applying these software skills to graphic design projects.

Course Number	Course Title	Credits
Term 1		
103-170	Beginning Photoshop	2
103-174	InDesign	2
111-101	Introduction to Graphic Communication	3
204-100	Imaging Editing	2
204-102	Digital Illustration and Design	2
204-111	Typography	3
204-112	Digital Graphic Design	3
	Total	**17**

Graphic Communications

Associate of Applied Science Degree: 10-204-3

The Graphic Communications program combines the creativity of graphic design and the technology of **digital media** to prepare graduates for careers in graphic communications. Emphasis is placed on the use of the graphic design software to generate text, graphics and photos to create digital media for use in newsletters, flyers, display ads, forms, manuals, brochures and Web-based documents. First-year students work primarily online building design and layout skills using a variety of graphic production software. Second-year students continue to develop these skills through hands-on, classroom-based production experiences.

Course Number	Course Title	Credits
Term 1		
103-170	Beginning Photoshop	2
111-101	Introduction to Graphic Communication	3
204-112	Digital Graphic Design	3
204-121	Publishing Principles	2
801-195	Written Communication	3
809-199	Psychology of Human Relations	3
	Total	**16**
Term 2		
103-174	InDesign	2
104-160	Marketing Basics	1
152-107	Graphics for the Web	2
204-102	Digital Illustration and Design	2
204-111	Typography	3
204-163	Acrobat PDF	2
801-196	Oral and Interpersonal Communication	3
	Total	**15**

(continued)

Graphic Communications (cont.)

Course Number	Course Title	Credits
Term 3		
196-189	Team Building and Problem Solving	3
204-100	Imaging Editing	2
204-134	Design Production and Planning: Workflow	3
204-144	Electronic Illustration 2 With Vector Graphics	3
804-107	College Mathematics	3
	Total	**14**
Term 4		
204-116	Digital Graphic Imaging	3
204-168	Design Production and Planning 2: Digital Output	3
204-181	Prepress Process (Color)	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
809-196	Introduction to Sociology	3
	Total	**18**
Required Elective Credits		3
	Total Program Credits	**66**

Exit Assessment
Successful completion of course 204-168 Design, Production and Planning 2: Digital Output is the required exit assessment for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Interactive Media Design - Animation

Associate of Applied Science Degree: 10-206-4

Interactive Media Design program students develop knowledge and skills to design and manipulate graphics, animations, sound, text and video into multimedia presentations used in developing products or creating advanced business presentations. Program graduates will be capable of creating animated and live videos, virtual worlds and commercials, applications used in mobile devices and touch screen kiosks, digital signage and other Web-based media.

This program is ideal for individuals seeking entry-level careers as interactive multimedia designers and animators or for those who are already working as Web developers, graphic designers and artists who are seeking to update and expand their skills. The program includes alternative courses. The Animation Art emphasis, for those having strong artistic talent, involves conceiving and designing two- and three-dimensional images and manipulating characters to interact with audio and video elements while the Motion Graphics emphasis includes courses that focus on animated graphics.

Course Number	Course Title	Credits
Term 1		
152-106	Web Site Design	3
204-100	Imaging Editing	2
204-102	Digital Illustration and Design	2
206-104	Interactive Design and Authoring	3
206-106	Introduction to the Interactive Media Industry	1
207-122	Basic Drawing for Animation	3
801-195	Written Communication	3
	Total	**17**
Term 2		
152-107	Graphics for the Web	2
206-108	Motion/Visual Effects	2
206-110	Video/Sound Editing	3
207-124	Animation 1	3
207-126	Introduction to 3-D Animation	2
804-107	College Mathematics	3
	Total	**15**
Term 3		
206-114	Flash Animation Application OR	3
206-122	Video Camera and Lighting Techniques OR	3
206-124	Pre-Production OR	3
207-134	Figure Drawing OR	3
207-140	Texture Mapping	3
207-128	3-D Animation 2 OR	3
206-122	Video Camera and Lighting Techniques OR	3
206-124	Pre-Production OR	3
207-134	Figure Drawing	3
207-130	Animation 2	3
801-196	Oral and Interpersonal Communication	3
809-166	Introduction to Ethics: Theory and Application	3
809-198	Introduction to Psychology	3
	Total	**18**
Term 4		
145-185	Entrepreneurship OR	3
206-126	Post Production OR	3
207-136	Advanced Image Manipulation OR	3
207-142	Lighting and Rendering	3
206-118	Designing for Mobile Applications OR	3
206-126	Post Production OR	3
207-136	Advanced Image Manipulation OR	3
207-138	Introduction to Maya OR	3
207-142	Lighting and Rendering	3
206-120	Team Production	3
207-132	Virtual Worlds and Game Applications OR	3
206-126	Post Production OR	3
207-136	Advanced Image Manipulation OR	3
207-138	Introduction to Maya OR	3
207-142	Lighting and Rendering	3
801-198	Speech	3
809-195	Economics	3
	Total	**18**
	Total Program Credits	**68**

Exit Assessment
A Capstone Project is the exit assessment graduation requirement for this program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Interactive Media Design - Motion Graphics

Associate of Applied Science Degree: 10-206-4

Interactive Media Design program students develop knowledge and skills to design and manipulate graphics, animations, sound, text and video into multimedia presentations used in developing products or creating advanced business presentations. Program graduates will be capable of creating animated and live videos, virtual worlds and commercials, applications used in mobile devices and touch screen kiosks, digital signage and other Web-based media.

This program is ideal for individuals seeking entry-level careers as interactive multimedia designers and animators or for those who are already working as Web developers, graphic designers and artists who are seeking to update and expand their skills. The program includes alternative courses. The Animation Art emphasis, for those having strong artistic talent, involves conceiving and designing two- and three-dimensional images and manipulating characters to interact with audio and video elements while the Motion Graphics emphasis includes courses that focus on animated graphics.

Course Number	Course Title	Credits
Term 1		
152-106	Web Site Design	3
204-100	Imaging Editing	2
204-102	Digital Illustration and Design	2
206-104	Interactive Design and Authoring	3
206-106	Introduction to the Interactive Media Industry	1
207-122	Basic Drawing for Animation	3
801-195	Written Communication	3
	Total	**17**
Term 2		
152-107	Graphics for the Web	2
204-112	Digital Graphic Design	3
206-108	Motion/Visual Effects	2
206-110	Video/Sound Editing	3
207-126	Introduction to 3-D Animation	2
804-107	College Mathematics	3
	Total	**15**

(continued)

Interactive Media Design - Motion Graphics (cont.)

Course Number	Course Title	Credits
Term 3		
204-116	Digital Graphic Imaging	3
206-114	Flash Animation Application OR	3
206-122	Video Camera and Lighting Techniques OR	3
206-124	Pre-Production OR	3
207-134	Figure Drawing OR	3
207-140	Texture Mapping	3
207-128	3-D Animation 2 OR	3
206-122	Video Camera and Lighting Techniques OR	3
206-124	Pre-Production OR	3
207-134	Figure Drawing	3
801-196	Oral and Interpersonal Communication	3
809-166	Introduction to Ethics: Theory and Application	3
809-198	Introduction to Psychology	3
	Total	**18**
Term 4		
145-185	Entrepreneurship OR	3
206-126	Post Production OR	3
207-136	Advanced Image Manipulation OR	3
207-142	Lighting and Rendering	3
206-118	Designing for Mobile Applications OR	3
206-126	Post Production OR	3
207-136	Advanced Image Manipulation OR	3
207-138	Introduction to Maya OR	3
207-142	Lighting and Rendering	3
206-120	Team Production	3
207-132	Virtual Worlds and Game Applications OR	3
206-126	Post Production OR	3
207-136	Advanced Image Manipulation OR	3
207-138	Introduction to Maya OR	3
207-142	Lighting and Rendering	3
801-198	Speech	3
809-195	Economics	3
	Total	**18**
	Total Program Credits	**68**

Exit Assessment
A Capstone Project is the exit assessment graduation requirement for this program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **3rd** semester

Business, Management and Administration

Administrative Professional

Associate of Applied Science Degree: 10-106-6

In the age of technology, the role of the administrative assistant has broadened not only to include the administrative and office functions needed to run an organization efficiently but also to possess a solid foundation in the technological equipment that supports these functions.

Moraine Park's Administrative Professional coursework prepares students to provide customer service, produce business communications, manage projects, plan meetings and events, and perform an array of other office responsibilities. Students also develop high-level skills in common software applications such as databases and spreadsheets.

They find employment in industrial/manufacturing, service, educational, insurance, sales, human resources and government settings. Administrative assistants enjoy working with others, have good oral and written communication skills, possess strong organizational skills, and project a professional attitude and image.

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
106-120	Document Processing	1
106-138	Computer Essentials	2
106-163	Database and Spreadsheet Essentials	3
106-181	Document Standards and Expectations	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**18**
Term 2		
102-135	Business Technology and Innovation	3
106-121	Advanced Document Processing	1
106-164	Business Applications for Microsoft Office	3
106-182	Document Management	3
196-189	Team Building and Problem Solving	3
801-196	Oral and Interpersonal Communication	3
	Total	**16**
Term 3		
101-184	Principles of Accounting	3
102-101	Customer Service Essentials	3
106-111	Business Communications	3
106-113	Business Publications	3
809-195	Economics	3
809-196	Introduction to Sociology	3
	Total	**18**
Term 4		
105-150	Business Practice Firm	3
106-142	Business Meeting and Event Planning	3
106-180	Business Protocol	3
809-166	Introduction to Ethics: Theory and Application	3
809-199	Psychology of Human Relations	3
	Total	**15**
	Total Program Credits	**67**

Exit Assessment
A Capstone Project is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **3rd** semester

Advanced Office Software Suite Certificate

Certificate: 97-103-3

Students in this advanced certificate series gain knowledge and skills in the following office software:

- Advanced word processing
- Advanced spreadsheet, worksheet and workbook
- Advanced database creation and manipulation
- Advanced presentation application
- Linking and embedding capabilities

This ten-credit advanced certificate provides training in advanced Microsoft Office applications, including Word, Excel, Access, PowerPoint and integration between these programs.

(continued)

Advanced Office Software Suite Certificate (cont.)

The Advanced Office Software Suite Certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program and the credits may later be applied toward a degree or diploma. This certificate complements many Moraine Park degree and diploma programs.

Course Number	Course Title	Credits
Term 1		
103-164	Advanced Microsoft Integration	2
103-183	Advanced Microsoft PowerPoint	2
103-188	Advanced Microsoft Access	2
103-190	Advanced Microsoft Excel	2
106-159	Advanced Microsoft Word	2
	Total	**10**

Business Management - Management and Supervision

Associate of Applied Science Degree: 10-102-3

The Business Management program is designed for individuals who are seeking an entry-level business-related position, pursuing self-employment or seeking a job change or advancement. Students receive a broad background in business fundamentals with specific skills in managing operations, marketing, accounting, supervision and computer software applications. Teamwork, problem solving, communication skills and ethical behavior are emphasized as well.

Emphasis Description

The Management and Supervision emphasis provides you with the skills and knowledge necessary to be a successful leader in today's fast-changing work environment. The program is designed to train and educate you in supervisory and management skills in service, manufacturing and nonprofit organizations. You will develop skills in leadership, human resources, teamwork, quality, finance, marketing, operations, labor relations/business law, employee training, problem solving and safety. In addition, you will develop communication skills in writing and speaking.

You can also consider:

- Marketing Emphasis
- Small Business Entrepreneurship Emphasis

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
102-135	Business Technology and Innovation	3
196-189	Team Building and Problem Solving	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**15**
Term 2		
101-184	Principles of Accounting	3
102-120	Principles of Management	3
104-102	Marketing Principles	3
105-160	Business Law	3
801-196	Oral and Interpersonal Communication	3
809-196	Introduction to Sociology	3
	Total	**18**
Term 3		
101-134	Introduction to Finance	3
102-101	Customer Service Essentials	3
102-130	Introduction to Human Resources	3
106-111	Business Communications	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**15**
Term 4		
104-140	Integrated Marketing Communications	3
105-140	Business Decision Making	3
105-150	Business Practice Firm	3
196-192	Managing for Quality	3
809-195	Economics	3
809-199	Psychology of Human Relations	3
	Total	**18**
	Total Program Credits	**66**

Exit Assessment

Successful completion of 105-150 Business Practice Firm is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Business Management - Marketing

Associate of Applied Science Degree: 10-102-3

The Business Management program is designed for individuals who are seeking an entry-level business-related position, pursuing self-employment or seeking a job change or advancement. Students receive a broad background in business fundamentals with specific skills in managing operations, marketing, accounting, supervision and computer software applications. Teamwork, problem solving, communication skills and ethical behavior are emphasized as well.

Emphasis Description

The Marketing emphasis is designed to prepare individuals for employment in marketing, sales management and retail management fields. Students will learn current practices and acquire knowledge in marketing fundamentals; management; sales; retail operations; sales force management; and new applications in the art of advertising, promotion and selling.

The coursework combines technical skills with creativity and equips students with the skills to compete in the current industry environment. Successful marketing professionals enjoy working with people, have excellent communication skills and present a professional appearance.

You can also consider:

- Management and Supervision Emphasis
- Small Business Entrepreneurship Emphasis

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
102-135	Business Technology and Innovation	3
104-102	Marketing Principles	3
196-189	Team Building and Problem Solving	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**18**
Term 2		
102-120	Principles of Management	3
104-120	Introduction to Digital Marketing	3
104-140	Integrated Marketing Communications	3
105-160	Business Law	3
801-196	Oral and Interpersonal Communication	3
809-196	Introduction to Sociology	3
	Total	**18**
Term 3		
101-184	Principles of Accounting	3
102-101	Customer Service Essentials	3
104-105	Selling	3
106-111	Business Communications	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**15**
Term 4		
104-107	Merchandising Management	3
105-140	Business Decision Making	3
105-150	Business Practice Firm	3
809-195	Economics	3
809-199	Psychology of Human Relations	3
	Total	**15**
	Total Program Credits	**66**

(continued)

Business Management - Marketing (cont.)

Exit Assessment
Successful completion of 105-150 Business Practice Firm is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Business Management - Small Business Entrepreneurship

Associate of Applied Science Degree: 10-102-3

The Business Management program is designed for individuals who are seeking an entry-level business-related position, pursuing self-employment or seeking a job change or advancement. Students receive a broad background in business fundamentals with specific skills in managing operations, marketing, accounting, supervision and computer software applications. Teamwork, problem solving, communication skills and ethical behavior are emphasized as well.

Emphasis Description

The Small Business Entrepreneurship emphasis is designed for people interested in exploring the components of small business start-up and operation. Coursework provides new and existing entrepreneurs hands-on training in the areas of business planning, financing, marketing, customer service, financial management and business communications.

You can also consider:

- Management and Supervision Emphasis
- Marketing Emphasis

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
102-135	Business Technology and Innovation	3
196-189	Team Building and Problem Solving	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**15**
Term 2		
101-184	Principles of Accounting	3
102-120	Principles of Management	3
104-102	Marketing Principles	3
105-160	Business Law	3
801-196	Oral and Interpersonal Communication	3
809-196	Introduction to Sociology	3
	Total	**18**
Term 3		
102-101	Customer Service Essentials	3
102-130	Introduction to Human Resources	3
106-111	Business Communications	3
145-185	Entrepreneurship	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**15**
Term 4		
101-134	Introduction to Finance	3
104-140	Integrated Marketing Communications	3
105-150	Business Practice Firm	3
145-189	Writing a Small Business Plan	3
809-195	Economics	3
809-199	Psychology of Human Relations	3
	Total	**18**
	Total Program Credits	**66**

Exit Assessment
Successful completion of 105-150 Business Practice Firm is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Customer Service Certificate

Certificate: 97-106-5

This certificate prepares students for entry-level customer service positions such as customer service representative or receptionist.

The coursework offers a foundation in computer skills typically used in customer service careers as well as develops the skills and techniques focused on meeting customer wants and needs.

Individuals interested in this field should enjoy providing information to and resolving issues for customers whether it is in person, using the telephone or on the Internet. They must also enjoy working with a computer to input and access electronic data.

Course Number	Course Title	Credits
Term 1		
102-101	Customer Service Essentials	3
103-159	Computer Literacy - Microsoft Office	1
103-165	Exploring the Internet With Client Software	1
106-112	Information Storage and Retrieval	2
106-120	Document Processing	1
801-196	Oral and Interpersonal Communication	3
890-125	Student Success	1
	Total	**12**

Entrepreneurship Certificate

Certificate: 97-145-1

The Entrepreneurship Certificate is designed for people interested in exploring the components of small business start-up and operation. Coursework provides new and existing entrepreneurs hands-on training in the areas of business planning, financing, marketing, customer service, financial management and business communications.

Course Number	Course Title	Credits
Term 1		
101-184	Principles of Accounting	3
102-110	Introduction to Business	3
102-120	Principles of Management	3
104-102	Marketing Principles	3
	Total	**12**
Term 2		
102-135	Business Technology and Innovation	3
104-140	Integrated Marketing Communications	3
145-185	Entrepreneurship	3
145-189	Writing a Small Business Plan	3
	Total	**12**
	Total Program Credits	**24**

Human Resource Development Certificate

Certificate: 97-196-1

This certificate establishes a foundation for developing employee effectiveness by focusing on the supervisor's role in understanding, communicating and implementing organizational policies. Coursework entails: employment law; skills and tools to enhance employee performance, motivation and development; and workplace safety and health programs.

(continued)

Human Resource Development Certificate (cont.)

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can later be applied toward the Human Resources associate of applied science degree if the student desires. In addition, graduates or students currently enrolled in a program may find they have already completed some of the certificate's requirements.

These classes are offered in the accelerated format and are designed for employed adults. Classes meet for six weeks, four hours per week. Extensive out-of-class work is required. Courses in this certificate can be customized for on-site company training.

Course Number	Course Title	Credits
Term 1		
196-134	Legal Issues in the Workplace	3
196-136	Safety in the Workplace	3
196-193	Human Resource Management	3
	Total	**9**

Human Resources

Associate of Applied Science Degree: 10-196-4

The Human Resources associate of applied science degree program prepares you with general skills in communication, human relations and business fundamentals. You will also develop specific skills in the Human Resource areas of recruiting; coordinating the hiring, benefits, and training and orientation process; maintaining personnel records; safety; and planning company special events and functions.

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
102-130	Introduction to Human Resources	3
102-135	Business Technology and Innovation	3
196-189	Team Building and Problem Solving	3
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
	Total	**18**
Term 2		
101-141	Payroll Accounting	3
102-120	Principles of Management	3
196-136	Safety in the Workplace	3
196-164	Personal Skills for the Workplace	3
196-194	Human Resource Recordkeeping	3
809-196	Introduction to Sociology	3
	Total	**18**
Term 3		
196-134	Legal Issues in the Workplace	3
196-152	Orientation and Training	3
196-154	Recruiting and Hiring	3
804-107	College Mathematics	3
809-199	Psychology of Human Relations	3
	- OR -	
809-198	Introduction to Psychology	3
	Total	**15**
Term 4		
105-150	Business Practice Firm OR Internship	3
106-142	Business Meeting and Event Planning	3
196-151	Employee Relations	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
	Total	**15**
	Total Program Credits	**66**

Exit Assessment
Completion of 105-150 Business Practice Firm (or internship) is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Leadership Development

Associate of Applied Science Degree: 10-196-1

The Leadership Development program offers training in leadership; human relations; budgeting; quality, legal and safety issues; problem solving and team building; and diversity and change management. The role of the traditional supervisor is changing, and the new supervisor must be able to balance employee participation with the need to meet established goals.

This program is offered in an accelerated format and is designed for employed adults. Each class runs six weeks and meets once each week for four hours. Courses are offered at all three campuses with sections available mornings, evenings and online. Core courses are offered at scheduled times, while support, general studies and electives courses may be taken at any time. Extensive out-of-class work is required. Courses within the program can be customized for on-site company training.

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
196-189	Team Building and Problem Solving	3
196-191	Supervision	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**15**
Term 2		
103-180	Microsoft Excel	2
	- OR -	
103-182	Microsoft PowerPoint	2
196-164	Personal Skills for the Workplace	3
196-190	Leadership Development	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
	- OR -	
801-198	Speech	3
809-195	Economics	3
	Total	**14**
Term 3		
196-134	Legal Issues in the Workplace	3
196-136	Safety in the Workplace	3
196-168	Organizational Development	3
196-169	Diversity and Change Management	3
809-199	Psychology of Human Relations	3
	- OR -	
809-198	Introduction to Psychology	3
	Total	**15**
Term 4		
101-184	Principles of Accounting	3
196-188	Project Management	3
196-192	Managing for Quality	3
196-193	Human Resource Management	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
	Total	**18**
Required Elective Credits		3
	Total Program Credits	**65**

Exit Assessment
A program outcome checklist is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Legal Administrative Professional

Associate of Applied Science Degree: 10-106-3

The Legal Administrative Professional program prepares students to provide client services; produce and coordinate legal communications, documents and information; and organize and maintain files. The coursework focuses on concepts, procedures and skills specific to the legal environment.

Individuals interested in this career are detail-oriented, have strong communication skills and enjoy working with others.

Graduates are employed in private law firms, the court system, government offices, financial trust departments or private industry. They work in a variety of law fields including bankruptcy, business and corporate, criminal, divorce and family, government, trademark and copyright, real estate, civil litigation, tax law, and estate planning.

Course Number	Course Title	Credits
Term 1		
106-120	Document Processing	1
106-124	Keyboarding, Speed and Accuracy Improvement	1
106-163	Database and Spreadsheet Essentials	3
106-178	Legal Office Professional	3
106-181	Document Standards and Expectations	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**17**
Term 2		
102-135	Business Technology and Innovation	3
106-164	Business Applications for Microsoft Office	3
106-167	Legal Processes and Systems	3
106-182	Document Management	3
801-196	Oral and Interpersonal Communication	3
	Total	**15**
Term 3		
102-101	Customer Service Essentials	3
106-111	Business Communications	3
106-175	Legal Documents Production 1	2
106-176	Legal Documents Production 2	2
809-195	Economics	3
809-196	Introduction to Sociology	3
	Total	**16**
Term 4		
101-184	Principles of Accounting	3
106-169	Law Office Applications	3
196-189	Team Building and Problem Solving	3
809-166	Introduction to Ethics: Theory and Application	3
809-199	Psychology of Human Relations	3
	Total	**15**
Required Elective Credits		4
	Total Program Credits	**67**

Exit Assessment
A Project Checklist is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Legal Office Skills Certificate

Certificate: 97-106-4

This certificate assists individuals who have general business/office skills in gaining specialized training for the legal office environment and assists individuals currently in the legal environment to enhance their skills or credential their legal work experience.

Coursework is drawn from the Legal Administrative Professional associate of applied science degree to provide an overview of the court system and office functions specific to the legal environment. In addition, students develop the skills to prepare documents for court filing in civil, criminal and small claims cases as well as, but not limited to, documents for real estate, family law and corporate law.

This certificate enables students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can later be applied toward a degree if the student desires.

This certificate can be completed part-time during the days or evenings. A combination of instructor-led and Internet courses are available to meet the needs of the working adult.

Course Number	Course Title	Credits
Term 1		
103-159	Computer Literacy - Microsoft Office	1
106-167	Legal Processes and Systems	3
106-169	Law Office Applications	3
106-175	Legal Documents Production 1	2
106-176	Legal Documents Production 2	2
106-178	Legal Office Professional	3
	Total	**14**

Medical Office Specialist

Technical Diploma: 31-106-2

Graduates of the Medical Office Specialist program find employment in individual physician's offices, clinics, outpatient clinics, health insurance companies, laboratories, medical supplies and equipment companies, nursing homes, skilled nursing facilities and public health departments.

Medical Office Specialists combine medical office skills with computer skills. Necessities for the field are strong ethical values and confidentiality standards. Strong human relations skills are important when dealing with the needs of patients on a daily basis.

Major skills learned in the program include:

- Medical Terminology
- Health Insurance/Coding
- Legal and Ethical Compliance in the Health Care Setting
- Customer Service
- Medical Billing, Scheduling and Electronic Medical Record Software
- Problem Solving
- Applications Software (Word, Access, Excel, PowerPoint)
- Medical Transcription of Medical Documents

High school courses helpful in preparing for the program are Medical Terminology, Anatomy, keyboarding, computer software and English.

Course Number	Course Title	Credits
Term 1		
106-120	Document Processing	1
106-138	Computer Essentials	2
501-101	Medical Terminology	3
501-107	Introduction to Healthcare Computing	2
509-301	Medical Assistant Administrative Procedures	2
509-307	Medical Office Insurance and Finance	2
801-195	Written Communication	3
	Total	**15**

(continued)

Medical Office Specialist (cont.)

Course Number	Course Title	Credits
Term 2		
106-151	Specialized Insurance Claims	2
106-152	Electronic Patient Billing	2
106-154	Medical Office Applications	3
106-160	Medical Office Practicum	2
501-108	Pharmacology for Allied Health	2
509-302	Human Body in Health and Disease	3
509-309	Medical Law, Ethics and Professionalism	2
	Total	**16**
	Total Program Credits	**31**

Exit Assessment
Medical Office Practicum (106-160) is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
890-130 Career Development - take **2nd** semester

Students will need to complete Basic Math Proficiency.

Multilingual Business Certificate

Certificate: 97-106-9

The Multilingual Business Certificate prepares students to provide services in both a multilingual and multicultural business environment. Business service areas might include government, legal, education, telecommunications, health care, banking, attractions, hotels and resorts, and museums. As a student in this certificate, you will:

- Compose and produce documents in English and a second language.
- Apply business technology tools to communicate verbally/orally.
- Use a variety of software applications.
- Manage multicultural business practices.
- Provide multicultural customer service.
- Integrate the following core skills: customer service, team player, keyboarding, computer skills and value diversity.

Course Number	Course Title	Credits
Term 1		
106-117	Fundamentals of Interpretation and Translation	2
106-120	Document Processing	1
106-127	Office Software for Multilingual	3
802-109	Spanish 1	2
802-110	Spanish 2	2
	Total	**10**
Term 2		
106-128	Technology and Services for Translation	2
106-129	Multilingual Business Essentials	3
802-111	Spanish 3	2
	Total	**7**
	Total Program Credits	**17**

Office Assistant

Technical Diploma: 31-106-1

Moraine Park's Office Assistant program is designed to provide individuals with the skills to perform fundamental office functions in a variety of business settings. The coursework trains students to use advanced word processing skills, produce business documents, maintain and retrieve files/records, perform basic accounting functions, create spreadsheets and databases, and provide customer service.

Most of the courses from this program can be directly transferred into Moraine Park's Administrative Professional and Legal Administrative Professional associate of applied science degrees should students choose to continue their education.

Note: Individuals with keyboarding experience may elect to obtain advanced standing credit for the Keyboarding course (106-103) by successfully meeting the requirements through a timed test provided at the College.

Course Number	Course Title	Credits
Term 1		
102-101	Customer Service Essentials	3
106-103	Keyboarding	1
106-120	Document Processing	1
106-138	Computer Essentials	2
106-163	Database and Spreadsheet Essentials	3
106-181	Document Standards and Expectations	3
801-195	Written Communication	3
	- OR -	
801-322	Occupational Writing	1
	Total	**14 or 16**
Term 2		
101-184	Principles of Accounting	3
102-135	Business Technology and Innovation	3
106-121	Advanced Document Processing	1
106-164	Business Applications for Microsoft Office	3
106-182	Document Management	3
196-189	Team Building and Problem Solving	3
	Total	**16**
	Total Program Credits	**30 or 32**

Exit Assessment
A Portfolio is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **2nd** semester

Students will need to complete Basic Math Proficiency.

If associate of applied science degree General Education course 801-195 option is chosen, higher assessment test scores will be required. Please contact an Admissions Specialist for assistance.

Office Software Suite Certificate

Certificate: 97-103-2

Students in this certificate series gain knowledge and skills in the following office software:

- Windows
- Word processing
- Database
- Spreadsheet
- Presentation graphics
- Linking and embedding capabilities

This nine-credit certificate provides training in Microsoft Windows operating system, Word, Access, Excel and PowerPoint software packages, as well as entry-level integration of these applications.

Office Software Suite allows students to take associate of applied science degree courses without the time commitment of a full-time program; the credits can later be applied toward a degree or diploma if the student desires. Students may also find that this certificate complements many Moraine Park degree and diploma programs. In addition, graduates or students may find they have already completed some of the certificate's requirements.

Course Number	Course Title	Credits
Term 1		
103-160	Microsoft Word	2
103-180	Microsoft Excel	2
103-181	Microsoft Access	2
103-182	Microsoft PowerPoint	2
103-189	Microsoft Windows	1
	Total	**9**

Organizational Management Certificate

Certificate: 97-196-3

This certificate focuses on the organization of an office or business and project management and quality issues.

Coursework develops skills to manage staff behaviors and design processes, analyze problems and create solutions to manage projects, and gain knowledge of concepts and tools to improve quality.

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can later be applied toward a degree or diploma if the student desires. In addition, graduates or students currently enrolled in a program may have already completed some of the certificate's requirements.

These classes are offered in the accelerated format and are designed for employed adults. Classes meet for six weeks, four hours per week. Extensive out-of-class work is required.

Courses in this certificate can be customized for on-site company training.

Course Number	Course Title	Credits
Term 1		
196-168	Organizational Development	3
196-188	Project Management	3
196-192	Managing for Quality	3
	Total	**9**

Principles of Management Certificate

Certificate: 97-196-2

This certificate develops students' management and leadership skills. These five, three-credit classes provide supervisors and those who want to be supervisors the tools to be more effective. Students study and apply various management concepts, such as leadership skills and styles, motivation, conflict resolution and team building.

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can later be applied toward a degree if the student desires. In addition, graduates or students currently enrolled in a program may find they have already completed some of the certificate's requirements.

These classes are offered in the accelerated format and are designed for employed adults. Classes meet for six weeks, four hours per week. Extensive out-of-class work is required.

Courses in this certificate can be customized for on-site company training.

Course Number	Course Title	Credits
Term 1		
196-164	Personal Skills for the Workplace	3
196-169	Diversity and Change Management	3
196-189	Team Building and Problem Solving	3
196-190	Leadership Development	3
196-191	Supervision	3
	Total	**15**

Quality/Supervision Certificate

Certificate: 97-623-3

This certificate focuses on the management skills necessary in the field of quality management. Five courses complete the series. Classes are a combination of the Leadership Development and Quality program areas, providing individuals with an interdisciplinary experience.

Courses are scheduled days, evenings and weekends throughout the campus locations and some are offered online. The classes are offered in an accelerated format and designed for working adults. Extensive out-of-class work is required.

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program. The credits can later be applied toward an associate of applied science degree if so desired. In addition, graduates or those currently enrolled in a program may find they have already completed some of the certificate's requirements.

Courses in this certificate can be customized for on-site company training.

Course Number	Course Title	Credits
Term 1		
196-189	Team Building and Problem Solving	3
196-191	Supervision	3
623-151	Lean Manufacturing	3
623-167	ISO 9000/2000 and Auditing	3
804-107	College Mathematics	3
	Total	**15**

Instructional Assistant

Associate of Applied Science Degree: 10-522-2

The Instructional Assistant associate of applied science degree prepares qualified individuals to work directly with students under the supervision of a licensed teacher. Students develop the skills to assist children with math, science, reading and writing assignments, as well as handle classroom management, clerical and other tasks related to instruction. This program meets Title I requirements.

Duties may also include monitoring student activities, assisting with reading, correcting papers, tutoring, one-on-one activities and small group facilitation. In addition, instructional assistants work on classroom displays, assist children with computers and media, and supervise various classroom and other school events. Instructional Assistants may be hired to provide instructional services to students from prekindergarten through high school; however, the focus of this program is on preparing graduates to work primarily in elementary and middle schools.

This program fulfills the requirements of the No Child Left Behind Act (NCLB Act) for paraprofessionals.

Course Number	Course Title	Credits
Term 1		
522-102	IA: Techniques for Reading and Language Arts	3
522-103	IA: Introduction to Educational Practices	3
522-106	IA: Child and Adolescent Development	3
	- OR -	
307-179	ECE: Child Development	3
801-195	Written Communication	3
	Total	**12**
Term 2		
522-111	IA: Guiding and Managing Behavior	3
	- OR -	
307-188	ECE: Guiding Children's Behavior	3
522-120	IA: Techniques for Science	3
522-122	IA: Advanced Reading and Language Arts	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
804-107	College Mathematics	3
	- OR -	
806-122	Natural Science in Society	3
	Total	**15**
Term 3		
522-101	IA: Teamwork in School Settings	3
	- OR -	
307-195	ECE: Family and Community Relationships	3
522-107	IA: Overview of Special Education	3
	- OR -	
307-187	ECE: Children With Differing Abilities	3
522-118	IA: Techniques for Math	3
522-132	IA: Positive Classroom Management Techniques	3
809-166	Introduction to Ethics: Theory and Application	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**18**
Term 4		
522-104	IA: Technology and Media Resources	3
522-129	IA: Practicum 1	3
522-131	IA: Practicum 2	3
522-124	IA: Supporting Students With Disabilities	3
809-172	Race, Ethnic and Diversity Studies	3
809-196	Introduction to Sociology	3
	Total	**18**
Required Elective Credits		3
	Total Program Credits	**66**

Exit Assessment
A Practicum is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Introduction to the Instructional Assistant Career Certificate

Certificate: 97-522-2

This certificate is designed for anyone with an interest in the roles of instructional assistants or educational paraprofessionals working with ages preschool through grade twelve. Courses provide an overview of the variety of duties assisting teachers in implementing instructional programs for individuals or small groups of students. The coursework in this certificate program provides a basic foundation in theory and practical application of how children learn, teaching strategies, developing positive relationships with students, supporting the classroom teacher with classroom management, and addressing the needs of special needs students. All courses transfer to the Instructional Assistant associate of applied science degree.

Course Number	Course Title	Credits
Term 1		
522-101	IA: Teamwork in School Settings	3
522-103	IA: Introduction to Educational Practices	3
522-106	IA: Child and Adolescent Development	3
522-107	IA: Overview of Special Education	3
522-111	IA: Guiding and Managing Behavior	3
	Total	**15**

Supporting Children's Learning Certificate

Certificate: 97-522-1

This certificate is designed to further the professional development needs of anyone preparing for, or already engaged in, an instructional assistant or educational paraprofessional position. The coursework in this certificate program addresses methods for assisting in the instruction, guidance and classroom management of students by performing a variety of instructional support activities related to grade-level curriculum. Integrating current technology into the learning environment is also introduced. All courses transfer to the Instructional Assistant associate of applied science degree.

Course Number	Course Title	Credits
Term 1		
522-102	IA: Techniques for Reading and Language Arts	3
522-104	IA: Technology and Media Resources	3
522-111	IA: Guiding and Managing Behavior	3
522-118	IA: Techniques for Math	3
522-120	IA: Techniques for Science	3
	Total	**15**

Accounting

Associate of Applied Science Degree: 10-101-1

The Accounting program provides the foundation for individuals to prepare financial statements and record business transactions for all types of business and industry. Coursework trains students in all facets of accounting including financial, cost, payroll, taxes, auditing and computerized systems. Students develop a strong knowledge base of Generally Accepted Accounting Principles (GAAP), accounting procedures and software applications for accounting processes. Using computers, students gain hands-on experience to process financial data into information for reporting, planning, controlling and decision-making purposes.

Teamwork, communication skills, computer technology, ethical behavior and compliance with GAAP are also emphasized.

Graduates find employment in a wide variety of accounting occupations in both the private and public sectors and/or use their training to pursue additional educational goals.

Course Number	Course Title	Credits
Term 1		
101-112	Accounting 1	4
101-141	Payroll Accounting	3
102-110	Introduction to Business	3
103-180	Microsoft Excel	2
801-195	Written Communication	3
	Total	**15**
Term 2		
101-114	Accounting 2	4
101-154	Microcomputer Accounting Applications	3
103-190	Advanced Microsoft Excel	2
105-160	Business Law	3
801-196	Oral and Interpersonal Communication	3
804-107	College Mathematics	3
	Total	**18**
Term 3		
101-115	Accounting 3	4
101-123	Income Tax Accounting	3
101-125	Cost Management	3
809-195	Economics	3
809-199	Psychology of Human Relations	3
	Total	**16**
Term 4		
101-126	Advanced Cost Management	3
	- OR -	
101-128	Auditing	3
	- OR -	
101-129	Applied Income Tax	3
101-134	Introduction to Finance	3
101-145	Integrated Accounting Applications	3
105-150	Business Practice Firm	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
	Total	**18**
	Total Program Credits	**67**

Exit Assessment
Completion of 105-150 Business Practice Firm is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Accounting Assistant

Technical Diploma: 31-101-1

The Accounting Assistant program prepares students to perform entry-level bookkeeping and accounting work. Graduates may work in a small business and be responsible for all aspects of bookkeeping or work in a larger firm and specialize in a certain area under the supervision of an accountant. The program combines hands-on computer training with accounting concepts and procedures. It serves as a solid foundation for further study in the accounting field. Courses are directly transferrable into Moraine Park's Accounting associate of applied science degree.

Course Number	Course Title	Credits
Term 1		
101-112	Accounting 1	4
101-141	Payroll Accounting	3
102-110	Introduction to Business	3
103-180	Microsoft Excel	2
801-195	Written Communication	3
	Total	**15**
Term 2		
101-114	Accounting 2	4
101-154	Microcomputer Accounting Applications	3
103-190	Advanced Microsoft Excel	2
105-160	Business Law	3
801-196	Oral and Interpersonal Communication	3
804-107	College Mathematics	3
	Total	**18**
	Total Program Credits	**33**

Exit Assessment
Completion of 101-154 Microcomputer Accounting Applications is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

General Studies

General Studies Certificate

Certificate: 97-809-1

Moraine Park's General Studies Certificate is designed for individuals who wish to continue their education but aren't sure what career path fits their needs. Students start with classes that lay the foundation to other degree offerings or they can apply their new academic skills in the workplace. While doing certificate coursework, students are encouraged to take advantage of free career exploration services and instruction to find a direction for their educational and career goals.

Graduates of the certificate may choose to transfer the credits directly into a Moraine Park program. Many of the credits may also transfer to a four-year college or university.

Course Number	Course Title	Credits
Term 1		
801-195	Written Communication	3
890-125	Student Success	1
Choose three courses from the following list:		
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
	- OR -	
801-198	Speech	3
804-107	College Mathematics	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**13**

General Studies Transfer Certificate

Certificate: 97-809-2

Moraine Park's General Studies Transfer Certificate is designed to provide direct transfer between Moraine Park and University of Wisconsin colleges. The courses in this certificate also apply to Moraine Park general education requirements.

Graduates of this certificate with a 2.5 overall grade point average may qualify for sophomore status at various University of Wisconsin colleges. Or graduates desiring to continue their education at Moraine Park could apply all of the credits earned to a Moraine Park associate of applied science degree program.

Course Number	Course Title	Credits
Transfer to UW-Oshkosh		
801-195	Written Communication	3
801-197	Technical Reporting	3
801-198	Speech	3
804-118	Intermediate Algebra With Applications	4
806-114	General Biology	4
806-177	General Anatomy and Physiology	4
809-166	Introduction to Ethics: Theory and Application	3
And 3 of the Following Courses in at least 2 Areas		
809-159	Abnormal Psychology	3
809-188	Developmental Psychology	3
809-198	Introduction to Psychology	3
809-199	Psychology of Human Relations	3
809-195	Economics	3
809-172	Race, Ethnic and Diversity Studies	3
809-196	Introduction to Sociology	3
OR		
Transfer to UW-Green Bay		
801-195	Written Communication	3
804-118	Intermediate Algebra With Applications	4
806-197	Microbiology	4
809-166	Introduction to Ethics: Theory and Application	3
809-172	Race, Ethnic and Diversity Studies	3
809-188	Developmental Psychology	3
809-195	Economics	3
809-196	Introduction to Sociology	3
809-197	Contemporary American Society	3
809-198	Introduction to Psychology	3
	Total	**32 or 33**

Individualized Technical Studies

Associate of Applied Science Degree: 10-825-1

The Individualized Technical Studies (ITS) associate of applied science degree is a flexible program intended for students with unique backgrounds and specific career goals that can't be met by enrolling in any single program currently offered by the College. The ITS degree gives students the option to create a unique program by combining associate degree level courses from two or more existing Moraine Park programs. At least 20 credits must be from one discipline. ITS students work with an occupational mentor of their choosing and a team of college staff to design a sound, industry-specific program that considers the student's career goals and prior work experiences. As a result, students achieve their career goals by acquiring knowledge and skills tailored to their specific employment needs. Students may be eligible for credit for prior learning based on previous work experience, coursework or military service training. Documentation of prior learning can be submitted in a request for advanced standing in degree program courses. A minimum of 25 percent of the total program requirements must be earned at Moraine Park.

Course Number	Course Title	Credits
Individual Technical Studies Courses - 39 to 49 Credits		

Coursework is based on the student's Career Outcome Statements. A minimum of 20 credits must be focused in one discipline; however, the courses may be selected from more than one program. A discipline is described as a program cluster such as finance, information technology, manufacturing or health care.

General Studies Courses - 21-30 Credits		
Communications - 6 credits minimum (Select 801-195 Written Communication and one additional course)		
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication (or)	3
801-197	Technical Reporting (Prerequisite: 801-195 Written Communication) (or)	3
801-198	Speech	3
Social Science - 6 credits minimum (Select 809-166 Introduction to Ethics and one additional course)		
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics (or)	3
809-1xx	Other Social Science Courses Related to Degree	3
Behavioral Science - 3 credits minimum		
809-198	Introduction to Psychology (or)	3
809-199	Psychology of Human Relations (or)	3
809-1xx	Other Behavioral Science Courses Related to Degree	3
Math and Science - 3 credits minimum		
804-107	College Mathematics or advanced math course (or)	3
806-1xx	Science Courses Related to Degree	3-4
	Total	**60-70**

Exit Assessment

An Individualized Technical Studies Exit Assessment is a graduation requirement for this program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Liberal Arts Collaborative Agreement

Milwaukee Area Technical College Program Number: 10-800-2

Madison College Program Number: 10-800-3

Nicolet College Program Number: 10-800-4

Moraine Park's Liberal Arts Collaborative Agreement is for students who want to begin college at Moraine Park and transition to Madison College (MATC-Madison), Nicolet College, or Milwaukee Area Technical College (MATC-Milwaukee) to earn an Associate in Arts or an Associate in Science degree. Students who select this program code option have the goal of transferring to a four-year university to complete a bachelor's degree.

Students interested in this program must visit with the Moraine Park Transfer Specialist and sign a Liberal Arts Collaborative Agreement Admission Application prior to the completion of 12 credits. While granted provisional admission to MPTC, students must be admitted at one of the host colleges first. Please refer to the Web for additional details regarding the Liberal Arts Collaborative Agreement. NOTE: A maximum of 30 credits at the 100-level will be applied toward the Liberal Arts Collaborative Agreement with Madison Area Technical College (MATC-Madison), Nicolet College, or Milwaukee Area Technical College (MATC-Milwaukee).

Health Science

Chiropractic Assistant: Office Certificate

Certificate: 97-523-2

Prepares students for careers as front-office staff for doctors of chiropractic. Skills transfer well to other small clinic settings. Participation in three office internships makes for practical application in authentic settings.

Course Number	Course Title	Credits
Term 1		
501-101	Medical Terminology	3
523-110	Introduction to Chiropractic Philosophy	2
523-140	Chiropractic Office Procedures	3
523-145	Chiropractic Office Management Applications	2
523-165	Chiropractic Insurance	3
523-190	Chiropractic Office Procedures Internship	2
	Total	**15**

Chiropractic Assistant: Radiography Certificate

Certificate: 97-523-3

Prepares students for careers as radiographic assistants to doctors of chiropractic. Upon completion, student will satisfy current State of Wisconsin Delegation law* in the area of radiography subject to state certification.

*State laws are subject to change.

Course Number	Course Title	Credits
Term 1		
523-110	Introduction to Chiropractic Philosophy	2
523-113	Chiropractic Foundations	3
523-151	Chiropractic Radiographic Dynamics	3
523-155	Chiropractic Radiographic Positioning	3
531-450	BLS for Healthcare Providers	.15
	Total	**11.15**

CPR training–health care provider–to include infant, child and adult CPR with AED instruction.

Chiropractic Assistant: Therapy Certificate

Certificate: 97-523-4

Prepares students for careers as assistants to doctors of chiropractic. Upon completion, student will satisfy current State of Wisconsin Delegation law* in the areas of therapies, preliminary examination and case history.

*State laws are subject to change. State certification required.

Course Number	Course Title	Credits
Term 1		
523-110	Introduction to Chiropractic Philosophy	2
523-113	Chiropractic Foundations	3
523-161	Chiropractic Examination	3
523-170	Chiropractic Conjunctive Therapy	3
531-450	BLS for Healthcare Providers	.15
	Total	**11.15**

CPR training–health care provider–to include infant, child and adult CPR with AED instruction.

Clinical Chiropractic Specialist

Associate of Applied Science Degree: 10-523-1

Moraine Park's Clinical Chiropractic Specialist associate of applied science degree is the only program of its kind in the Wisconsin Technical College System. Students develop knowledge and skills in a variety of areas related to chiropractic health care, including office management and insurance procedures, patient therapies, nutrition, patient education and taking x-rays. As part of the experience, students rotate through a variety of internship experiences.

Graduates, under the supervision of a chiropractor, perform functions and services that are preparatory or complementary to chiropractic adjustments. Skills learned in the program include patient examination, physiotherapy treatment, chiropractic radiology, patient education and nutrition education, office procedures and management skills.

Additionally, this exciting health care career option is offered at the West Bend campus. Program courses meet on Thursdays and/or Fridays and online, giving you the convenience to complete your degree close to home and the ability to continue to work and earn your associate's with some flexibility.

Graduates have the option of becoming nationally certified in radiology by the American Chiropractic Registry of Radiologic Technologists.

(continued)

Clinical Chiropractic Specialist (cont.)

Clinical Chiropractic Specialist is accredited or approved by the Wisconsin Chiropractic Examining Board.

Course Number	Course Title	Credits
Term 1		
501-101	Medical Terminology	3
523-110	Introduction to Chiropractic Philosophy	2
523-113	Chiropractic Foundations	3
523-140	Chiropractic Office Procedures	3
523-151	Chiropractic Radiographic Dynamics	3
	Total	**14**
Term 2		
523-125	Chiropractic Nutrition	2
523-155	Chiropractic Radiographic Positioning	3
523-165	Chiropractic Insurance	3
523-170	Chiropractic Conjunctive Therapy	3
523-190	Chiropractic Office Procedures Internship	2
801-195	Written Communication	3
	Total	**16**
Term 3		
523-163	Chiropractic Radiographic and Conjunctive Therapy	4
523-171	Chiropractic Patient Education	3
801-196	Oral and Interpersonal Communication	3
804-107	College Mathematics	3
	- OR -	
806-189	Basic Anatomy	3
809-195	Economics	3
	- OR -	
809-172	Race, Ethnic and Diversity Studies	3
	Total	**16**
Term 4		
523-145	Chiropractic Office Management Applications	2
523-161	Chiropractic Examination	3
523-166	Chiropractic Insurance Applications Internship	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**17**
Required Elective Credits		3
	Total Program Credits	**66**

Exit Assessment
A paper portfolio exit assessment is a graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Health Care Leadership Certificate

Certificate: 97-196-4

This certificate develops the management and leadership skills of the health care worker. Current supervisors and those who want to be supervisors build the fundamental skills to be successful in leadership in the health care field. Taken from the Leadership Development program, these courses focus on issues relating to leading in a health care environment.

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can be later applied toward a degree if the student desires. In addition, graduates or students currently enrolled in the program may find they have already completed some of the certificate's requirements.

These classes are offered in the accelerated format and are designed for employed adults. Courses are offered online to accommodate the varied schedules of health care providers. Extensive out-of-class work is required.

Courses in this certificate can be customized for on-site company training.

Course Number	Course Title	Credits
Term 1		
196-169	Diversity and Change Management	3
196-189	Team Building and Problem Solving	3
196-190	Leadership Development	3
196-191	Supervision	3
196-192	Managing for Quality	3
	Total	**15**

Health Information Technology

Associate of Applied Science Degree: 10-530-1

This field is where health care meets the cutting edge of technology! Health information technicians are specialists in great demand! The HIM professionals can expect to be in high demand as the health sector expands in the century. In fact, the Bureau of Labor Statistics cites health information technology as one of the fastest growing occupations in the U.S. Health information technicians contribute to the quality of care by collecting, analyzing and reporting health care data. This requires knowledge of disease, treatments, computer systems and organizational skills.

This program can be completed on a full-time or part-time basis. All core program classes are offered online.

Graduates are in great demand by hospitals, clinics, nursing homes, insurance companies, medical research organizations and government agencies.

The Health Information Technology program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Graduates are eligible to take the national certification exam offered by the American Health Information Management Association to become Registered Health Information Technicians (RHIT).

Job shadowing in this field is recommended prior to application. For more information about this career: www.ahima.org/careers/intro.cfm.

Health Information Technology is accredited or approved by the Commission on Accreditation for Health Informatics and Information Management Education.

Course Number	Course Title	Credits
Term 1		
501-101	Medical Terminology	3
501-107	Introduction to Healthcare Computing	2
530-176	Health Data Management	2
530-181	Introduction to the Health Record	1
801-195	Written Communication	3
806-189	Basic Anatomy	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**17**
Term 2		
103-181	Microsoft Access	2
106-138	Computer Essentials	2
530-177	Healthcare Stats and Research	2
530-178	Healthcare Law and Ethics	2
530-182	Human Diseases for the Health Professions	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
809-196	Introduction to Sociology	3
	Total	**17**

(continued)

Health Information Technology (cont.)

Course Number	Course Title	Credits
Term 3		
530-160	Healthcare Informatics	4
530-161	Health Quality Management	3
530-184	CPT Coding	3
530-196	Professional Practice 1	3
530-197	ICD Diagnosis Coding	3
	Total	**16**
Term 4		
530-185	Healthcare Reimbursement	2
530-194	HIM Organizational Resources	2
530-195	Applied Coding	2
530-198	Professional Practice 2	3
530-199	ICD Procedure Coding	2
801-197	Technical Reporting	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**17**
	Total Program Credits	**67**

Exit Assessment
An Internship is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester	
890-130	Career Development - take **3rd** semester	

LPN to ADN Progression Track

Associate of Applied Science Degree: 10-543-1

The LPN to ADN Progression Track is designed for individuals who are currently Wisconsin Licensed Practical Nurses (LPN) and want to become Registered Nurses (RN). The coursework builds upon prior learning.

Advanced standing credit may be awarded for knowledge and skills gained through occupational experiences, prior learning and other advanced placement subject exams. To ensure that students have the academic foundation for higher-level coursework, 19 escrow credits are granted after successful completion of 543-109, 543-110, 543-111 and 543-112. These escrow credits then fulfill the core course requirements for the first year of the Moraine Park Associate Degree Nursing program.

Program graduates are eligible to write the National Council Licensure Examination for registered nurses.

The program is accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326 (phone 1-404-975-5000) and the Wisconsin Board of Nursing (phone 1-608-267-2357).

Course Number	Course Title	Credits
Clinical Admissions Requirements		
Petition Requirements (Currently accepted pre-core nursing students, go to *my*MPTC Student tab for specifics.)		
543-117	Nursing Bridge to ADN (Can be used as an elective credit.)	2
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
806-177	General Anatomy and Physiology	4
806-179	Advanced Anatomy and Physiology	4
809-188	Developmental Psychology	3
Current WI Licensed Practical Nurse; employment as an LPN for a minimum of 2,080 hours in the last 2 years		
	Total	**17**
Term 1		
543-109	Nursing: Complex Health Alterations 1	3
543-110	Nursing: Mental Health and Community Concepts	2
543-111	Nursing: Intermediate Clinical Practice	3
543-112	Nursing: Advanced Skills	1
806-197	Microbiology	4
809-198	Introduction to Psychology	3
	Total	**16**
19 escrow credits will be granted after successful completion of 543-109, 543-110, 543-111, 543-112		19
Term 2		
543-113	Nursing: Complex Health Alterations 2	3
543-114	Nursing: Management and Professional Concepts	2
543-115	Nursing: Advanced Clinical Practice	3
543-116	Nursing Clinical Transition	2
809-166	Introduction to Ethics: Theory and Application	3
	Total	**13**
Required Elective Credits		5
	Total Program Credits	**70**

Exit Assessment
Clinical evaluations are the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester	
103-159	Computer Literacy/Advanced Standing - take **1st** semester	
890-130	Career Development - take **2nd** semester	

Medical Assistant

Technical Diploma: 31-509-1

Moraine Park's Medical Assistant program prepares students to assist the doctor in a variety of clinical tasks. Students develop the skills to take medical histories, record vital signs, prepare patients for examination, collect and prepare laboratory specimens, perform basic laboratory tests, draw blood and instruct patients about medications or special diets. As graduates, these clinical tasks are performed under the supervision of a physician and vary according to state law.

Medical assistants may also perform administrative tasks such as billing and insurance, greeting patients on the phone and in person, handling correspondence, scheduling appointments and updating patient charts. The medical assistant profession is one of the fastest growing occupations.

The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE), CAAHEP, 1361 Park Street, Clearwater, FL, 727-210-2350.

Medical Assistant is accredited or approved by the Commission of Accreditation of Allied Health Educational Programs and American Association of Medical Assistants.

Course Number	Course Title	Credits
Term 1		
501-101	Medical Terminology	3
501-107	Introduction to Healthcare Computing	2
501-108	Pharmacology for Allied Health	2
509-301	Medical Assistant Administrative Procedures	2
509-302	Human Body in Health and Disease	3
509-303	Medical Assistant Laboratory Procedures 1	2
509-304	Medical Assistant Clinical Procedures 1	4
	Total	**18**
Term 2		
509-305	Medical Assistant Laboratory Procedures 2	2
509-306	Medical Assistant Clinical Procedures 2	3
509-307	Medical Office Insurance and Finance	2
509-309	Medical Law, Ethics and Professionalism	2
509-310	Medical Assistant Practicum	3
801-195	Written Communication	3
	Total	**15**
	Total Program Credits	**33**

Exit Assessment
Medical Assistant Practicum (509-310) is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester	
890-130	Career Development- take **2nd** semester	

Medical Assistant Practicum (509-310) must be taken the last semester before graduation. Students will need to complete Basic Math Proficiency.

Medical Billing Specialist Certificate

Certificate: 97-106-6

The highly specialized professional trend in the medical office is emerging as a result of the changes in the health care delivery system and the continuous growth of managed care. This certificate prepares the student to perform the functions of the extremely complex billing processes in a health care organization.

Course Number	Course Title	Credits
Term 1		
501-101	Medical Terminology	3
501-107	Introduction to Healthcare Computing	2
509-302	Human Body in Health and Disease	3
509-307	Medical Office Insurance and Finance	2
	Total	**10**
Term 2		
106-151	Specialized Insurance Claims	2
106-152	Electronic Patient Billing	2
509-301	Medical Assistant Administrative Procedures	2
509-309	Medical Law, Ethics and Professionalism	2
	Total	**8**
	Total Program Credits	**18**

Students will need to complete Basic Math Proficiency.

Medical Coding Specialist

Technical Diploma: 31-530-2

The Medical Coding Specialist program prepares individuals for employment as entry-level coding specialists in health care facilities such as hospitals, clinics, physician practice groups, surgery centers, long-term care facilities and home health care agencies. Coding specialists are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies and computer software companies. The medical coding specialist reviews medical documentation provided by physicians and other health care providers and translates this into numeric codes. The coding specialist assigns and sequences diagnostic and procedural codes using universally recognized coding systems. Several uses of coded data are for payment of health care claims, statistics and medical research.

The courses are directly transferable into Moraine Park's Health Information Technology associate of applied science degree if students wish to further their education in this field. This diploma can be completed on a full-time or part-time basis.

Major areas of study in this program include:

- Health Information Science
- Health Care Delivery Systems
- Reimbursement
- Coding

Graduates are eligible to take the national Clinical Coding Associate (CCA) certification examination through the American Health Information Management Association (AHIMA). They may also take AHIMA's national Clinical Coding Specialist (CCS) examination; however, two years of coding experience are recommended before taking the CCS examination.

Course Number	Course Title	Credits
Term 1		
501-101	Medical Terminology	3
530-176	Health Data Management	2
530-181	Introduction to the Health Record	1
530-182	Human Diseases for the Health Professions	3
530-197	ICD Diagnosis Coding	3
806-189	Basic Anatomy	3
	Total	**15**
Term 2		
501-107	Introduction to Healthcare Computing	2
530-184	CPT Coding	3
530-185	Healthcare Reimbursement	2
530-195	Applied Coding	2
530-199	ICD Procedure Coding	2
890-130	Career Development	1
	Total	**12**
	Total Program Credits	**27**

Exit Assessment
An exit assessment is a graduation requirement for this program.

Institutional Requirements
890-125 Student Success - take **1st** semester

Medical Laboratory Technician

Associate of Applied Science Degree: 10-513-1

At career entry, the medical laboratory technician will be able to perform routine clinical laboratory tests (such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular and other emerging diagnostics) as the primary analyst making specimen-oriented decisions on predetermined criteria, including a working knowledge of critical values. Communications skills will extend to frequent interactions with members of the health care team, external relations, customer service and patient education. The level of analysis ranges from waived and point of care testing to complex testing encompassing all major areas of the medical laboratory. The medical laboratory technician will have diverse functions in areas of preanalytical, analytical and post-analytical processes. The medical laboratory technician will have responsibilities for information processing, training and quality control monitoring wherever medical laboratory testing is performed.

The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS, 5600 N. River Road, Suite 720, Rosemont, IL 60018; Phone: 773-714-8880). Upon graduation, students are eligible to sit for the National Board of Certification Exam through the ASCP.

Medical Laboratory Technician is accredited or approved by the National Accrediting Agency for Clinical Laboratory Sciences.

Course Number	Course Title	Credits
Term 1		
513-110	Basic Lab Skills	1
513-111	Phlebotomy	2
513-113	Quality Assurance and Laboratory Math	1
513-115	Basic Immunology Concepts	2
801-195	Written Communication	3
806-186	Introduction to Biochemistry	4
	Total	**13**
Term 2		
513-109	Blood Bank	4
513-114	Urinalysis	2
513-120	Basic Hematology	3
513-121	Coagulation	1
801-196	Oral and Interpersonal Communication	3
806-197	Microbiology	4
	Total	**17**

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Medical Laboratory Technician (cont.)

Course Number	Course Title	Credits
Term 3		
513-130	Advanced Hematology	2
513-131	Clinical Chemistry 1	3
513-132	Clinical Chemistry 2	2
513-133	Clinical Microbiology	4
809-166	Introduction to Ethics: Theory and Application	3
	Total	**14**
Term 4		
513-140	Advanced Microbiology	2
513-151	Clinical Experience 1	3
513-152	Clinical Experience 2	4
513-153	Clinical Experience Seminar	4
513-170	Introduction to Molecular Diagnostics	2
809-198	Introduction to Psychology	3
	Total	**18**
	Total Program Credits	**66**

Exit Assessment
An exit exam is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Nursing Assistant

Technical Diploma: 30-543-1

The Nursing Assistant program provides classroom theory, laboratory experience and clinical learning that teaches students the skills to perform duties such as taking vital signs, bathing, dressing, making beds, and other direct resident care. Community agencies are used for clinical learning and includes long-term care settings.

Course Number	Course Title	Credits
Term 1		
543-300	Nursing Assistant	3
	Total	**3**

Applicants must be at least 16 years of age.

Health Requirements need to be met, and a Criminal Background Check is required.

Mandatory-prior to class read "Course Information."

Wisconsin Nurse Aide Registry: To be eligible for inclusion on the Wisconsin Nurse Aide Registry, students also complete written/oral and skill performance competency examinations after completing the course. This permits graduates to be employed in state and federally approved skilled long-term care and home health care facilities. For more information about the Wisconsin Nurse Aide Registry competency examination, contact the American Red Cross at 866-257-5424, Pearson VUE at 877-329-8760 or www.pearsonvue.com.

High school courses helpful in preparing for this program include English, science and math.

Nursing - Associate Degree With a Practical Nursing Exit Point

Associate of Applied Science Degree: 10-543-1

The Nursing - Associate Degree With a Practical Nursing Exit Point program prepares graduates for careers as nurses (LPN and/or RN) in ambulatory care settings, acute care settings and long-term care organizations, as defined by the Wisconsin Nurse Practice Act. After successfully completing the first two semesters of the program, students are eligible to write the Practical Nursing National Council Licensure Examination. At this point, students could job out and seek employment as LPNs or continue on in the remaining two semesters and prepare to write the National Council Licensure Examination for Registered Nurses. Admissions windows are in spring and fall.

Students receive classroom instruction, laboratory practice and clinical nursing experiences.

The program is accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326 (phone 1-404-975-5000) and the Wisconsin Board of Nursing (phone 1-608-267-2357).

Helpful high school courses include chemistry, biology, mathematics, reading, writing and oral communication.

Course Number	Course Title	Credits
Clinical Admissions Requirements		
	Petition Requirements (Currently accepted pre-core nursing students, go to *my*MPTC Student tab for specifics.)	
806-177	General Anatomy and Physiology	4
806-179	Advanced Anatomy and Physiology	4
543-300	Nursing Assistant (This course is not counted as part of the program credits.)	3
	Total	**8**
Term 1		
543-101	Nursing Fundamentals	2
543-102	Nursing Skills	3
543-103	Nursing Pharmacology	2
543-104	Nursing: Introduction to Clinical Practice	2
801-195	Written Communication	3
809-188	Developmental Psychology	3
	Total	**15**
Term 2		
543-105	Nursing: Health Alterations	3
543-106	Nursing: Health Promotion	3
543-107	Nursing: Clinical Care Across the Lifespan	2
543-108	Nursing: Introduction to Clinical Care Management	2
801-196	Oral and Interpersonal Communication	3
	Total	**13**
Term 3		
543-109	Nursing: Complex Health Alterations 1	3
543-110	Nursing: Mental Health and Community Concepts	2
543-111	Nursing: Intermediate Clinical Practice	3
543-112	Nursing: Advanced Skills	1
806-197	Microbiology	4
809-198	Introduction to Psychology	3
	Total	**16**
Term 4		
543-113	Nursing: Complex Health Alterations 2	3
543-114	Nursing: Management and Professional Concepts	2
543-115	Nursing: Advanced Clinical Practice	3
543-116	Nursing Clinical Transition	2
809-166	Introduction to Ethics: Theory and Application	3
	Total	**13**
Required Elective Credits		5
	Total Program Credits	**70**

Exit Assessment
An exit assessment is a graduation requirement for Practical Nursing Exit. Clinical evaluations are an exit assessment graduation requirement for the Associate Degree Nursing program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Practical Nursing Exit must complete all courses in Terms 1 and 2 and 890-125 Student Success.

Pharmacy Technician

Technical Diploma: 31-536-1

If you're ill or injured, you have access to an enormous variety of therapeutic medications, and you trust your pharmacy to correctly interpret and fill your prescriptions. Pharmacy technicians contribute to our safety by assisting pharmacists in a variety of technical tasks. If you're attentive to detail; organized; a good communicator; and like math, science, and working with people, a career as a pharmacy technician may be your prescription for success.

Course Number	Course Title	Credits
MPTC Courses		
501-101	Medical Terminology	3
801-198	Speech	3
809-199	Psychology of Human Relations	3
Lakeshore Courses		
501-102	Health Insurance and Reimbursement	3
536-110	Pharmaceutical Calculations*	3
536-112	Pharmacy Business Applications*	4
536-115	Pharmacy Law*	2
536-120	Fundamentals of Reading Prescriptions*	1
536-122	Pharmacology*	3
536-124	Pharmacy Drug Distribution Systems*	1
536-126	Pharmacy Parenteral Admixtures*	3
536-138	Pharmacy Community Clinical	2
Choice A		
536-140	Pharmacy Hospital Clinical	3
536-141	Hospital Clinical Lab	2
Choice B		
536-142	Pharmacy Community Clinical-Advanced	2
xxx-xxx	An Approved Business Course Such As:	3
104-102	Principles of Marketing	3
104-104	Selling Principles	3
182-108	Purchasing	3
	Total	**36**

Courses with an * are offered at Moraine Park Technical College over the interactive video conference system.

Phlebotomy Technician Certificate

Certificate: 97-513-1

This two-course certificate prepares individuals to collect blood specimens via venipuncture and capillary puncture procedures for the purposes of laboratory analysis.

The courses are taken in sequence over two semesters. The first course, Phlebotomy Essentials, provides the student with theory, safety techniques and regulations, infection control, and procedural applications and training. The second course, Phlebotomy Clinical, places students at clinical sites. Travel may be required for clinical sites, and clinical times may vary.

Upon completion of the certification, students may take the national certification examination offered by the Board of Certification.

Course Number	Course Title	Credits
Term 1		
513-100	Phlebotomy Essentials	4
513-101	Phlebotomy Clinical	2
	Total	**6**

Radiography

Associate of Applied Science Degree: 10-526-1

Radiography prepares individuals for a career in diagnostic radiology (x-ray) as a radiographer. The radiographer is a technologist who produces images of the human body to aid physicians in the diagnosis of injuries and diseases. Graduates of the program are eligible to take the entry-level certification examination administered by the American Registry of Radiography Technologists (ARRT) and may obtain employment in x-ray departments associated with hospitals, medical clinics, veterinary clinics and private offices. Program curriculum focuses on theoretical and applied radiography and includes a clinical experience in a radiographic department. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students learn to use x-ray imaging machines to demonstrate body parts on x-ray films for diagnostic purposes, including diagnostic radiology, bedside and trauma procedures, pediatric radiography and special procedures.

Course Number	Course Title	Credits
Clinical Admissions Requirement:		
806-177	General Anatomy and Physiology	4
Term 1		
526-149	Radiographic Anatomy and Procedures 1	5
526-158	Introduction to Radiography	3
526-159	Radiographic Imaging 1	3
526-168	Radiography Clinical 1	2
804-107	College Mathematics	3
	Total	**16**
Term 2		
526-170	Radiographic Imaging 2	3
526-191	Radiographic Anatomy and Procedures 2	5
526-192	Radiography Clinical 2	3
526-193	Radiography Clinical 3	3
801-195	Written Communication	3
	Total	**17**
Term 3		
526-194	Imaging Equipment Operation	3
526-195	Radiographic Quality Analysis	2
526-196	Modalities	3
526-199	Radiography Clinical 4	3
809-198	Introduction to Psychology	3
	Total	**14**
Term 4		
526-174	ARRT Certification Seminar	2
526-189	Radiographic Pathology	1
526-190	Radiography Clinical 5	2
526-197	Radiation Protection and Biology	3
526-198	Radiography Clinical 6	2
801-196	Oral and Interpersonal Communication	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
	Total	**19**
	Total Program Credits	**70**

Exit Assessment
Clinicals and an Accrediting Outcomes Checklist are the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Respiratory Therapist

Associate of Applied Science Degree: 10-515-1

Respiratory therapists, as members of a team of health care professionals, work to evaluate, treat and manage patients of all ages with respiratory illnesses and other cardiopulmonary disorders in a wide variety of clinical settings. In addition to performing respiratory care procedures, respiratory therapists are involved in clinical decision-making (such as patient evaluation, treatment selection and assessment of treatment efficacy) and patient education.

The scope of practice for respiratory therapy includes, but is not limited to, assessing the cardiopulmonary status of patients; drawing blood samples; performing blood gas analysis and pulmonary function testing; initiating

(continued)

Respiratory Therapist (cont.)

ordered respiratory care; evaluating and monitoring patients' responses to such care; modifying the prescribed respiratory therapy and cardiopulmonary procedures and life support endeavors to achieve desired therapeutic objectives; providing patient, family and community education; and participating in life support activities as required. At graduation, the student is qualified for admission to the entry-level and advanced practitioner examinations to become a registered respiratory therapist. The Respiratory Therapist program is accredited by the Commission on Accreditation for Respiratory Care (CoARC).

Course Number	Course Title	Credits
Clinical Admissions Requirement		
806-177	General Anatomy and Physiology	4
Term 1		
501-101	Medical Terminology	3
515-111	Respiratory Survey	3
515-171	Respiratory Therapeutics 1	3
801-195	Written Communication	3
806-197	Microbiology	4
	Total	**16**
Term 2		
515-112	Respiratory Airway Management	2
515-172	Respiratory Therapeutics 2	3
515-173	Respiratory Pharmacology	3
515-174	Respiratory and Cardiac Physiology	3
515-175	Respiratory Clinical 1	2
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
	Total	**16**
Term 3		
515-113	Respiratory Life Support	3
515-176	Respiratory Disease	3
515-178	Respiratory Clinical 2	3
515-179	Respiratory Clinical 3	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**15**
Term 4		
515-180	Respiratory Neonatal and Pediatric Care	2
515-181	Respiratory and Cardio Diagnostics	3
515-182	Respiratory Clinical 4	3
515-183	Respiratory Clinical 5	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
	Total	**17**
Required Elective Credits		2
	Total Program Credits	**70**

Exit Assessment
Clinical Evaluations and Capstone Projects are the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Due to accreditation requirements, completion of mock certification and registry exams are required for graduation.

Surgical Technology

Associate of Applied Science Degree: 10-512-1

Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings.

The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

The clinical case requirement for program completion includes a minimum of 120 cases.

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA). ARC/STSA is sponsored by the Association of Surgical Technologists, the American College of Surgeons and the American Hospital Association, 1361 Park Street, Clearwater, FL 33756, 727-210-2350.

Course Number	Course Title	Credits
Clinical Admissions Requirements		
806-177	General Anatomy and Physiology	4
806-179	Advanced Anatomy and Physiology	4
	Total	**8**
Term 1		
501-101	Medical Terminology	3
512-125	Introduction to Surgical Technology	4
512-126	Surgical Technology Fundamentals 1	4
512-127	Exploring Surgical Issues	2
	Total	**13**
Term 2		
512-128	Surgical Technology Fundamentals 2	4
512-129	Surgical Pharmacology	2
512-130	Surgical Skills Application	2
801-195	Written Communication	3
806-197	Microbiology	4
	Total	**15**
Term 3		
512-131	Surgical Interventions 1	4
512-132	Surgical Technology Clinical 1	3
512-133	Surgical Technology Clinical 2	3
801-196	Oral and Interpersonal Communication	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**16**
Term 4		
512-134	Surgical Interventions 2	3
512-135	Surgical Technology Clinical 3	3
512-136	Surgical Technology Clinical 4	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**12**
Required Elective Credits		3
	Total Program Credits	**67**

Exit Assessment
Clinical experience, evaluations and a final competency exam are exit assessment graduation requirements for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Due to accreditation requirements, completion of the Certified Surgical Technologist (CST) exam is a graduation requirement.

Hospitality and Tourism

Artisan Baking Certificate

Certificate: 97-316-5

The Artisan Baking Certificate is designed for individuals seeking to acquire or desiring to upgrade skills in the production of quality, scratch-baked goods. Students learn the specialized skills in mixing and handling artisan breads (including sourdoughs), high-end tortes and breakfast pastries. Emphasis is on the use of wholesome ingredients for hotel, restaurant or bakery operations.

The Nutrition, Sanitation and Safety, and Baking courses can be applied directly into Moraine Park's Culinary Arts associate of applied science degree if students wish to continue their education. Students and graduates who want specialized training in Artisan Baking may have already completed several of the certificate courses.

Course Number	Course Title	Credits
Term 1		
316-121	Nutrition	2
316-147	Sanitation and Safety	2
316-160	Baking	2
316-162	Breakfast Pastries	2
	Total	**8**
Term 2		
316-168	Artisan Breads	3
316-169	Cakes, Tortes and Dessert	2
	Total	**5**
	Total Program Credits	**13**

Culinary Arts

Associate of Applied Science Degree: 10-316-1

The Culinary Arts program offers students many opportunities to enter and advance in the hospitality industry. Students receive hands-on, practical experience in all aspects of food preparation and production. Coursework begins with food preparation techniques and progresses through the development of management skills related to the operation of a food service business.

The food industry has and will continue to have excellent job opportunities. Millions of meals are prepared daily in restaurants, hotels, schools and health care facilities.

Course Number	Course Title	Credits
Term 1		
316-100	Food Principles 1	3
316-147	Sanitation and Safety	2
316-160	Baking	2
316-183	Food Production for Vegetables and Potatoes	2
316-184	Food Production for Pastas, Grains and Breakfast Cookery	2
316-185	Food Production for Stocks and Soups	2
316-186	Food Production for Sauces and Speciality Soups	2
	Total	**15**
Term 2		
316-101	Food Principles 2	1
316-151	Fundamentals of Meat Analysis	3
316-153	Food Purchasing	2
316-187	Food Production for Cold Food - Salads	2
316-188	Food Production for Cold Food - Sandwiches Desserts, Salads and Dressings	2
316-189	Food Production for Meat, Fish and Poultry	2
316-190	Food Production for Hot Sandwiches, Deli and Short-Order Cookery	2
801-195	Written Communication	3
	Total	**17**
Term 3		
316-116	Menu Planning, Management and Design	1
316-142	Restaurant Operations	3
316-171	Restaurant Management	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
	- OR -	
801-198	Speech	3
804-107	College Mathematics	3
809-195	Economics	3
	Total	**16**
Term 4		
316-121	Nutrition	2
316-165	Catering and Special Function Planning	3
316-175	Specialty Foods and Ethnic Cookery	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**17**
Required Elective Credits		3
	Total Program Credits	**68**

Exit Assessment
Successful completion of course 316-171 is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Culinary Basics Certificate

Certificate: 97-316-1

The Culinary Basics Certificate provides a convenient, short-term set of courses for people, without formal training, who currently work in the food service industry and wish to upgrade their skills.

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can later be applied toward a degree or diploma if the student desires.

Course Number	Course Title	Credits
Term 1		
316-100	Food Principles 1	3
316-101	Food Principles 2	1
316-147	Sanitation and Safety	2
316-160	Baking	2
	Total	**8**

Deli/Bakery Certificate

Certificate: 97-316-2

The Deli/Bakery Certificate enables students to gain knowledge and skills in:

- Sanitation and safety
- Customer sales and service
- Food preparation courses for deli sales
- Baking
- Applied math

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program—the credits can later be applied toward a degree or diploma if the student desires.

Course Number	Course Title	Credits
Core Courses		
316-100	Food Principles 1	3
316-147	Sanitation and Safety	2
316-160	Baking	2
316-181	Customer Sales and Service	1
Choice of Three Courses		
316-185	Food Production for Stocks and Soups	2
316-187	Food Production for Cold Food - Salads	2
316-188	Food Production for Cold Food - Sandwiches, Desserts, Salads and Dressings	2
316-189	Food Production for Meat, Fish and Poultry	2
316-190	Food Production for Hot Sandwiches, Deli and Short-Order Cookery	2
	Total	**14**

Food Production Certificate

Certificate: 97-316-3

The Food Production Certificate provides a convenient, short-term set of courses for people who currently work in the food service industry and wish to upgrade their skills and obtain formal training.

This certificate allows students to take associate of applied science degree courses without the time commitment of a full-time program.

Course Number	Course Title	Credits
Term 1		
316-100	Food Principles 1	3
316-147	Sanitation and Safety	2
316-183	Food Production for Vegetables and Potatoes	2
316-184	Food Production for Pastas, Grains and Breakfast Cookery	2
316-185	Food Production for Stocks and Soups	2
316-186	Food Production for Sauces and Speciality Soups	2
316-187	Food Production for Cold Food - Salads	2
316-188	Food Production for Cold Food - Sandwiches, Desserts, Salads and Dressings	2
316-189	Food Production for Meat, Fish and Poultry	2
316-190	Food Production for Hot Sandwiches, Deli and Short-Order Cookery	2
	Total	**21**

Food Service Production

Technical Diploma: 31-303-2

Moraine Park's Food Service Production program provides students with hands-on experience and skills in a broad range of cooking techniques and preparation methods as well as training in baking and work environment safety and sanitation.

Graduates of the program can directly transfer their credits into Moraine Park's Culinary Arts associate of applied science degree if they decide to continue their education.

There is a high demand for graduates in areas such as hospital food service, school and college food service, food contracting companies, the health care industry, retirement communities, and residential care facilities.

Course Number	Course Title	Credits
Term 1		
316-100	Food Principles 1	3
316-147	Sanitation and Safety	2
316-160	Baking	2
316-187	Food Production for Cold Food - Salads	2
316-188	Food Production for Cold Food - Sandwiches, Desserts, Salads and Dressings	2
316-189	Food Production for Meat, Fish and Poultry	2
316-190	Food Production for Hot Sandwiches, Deli and Short-Order Cookery	2
804-360	Occupational Mathematics 1	2
	Total	**17**
Term 2		
316-101	Food Principles 2	1
316-121	Nutrition	2
316-151	Fundamentals of Meat Analysis	3
316-181	Customer Sales and Service	1
316-183	Food Production for Vegetables and Potatoes	2
316-184	Food Production for Pastas, Grains and Breakfast Cookery	2
316-185	Food Production for Stocks and Soups	2
316-186	Food Production for Sauces and Speciality Soups	2
801-310	Occupational Communication	2
	- OR -	
801-195	Written Communication	3
	- OR -	
801-196	Oral and Interpersonal Communication	3
	Total (or 18 if student chooses 801-195 or 801-196)	**17**
	Total Program Credits (or 35 if student chooses 801-195 or 801-196)	**34**

Exit Assessment

A pre/post test is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125 Student Success - take **1st** semester

103-159 Computer Literacy/Advanced Standing - take **1st** semester

890-130 Career Development - take **2nd** semester

If associate of applied science degree General Education course options are chosen, higher assessment test scores will be required. Please contact an Admissions Specialist for assistance.

Hotel/Hospitality Management

Associate of Applied Science Degree: 10-109-1

The associate of applied science degree in Hotel/Hospitality Management prepares individuals for a management career in the hotel/hospitality industry. Coursework emphasizes theory and application of skills needed for mid-management and supervisory level of employment in food and lodging facilities. Hotel/hospitality management skills are also applicable to a variety of other hospitality operations that include conference centers, sports and entertainment facilities, front office managers, food and beverage operations, and other careers.

Course Number	Course Title	Credits
MPTC Courses		
196-191	Supervision	3
801-195	Written Communication	3
801-198	Speech	3
	- OR -	
801-196	Oral and Interpersonal Communication	3
809-122	Introduction to American Government	3
	- OR -	
806-122	Natural Science in Society	3
809-195	Economics	3
809-198	Introduction to Psychology	3
809-196	Introduction to Sociology	3
	- OR -	
809-172	Race, Ethnic and Diversity Studies	3
Lakeshore Courses		
101-158	Hotel/Hospitality Cost Controls (LTC)	2
104-128	Leadership and Professionalism	3
109-121	Introduction to Hotel/Hospitality Management (LTC)	3
104-170	Marketing Tourism and Hospitality (LTC)	3
109-110	Front Office Procedures and Management (LTC)	3
109-115	Hospitality Law (LTC)	3
109-113	Food and Beverage Operations (LTC)	2
109-128	Career Exploration (LTC)	2
109-111	Housekeeping Management (LTC)	2
109-120	Facilities and Security Operations (LTC)	2
109-122	Field Study/Experience (LTC)	1
101-102	Hospitality Accounting (LTC)	4
109-101	Issues in Hotel/Hospitality Management (LTC)	1
196-105	Recruitment and Retention of Employees (LTC)	3
109-127	Portfolio Assessment	1
Moraine Park OR Lakeshore Courses		
316-147	Sanitation and Safety (MPTC)	2
	- OR -	
109-112	Sanitation for Food Service (LTC)	1
890-125	Student Success (MPTC)	1
	- OR -	
105-124	Portfolio Introduction (LTC)	1
106-122	Customer Service Applications (MPTC)	2
	- OR -	
104-109	Customer Service Techniques (LTC)	2
804-107	College Mathematics (MPTC)	3
	- OR -	
804-123	Math With Business Applications (LTC)	3
105-156	Career Internship - Business (MPTC)	4
	- OR -	
109-144	Hospitality Internship (LTC)	4
	Total	**66**

Human Services

Alcohol and Other Drug Abuse Associate (AODA)

Associate of Applied Science Degree: 10-550-1

Moraine Park's AODA associate of applied science degree provides the foundational knowledge, skills and practical experience to prepare students to counsel and treat clients with substance use disorders. The program meets all educational requirements for counselor certification and prepares them for counselor certification examination. Upon completion of the associate of applied science degree in AODA, students are awarded 500 hours of clinical experience toward the required 4,000 hours of clinical experience needed for counselor certification as a Substance Abuse Counselor with the Department of Regulation and Licensing of the State of Wisconsin.

Graduates find employment as alcohol and other drug abuse associates/counselors. The associate of applied science degree meets the educational requirements for certification with the Department of Regulation and Licensing of the State of Wisconsin. Individuals in this AODA profession work with clients and their families to develop new lifestyles and coping methods for resolving personal conflicts without turning to alcohol and drugs for solutions.

Listening, negotiating, planning, writing and counseling skills and the ability to assist others are important personal attributes of AODA professionals.

Alcohol and Other Drug Abuse is accredited or approved by the Department of Safety and Professional Services.

Course Number	Course Title	Credits
Term 1		
550-106	Physiological Complications and Psychopharmacology	3
550-112	Client Rights, Confidentiality and Ethics	3
550-125	Counseling Skills and Practice	3
550-160	On-Campus Talk About Alcohol	1
801-195	Written Communication	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**16**
Term 2		
550-121	Introduction to Substance Abuse Treatment	4
550-140	Counseling Theory and Practice	3
550-141	Group Facilitation	3
550-142	Introduction to Community Mental Health	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
	Total	**16**
Term 3		
550-131	Crisis Management	2
550-135	Diversity in Counseling	3
550-150	Family Systems	3
804-107	College Mathematics	3
	- OR -	
806-122	Natural Science in Society	3
809-166	Introduction to Ethics: Theory and Application	3
809-188	Developmental Psychology	3
	Total	**17**
Term 4		
550-155	AODA Internship Seminar	3
550-156	Alcohol and Other Drug Abuse Internship 1	4
550-157	Alcohol and Other Drug Abuse Internship 2	4
550-159	Resiliency Training	2
809-196	Introduction to Sociology	3
	Total	**16**
Required Elective Credits		3
	Total Program Credits	**68**

Exit Assessment
An Internship is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

AODA Certification Preparation Certificate

Certificate: 97-550-1

Selected courses from the associate of applied science degree program, Alcohol and Other Drug Abuse Associate (AODA), contain competencies required for counselor certification. The coursework offered at Moraine Park provides the theoretical base for students to then obtain an internship placement and accumulate the required practical experiences. The AODA certificate program is designed for students who may already have a degree in human services and are interested in acquiring an additional specialty in AODA counseling.

Course Number	Course Title	Credits
Term 1		
550-106	Physiological Complications and Psychopharmacology	3
550-112	Client Rights, Confidentiality and Ethics	3
550-121	Introduction to Substance Abuse Treatment	4
550-125	Counseling Skills and Practice	3
550-131	Crisis Management	2
550-135	Diversity in Counseling	3
550-140	Counseling Theory and Practice	3
550-141	Group Facilitation	3
550-142	Introduction to Community Mental Health	3
550-150	Family Systems	3
	Total	**30**

Barber/Cosmetologist

Technical Diploma: 31-502-1

Moraine Park's Barber/Cosmetologist technical diploma is a 16-month daytime program and a 24-month evening program that prepares graduates for the state Barber/Cosmetologist Licensing Exam. Students begin by learning classroom theory and fundamental skill development. Then students will apply their skills in the recently renovated, state-of-the-art salon where they perform client services including: shampoos, hair colors, hair styles, facials, scalp treatment, manicures and permanent waves. Students also attend area beauty shows and hear guest presentations from industry artists.

Individuals interested in this field should have a strong interest in personal appearance, have artistic creativity and enjoy working with people. In addition, this career requires individuals to have the stamina to stand for longer periods to perform salon services. Class attendance is critical.

Daytime program start dates are August 2012 and January 2013. (Classes run Monday - Friday.)

Evening program with start dates of August 2013 and August 2015. (Classes run Monday - Thursday evenings and Saturdays, except during the summer.)

Students must be accepted into the program prior to enrolling in the courses. All fees must be paid prior to program start. Class size is limited to the first 20 paid students. Early

(continued)

Barber/Cosmetologist (cont.)

enrollment is encouraged. Students are strongly encouraged to get on the waiting list. If class space becomes available, wait-list students are offered the spots. See an admissions specialist for more information.

Barber/Cosmetologist Program is accredited or approved by the State of Wisconsin Department of Safety and Professional Services.

Course Number	Course Title	Credits
Term 1		
502-301	Hairstyling, Shampooing and Scalp Treatment	2
502-311	Haircutting, Basic Forms	2
502-334	Permanent Wave Techniques	2
502-345	Hair Color Applications	1
	Total	**7**
Term 2		
502-300	Professional Practices	2
502-302	Hairstyling, Basic Techniques	2
502-312	Haircutting Techniques	1
502-335	Permanent Wave, Design Wraps	1
502-346	Lightening and Toning	1
	Total	**7**
Term 3		
502-309	Nail Care	1
502-321	Salon Services 1	2
502-337	Advanced Design Wraps	1
502-348	Highlighting and Corrective Color	1
	Total	**5**
Term 4		
502-303	Hairstyling, Updos and Braids	1
502-313	Short and Trend Cuts	1
502-322	Salon Services 2	3
502-330	Facials/Skin Structure and Its Disorders	3
	Total	**8**
Term 5		
502-316	Artificial Nails	1
502-323	Salon Services 3	3
502-333	Chemical Relaxing and Wigs	1
502-381	Salon Operations	1
	Total	**6**
Term 6		
502-324	Salon Services 4	4
502-354	Chemistry	1
502-356	Laws and Rules	1
801-310	Occupational Communication	2
	Total	**8**
Term 7		
502-325	Salon Services 5	3
502-355	Anatomy and Book Final	1
	Total	**4**
	Total Program Credits	**45**

Exit Assessment
The Mock State Board Exam is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **last** semester

Child Care Administrative Credential Certificate

Certificate: 97-307-1

The Child Care Administrative Credential Certificate is comprised of six courses (18 credits) that address the many roles of program administrators and directors in early childhood settings. Students gain more knowledge in areas such as staffing, budget development, facilities management, determining community needs, understanding laws and regulations as well as best practices and performance standards.

The coursework is designed for current administrators, supervisors and child care teachers from early childhood settings who want to develop a stronger knowledge base of the administrative role. Upon completion, students may also apply to the Registry for the Wisconsin Professional Credential for Child Care Administrators.

Scholarships may be available for students who are employed in a licensed or exempt early childhood center or a licensed or certified family child care program. Applicants must have the support of their employer and possess a high school diploma or GED. Scholarships for the Child Care Administrative Credential Certificate are available through the Wisconsin Early Childhood Association.

Course Number	Course Title	Credits
Term 1		
307-131	Administration and Supervision	3
307-132	Operations Management	3
307-133	Financial Management	3
307-134	Early Childhood Programs and the External Environment	3
307-135	Best Practices	3
307-136	Administrative Seminar	3
	Total	**18**

Child Care Mentor/Protégé Certificate

Certificate: 97-307-3

The Child Care Mentor/Protégé Certificate is designed to enhance the quality of child care by improving the skills and training level of child care teachers. The program provides opportunities for professional networking and strengthens the commitment to a career in the Early Childhood profession. Experienced teachers serve as mentors to new early childhood teachers who are their protégés. Mentors and protégés work together at their child care centers for an "on-the-job" learning experience to further develop best practices, gain more professional skills, and enhance learning environments in early childhood education.

Scholarships may be available for students who are employed in a licensed or exempt early childhood center or a licensed or certified family child care program. Applicants must have the support of their employer and possess a high school diploma or GED. In addition, caregivers participating in these classes must commit to one year of employment beyond completion of the credential to assure stability in the workforce. Scholarships for the Child Care Mentor/Protégé Certificate are available through the Wisconsin Early Childhood Association.

Course Number	Course Title	Credits
Term 1		
307-180	Early Childhood Mentor and Teacher Seminar	2
307-181	Early Childhood Mentors and Protégés at Work	3
	Total	**5**

Child Care Services

Technical Diploma: 31-307-1

The Child Care Services technical diploma is part of a cluster of programs designed to meet the increasing demand for quality child care. The coursework provides students with the foundational knowledge and skills to understand the emotional, mental and physical development of young children; how to create developmentally appropriate classroom activities; how to guide behaviors; and how to provide a healthy, well-rounded learning environment. These skills are applied in practicum experiences where students gain hands-on experience working with children in local child care centers. This program prepares students for jobs in a variety of early childhood settings.

The Child Care Services program is part of the first year of Moraine Park's Early Childhood Education associate of applied science degree. All the Child Care Services classes are directly transferable into the Early Childhood Education program if students wish to continue their education.

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Child Care Services (cont.)

Both Fond du Lac and West Bend offer the complete program. A few courses are offered online. Fond du Lac offers primarily day courses and West Bend primarily evening classes.

Scholarships may be available for students who are employed in a licensed or exempt early childhood center or a licensed or certified family child care program. Applicants must have the support of their employer and possess a high school diploma or GED.

Course Number	Course Title	Credits
Term 1		
307-151	ECE: Infant and Toddler Development	3
307-167	ECE: Health, Safety and Nutrition	3
307-174	ECE: Practicum 1	3
307-178	ECE: Art, Music and Language Arts	3
307-188	ECE: Guiding Children's Behavior	3
	- OR -	
522-111	IA: Guiding and Managing Behavior	3
801-195	Written Communication	3
	Total	**18**
Term 2		
307-148	ECE: Foundations of Early Childhood Education	3
307-179	ECE: Child Development	3
	- OR -	
522-106	IA: Child and Adolescent Development	3
307-187	ECE: Children With Differing Abilities	3
	- OR -	
522-107	IA: Overview of Special Education	3
	- OR -	
522-124	IA: Supporting Students With Disabilities	3
307-192	ECE: Practicum 2	3
307-194	ECE: Math, Science and Social Studies	3
307-195	ECE: Family and Community Relationships	3
	- OR -	
522-101	IA: Teamwork in School Settings	3
	Total	**18**
	Total Program Credits	**36**

Exit Assessment
Capstone Projects and Demonstrations are an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

Students will need to complete Basic Math Proficiency.

Early Childhood Education

Associate of Applied Science Degree: 10-307-1

The Early Childhood Education program prepares students to work as teacher-caregivers in early childhood settings. It combines hands-on fieldwork in area centers with related academic work at the College. Graduates become responsible for the care and education of children in the birth-to-six years age range. They create and maintain safe and healthy play environments, guide behavior, plan and implement learning activities, and work cooperatively with staff and parents.

Students experience a variety of learning opportunities with increasing responsibility for working with children in local child care settings.

Both Fond du Lac and West Bend offer the complete program. A few courses are offered online. Fond du Lac offers primarily day courses and West Bend primarily evening classes.

Scholarships may be available for students who are employed in a licensed or exempt early childhood center or a licensed or certified family child care program. Applicants must have the support of their employer and possess a high school diploma or GED.

Course Number	Course Title	Credits
Term 1		
307-151	ECE: Infant and Toddler Development	3
307-167	ECE: Health, Safety and Nutrition	3
307-174	ECE: Practicum 1	3
307-178	ECE: Art, Music and Language Arts	3
307-188	ECE: Guiding Children's Behavior	3
	- OR -	
522-111	IA: Guiding and Managing Behavior	3
801-195	Written Communication	3
	Total	**18**
Term 2		
307-148	ECE: Foundations of Early Childhood Education	3
307-179	ECE: Child Development	3
	- OR -	
522-106	IA: Child and Adolescent Development	3
307-187	ECE: Children With Differing Abilities	3
	- OR -	
522-107	IA: Overview of Special Education	3
	- OR -	
522-124	IA: Supporting Students With Disabilities	3
307-192	ECE: Practicum 2	3
307-194	ECE: Math, Science and Social Studies	3
307-195	ECE: Family and Community Relationships	3
	- OR -	
522-101	IA: Teamwork in School Settings	3
	Total	**18**
Term 3		
307-166	ECE: Curriculum Planning	3
307-197	ECE: Practicum 3	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
804-107	College Mathematics	3
	- OR -	
806-122	Natural Science in Society	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**15**
Term 4		
307-198	ECE: Administering an Early Childhood Education Program	3
307-199	ECE: Practicum 4	3
809-172	Race, Ethnic and Diversity Studies	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**15**
Required Elective Credits		3
	Total Program Credits	**69**

Exit Assessment
Capstone Projects/Demonstrations are an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Early Childhood Inclusion Credential Certificate

Certificate: 97-307-B

Working with children who have special needs can present unique challenges and opportunities to the child care industry and early childhood education field in Wisconsin. Even experienced practitioners have felt intimidated in serving this population due to a lack of up-to-date information and a well thought-out service approach. This new credential is designed to help you build the skills, knowledge, resources and attitudes to successfully work with ALL children in your centers and programs. Courses can be taken in any order and concurrently as long as the Capstone Course (course 4) is taken last.

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Early Childhood Inclusion Credential Certificate (cont.)

Course Number	Course Title	Credits
Term 1		
307-187	ECE: Children With Differing Abilities	3
307-110	Behavioral and Emotional Challenges	3
307-111	Special Health Care Needs	3
307-112	Family and Team-Centered Practices	3
	Total	**12**

Early Childhood Preschool Credential Certificate

Certificate: 97-307-A

The Early Childhood Preschool Credential Certificate is designed for individuals working with children ages three to eight. This might include family child care providers, child care teachers, nursery school teachers, certified providers, or anyone wishing to provide a quality environment and learning activities for children in this critical age group.

All the Early Childhood Preschool Credential Certificate classes are directly transferable into the Child Care Services technical diploma and/or Early Childhood Education associate of applied science degree if students wish to continue their education.

Course Number	Course Title	Credits
Term 1		
307-148	ECE: Foundations of Early Childhood Education	3
307-167	ECE: Health, Safety and Nutrition	3
307-178	ECE: Art, Music and Language Arts	3
307-179	ECE: Child Development	3
	- OR -	
522-106	IA: Child and Adolescent Development	3
307-188	ECE: Guiding Children's Behavior	3
	- OR -	
522-111	IA: Guiding and Managing Behavior	3
307-102	ECE: Preschool Capstone	3
	Total	**18**

Infant/Toddler Credential Certificate

Certificate: 97-307-2

The Infant/Toddler Credential Certificate is composed of four courses (12 credits) that specifically focus on providing care to children from birth to three years of age. Students learn the emotional, mental and physical development for these ages; how to create developmentally appropriate activities; how to guide behaviors; and how to be sensitive to the needs of infants and toddlers. These skills are applied as part of a student internship.

Students are required to develop a portfolio based on the required outcomes for the courses. Upon completion, students will submit the portfolio to the instructor, who will award the certificate. Students may also apply to the Registry for the Wisconsin Professional Credential for Infant/Toddler Caregivers. Scholarships may be available for students who are employed in a licensed or exempt early childhood center or a licensed or certified family child care program.

Scholarships for the Infant/Toddler Credential are available through the Wisconsin Early Childhood Association.

Course Number	Course Title	Credits
Term 1		
307-151	ECE: Infant and Toddler Development	3
307-183	Group Care for Infants and Toddlers	3
307-195	ECE: Family and Community Relationships	3
307-196	Infant/Toddler Capstone	3
	- OR -	
307-199	ECE: Practicum 4	3
	Total	**12**

Nail Technician Certificate

Certificate: 97-502-1

The Nail Technician Certificate is offered as a day program with some limited evening hours. This 324-hour, 13-week certificate prepares students for the state licensing examination to practice as a manicurist. Students begin in August and graduate in November. Classes are held four days/evenings per week (Monday through Thursday). Contact an Admissions Specialist for specific scheduling.

This program is attractive to people with creativity, visual perception, and good human relations and communications skills. Students develop nail technician skills in the classroom and a simulated salon setting. Coursework also entails law, regulations, business management and ethics to help students who may want to start their own businesses.

NOTE: 502-361 is a prerequisite to 502-362. 502-362 is a prerequisite to 502-363. Students must be accepted into the certificate to be eligible to enroll in the courses. Fees must be paid prior to program start. Class size is limited to a maximum of 16. No students will be accepted following the second class session.

Graduates of the certificate find employment in salons or may choose to open their own place of business.

Nail Technician Certificate is accredited or approved by the State of Wisconsin Department of Safety and Professional Services.

Course Number	Course Title	Credits
Term 1		
502-361	Nail Technician 1	3
502-362	Nail Technician 2	4
502-363	Nail Technician 3	2
	Total	**9**

Information Technology

Computer Information Security Advanced Technical Certificate

Advanced Technical Certificate: 98-150-1

The Computer Information Security Advanced Technical Certificate addresses today's needs in security policy development, implementation techniques, intrusion detection and prevention, vulnerabilities, encryption, authentication, compromised networks, and tools to address these topics. Students develop skills to recognize, prevent and respond to network attacks; identify intrusion methods; and use security tools.

Course Number	Course Title	Credits
Term 1		
150-191	Principles of Information Security	3
150-192	Network Security Fundamentals	3
150-193	Network Attacks and Firewalls	3
150-194	Network Defense and Countermeasures	3
	Total	**12**

Information Technology - Applications Developer - Business

Associate of Applied Science Degree: 10-152-5

The Information Technology - Applications Developer program trains students in computer programming languages, client/server applications, database theory and application, systems analysis and design, Internet applications, operating systems and software applications. This program includes alternative courses. The Interactive Design emphasis is for those who are more interested in programming for digital application while the Business emphasis includes courses that focus more on business applications.

Individuals in this career need to be detail-oriented and have the ability to communicate effectively.

Course Number	Course Title	Credits
Term 1		
152-105	Relational Databases	3
152-106	Web Site Design	3
152-127	Visual Studio Developer	3
206-104	Interactive Design and Authoring	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**18**
Term 2		
152-118	Database-Driven Web Sites	3
152-126	Introduction to Systems Analysis	3
152-128	Visual Basic, Database Connectivity	3
152-139	C# Development	3
801-197	Technical Reporting	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**18**
Term 3		
152-129	Visual Basic, Business Applications	3
152-137	Java Programming	2
152-146	Database Automation	3
152-147	Systems Analysis and Design	3
801-196	Oral and Interpersonal Communication	3
809-195	Economics	3
	Total	**17**
Term 4		
102-110	Introduction to Business	3
152-134	Visual Basic, SQL Applications	3
152-138	Advanced Java Programming	2
152-148	Systems Analysis and Implementation	3
809-198	Introduction to Psychology	3
	Total	**14**
	Total Program Credits	**67**

Exit Assessment
A Capstone Project is the exit assessment graduation requirement for this program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Information Technology - Applications Developer - Interactive Media

Associate of Applied Science Degree: 10-152-5

The Information Technology - Applications Developer program trains students in computer programming languages, client/server applications, database theory and application, systems analysis and design, Internet applications, operating systems and software applications. This program includes alternative courses. The Interactive Design emphasis is for those who are more interested in programming for digital application while the Business emphasis includes courses that focus more on business applications.

Individuals in this career need to be detail-oriented and have the ability to communicate effectively.

Course Number	Course Title	Credits
Term 1		
152-105	Relational Databases	3
152-106	Web Site Design	3
152-127	Visual Studio Developer	3
206-104	Interactive Design and Authoring	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**18**
Term 2		
152-118	Database-Driven Web Sites	3
152-126	Introduction to Systems Analysis	3
152-128	Visual Basic, Database Connectivity	3
152-139	C# Development	3
801-197	Technical Reporting	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**18**
Term 3		
152-129	Visual Basic, Business Applications	3
152-137	Java Programming	2
152-140	Animation Application	3
152-141	Interactive Media Programming	3
801-196	Oral and Interpersonal Communication	3
809-195	Economics	3
	Total	**17**
Term 4		
152-134	Visual Basic, SQL Applications	3
152-136	MySQL	3
152-138	Advanced Java Programming	2
206-120	Team Production	3
809-198	Introduction to Psychology	3
	Total	**14**
	Total Program Credits	**67**

Exit Assessment
A Capstone Project is the exit assessment graduation requirement for this program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Information Technology - Network Specialist

Associate of Applied Science Degree: 10-150-2

The Information Technology - Network Specialist program prepares students with the skills and knowledge to provide businesses and organizations with computer network support, network installation, network administration, network design and integration. Coursework also prepares students to acquire nationally recognized industry certification. In order to better meet corporate demands for information sharing, integrated technologies are a major component of the program.

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Information Technology - Network Specialist (cont.)

Coursework may be offered in a sequence and time frame to meet the needs of part-time students and full-time students. A major strength of the program is instruction based on industry standards and certification. Required courses help prepare students for the Comp TIA A+ certification and the Comp TIA Network+ certification.

Course Number	Course Title	Credits
Term 1		
150-101	Network+	2
150-102	Microsoft Workstations	3
150-191	Principles of Information Security	3
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
804-107	College Mathematics	3
	Total	**17**
Term 2		
150-120	Microsoft Servers	3
150-122	Virtualization	3
154-112	Hardware/Software Support	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
	Total	**15**
Term 3		
150-103	Network Cabling	2
150-141	Computer Network Installation	2
152-106	Web Site Design	3
154-111	Computer System Maintenance	3
801-197	Technical Reporting	3
809-196	Introduction to Sociology	3
	Total	**16**
Term 4		
150-130	IT Administration	3
150-143	Linux Network Administration	2
152-127	Visual Studio Developer	3
154-113	Help Desk Concepts	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**14**
Required Elective Credits		6
	Total Program Credits	**68**

Exit Assessment
Successful completion of course 150-130 IT Administration is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Information Technology - Technical Support Specialist

Associate of Applied Science Degree: 10-154-4

Moraine Park's Information Technology - Technical Support Specialist program provides students with the skills to support micro-computer systems and their users in both stand-alone and network environments. Coursework offers both the theoretical and hands-on training to perform a variety of computer functions such as installing hardware and software, troubleshooting and repairing, providing computer and system maintenance, and having the knowledge of common software applications to assist others.

People working in this field require skills in communication, time management and organization, as well as mobility and a willingness to work long hours (nights and weekends). They also need to be detail-oriented and be able to prioritize their work and have a desire to learn new things. Typical jobs include supporting the end user, setting up new computers, troubleshooting/repairing computers, staffing a help desk, training individuals and writing procedures.

Advanced standing for skills gained through work experience is possible. Leads toward A+ certification.

Course Number	Course Title	Credits
Term 1		
103-160	Microsoft Word	2
103-182	Microsoft PowerPoint	2
150-102	Microsoft Workstations	3
154-120	Microcomputer Operating Systems	2
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
	Total	**15**
Term 2		
150-101	Network+	2
154-112	Hardware/Software Support	3
154-113	Help Desk Concepts	3
801-197	Technical Reporting	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
	Total	**17**
Term 3		
102-135	Business Technology and Innovation	3
106-163	Database and Spreadsheet Essentials	3
150-141	Computer Network Installation	2
154-111	Computer System Maintenance	3
154-115	Training and Development in Office Systems	3
804-107	College Mathematics	3
	Total	**17**
Term 4		
150-120	Microsoft Servers	3
150-130	IT Administration	3
154-122	Introduction to MAC	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**15**
Required Elective Credits		6
	Total Program Credits	**70**

Exit Assessment
An Internship or Electronic Portfolio is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Information Technology - Web Designer/Developer

Technical Diploma: 31-152-7

The Information Technology - Web Designer/Developer program teaches students to use a variety of software, programming and markup languages combined with Web design principles to create Web sites used for marketing and e-commerce.

Graduates may work in positions as Webmasters, Web designers, Web developers and Web site developer consultants/entrepreneurs. Individuals may be employed in a wide range of companies that are interested in using the Internet to market and/or sell their products or services. Graduates may be employed by a consulting firm that provides Web design, development and maintenance as a contracted service to businesses and industries or start their own business.

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Information Technology - Web Designer/Developer (cont.)

Course Number	Course Title	Credits
Term 1		
152-106	Web Site Design	3
152-107	Graphics for the Web	2
152-112	HTML/XML	3
152-119	Web Developer Concepts	2
204-100	Imaging Editing	2
801-195	Written Communication	3
	Total	**15**
Term 2		
103-193	Dreamweaver/Flash	3
152-113	JavaScript	3
152-115	Web Site Design, Implementation and Maintenance	3
152-118	Database-Driven Web Sites	3
204-112	Digital Graphic Design	3
801-196	Oral and Interpersonal Communication	3
	Total	**18**
Term 3		
152-117	Emerging Web Technologies and Trends	1
152-120	Web Developer Internship	3
152-124	e-Commerce: Designing and Marketing Web Sites	3
152-127	Visual Studio Developer	3
	Total	**10**
	Total Program Credits	**43**

Exit Assessment
An Internship is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **2nd** semester

Students will need to complete Basic Math Proficiency.

Note: Students should be able to keyboard 25 wpm or enroll in the Keyboarding (106-103) course; have experience using the Internet or enroll in the Exploring the Internet With Client Software (103-165) course; and have experience using Microsoft Word, Access and Excel.

This program is completed in three terms.

Web Site Coordinator Certificate

Certificate: 97-152-1

The Web Site Coordinator Certificate offers students the opportunity to develop basic skills that enable them to design, develop and maintain Internet Web sites. Coursework introduces students to design software, electronic imaging, Web site coding, and design and development processes to support the marketing functions of a business.

This certificate allows students to take technical diploma courses without the time commitment of a full-time program. The credits can be applied toward the Information Technology - Web Designer/Developer program if the student desires.

Course Number	Course Title	Credits
Term 1		
103-165	Exploring the Internet With Client Software	1
152-106	Web Site Design	3
152-107	Graphics for the Web	2
152-112	HTML/XML	3
152-115	Web Site Design, Implementation and Maintenance	3
152-119	Web Developer Concepts	2
204-100	Imaging Editing	2
	Total	**16**

Law, Public Safety and Security

Criminal Justice - Corrections

Associate of Applied Science Degree: 10-504-2

The Criminal Justice - Corrections program is an accredited two-year associate of applied science degree program that prepares students for positions in a variety of corrections careers ranging from least restrictive settings, such as group homes, to highly restrictive maximum-security prisons.

Students may begin correctional employment immediately upon graduation, continue on with their four-year degree, or work to get the combination of work and education required for specific positions such as probation and parole agent. Many current professionals enroll in the program to enhance career advancement opportunities.

This program focuses on the "soft skills" necessary for success in this field. Students are trained in paraprofessional counseling skills focused on the empowerment model. Many counties require the associate of applied science degree or 60 college credits. A graduate of Moraine Park's program, once hired in these jail positions, can expect to earn $15 to $16 per hour.

The field of corrections needs people with high ethical standards, positive human values, supportive attitudes and effective listening and negotiating skills.

Course Number	Course Title	Credits
Term 1		
504-102	Careers in Corrections	3
504-110	Introduction to Criminal Justice Supervision	3
504-181	Ethnicity, Corrections and Supervision	3
801-195	Written Communication	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**15**
Term 2		
504-930	Security Procedures	3
504-931	Communication Skills	3
504-937	Juvenile Supervision	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
809-159	Abnormal Psychology	3
	- OR -	
809-188	Developmental Psychology	3
	Total	**15**
Term 3		
504-143	Probation and Parole	3
504-155	Stress Management	3
504-162	Corrections Internship	2
504-933	Corrections Report Writing	3
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
	Total	**17**

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Criminal Justice - Corrections (cont.)

Course Number	Course Title	Credits
Term 4		
504-136	Correctional Counseling	3
504-932	Adult Supervision	3
504-934	Correctional Law and Code	3
504-935	Corrections Summary Assessment	1
504-936	Emergency Procedures	3
804-107	College Mathematics	3
	- OR -	
806-122	Natural Science in Society	3
	Total	**16**
Required Elective Credits		3
	Total Program Credits	**66**

Exit Assessment
Corrections Summary Assessment is the exit assessment graduation requirement for this program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **3rd** semester

Emergency Medical Technician

Technical Diploma: 30-531-3

Moraine Park Technical College's Emergency Medical Technician program prepares students for licensure as entry-level ambulance attendants in Wisconsin. Patients' lives often depend on the quick reactions and competent care provided by emergency medical technicians. EMTs respond to emergencies as varied as vehicle crashes, heart attacks, drownings, childbirths, gunshot wounds, strokes, falls, diabetic emergencies and environmental exposures. As an EMT, you will be trained to assess a scene for hazards, assess both sick and injured patients, apply needed care and transport patients to appropriate facilities. Major topics covered in this program include: patient assessment, airway management, medical emergencies, trauma and EMS operations.

Classes will meet two nights per week during the semester.

Students must possess current certification in Basic Life Support to the American Heart Association's Health Care Provider level, or equivalent approved by the Wisconsin Department of Health and Family Services.

Students must be 18 years of age at the conclusion of the course to qualify for licensure.

Course Number	Course Title	Credits
Term 1		
531-301	Emergency Medical Technician	5
	Total	**5**

Emergency Medical Technician - Paramedic

Technical Diploma: 31-531-1

Moraine Park Technical College's Emergency Medical Technician - Paramedic program prepares students to perform pre-hospital medical procedures. People's lives often depend on the quick reaction and competent care of emergency medical technicians (EMTs) and paramedics. Paramedics with additional advanced training can perform more difficult and demanding pre-hospital medical procedures. Incidents as varied as automobile accidents, heart attacks, drowning, childbirth and gunshot wounds all require immediate, professional medical attention. As a paramedic, you will provide this vital attention as you care for and transport the sick or injured. Major topics to be covered include patient assessment, pharmacology, pediatrics, ambulance/system operations, trauma, respiratory emergencies and medical emergencies.

The program begins in August every year and requires full-time enrollment. **There is not a part-time option for this program. Students must have a current Emergency Medical Technician license to enroll in the Emergency Medical Technician - Paramedic program.**

Course Number	Course Title	Credits
Term 1		
531-911	EMS Fundamentals	2
531-912	Paramedic Medical Principles	4
531-913	Patient Assessment Principles	3
531-914	Prehospital Pharmacology	3
531-915	Paramedic Respiratory Management	2
531-916	Paramedic Cardiology	4
531-917	Paramedic Clinical Field 1	3
	Total	**21**
Term 2		
531-918	Advanced Resuscitation	1
531-919	Paramedic Medical Emergencies	4
531-920	Paramedic Trauma	3
531-921	Special Patient Populations	3
531-922	EMS Operations	1
531-923	Paramedic Capstone	1
531-924	Paramedic Clinical Field 2	4
	Total	**17**
	Total Program Credits	**38**

Exit Assessment
531-923 Paramedic Capstone is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **2nd** semester

Students will need to complete Basic Math Proficiency.

Judicial Reporting

Associate of Applied Science Degree: 10-106-1

You've seen high-profile trials with a person keying the testimony into a stenograph machine or reading the scrolling captions for the hearing-impaired on your TV screen. The person recording the spoken words at speeds ranging from 180 to 225 words a minute is a judicial reporter. If you're an excellent listener, enjoy keyboarding, have strong language and communications skills, and are committed to accuracy and confidentiality, a career in judicial reporting may be a perfect fit for you.

Course Number	Course Title	Credits
MPTC Courses		
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
809-122	Introduction to American Government	3
	- OR -	
809-172	Race, Ethnic and Diversity Studies	3
809-196	Introduction to Sociology	3
809-195	Economics	3
	- OR -	
809-144	Macroeconomics (LTC)	3
804-107	College Mathematics	3
	- OR -	
806-122	Natural Science in Society	3
Lakeshore Courses		
106-104	Realtime Reporting 1 (LTC)	5
106-105	Realtime Reporting 2 (LTC)	5
106-108	Realtime Reporting Speed Development (LTC)	2
106-109	Literary 1 - Advanced (LTC)	2
106-111	Literary 2 - Advanced (LTC)	2
106-128	Jury Charge 1 - Advanced (LTC)	2
106-129	Jury Charge 2 - Advanced (LTC)	2
106-142	Judicial Reporting Procedures (LTC)	2
106-143	Judicial Reporting Internship (LTC)	1
106-144	Realtime Reporting Orientation (LTC)	1
106-156	Testimony 1 - Advanced (LTC)	3
106-157	Testimony 2 - Advanced (LTC)	3
106-158	Realtime Reporting Technology (LTC)	2
106-159	Legal Terminology (LTC)	1
106-171	Medical Reporting and Terminology (LTC)	2

(continued)

Judicial Reporting (cont.)

Course Number	Course Title	Credits
Lakeshore Courses		
106-184	English for Realtime Reporters (LTC)	1
106-804	Realtime Reporting 1 Lab (LTC)	1
106-805	Realtime Reporting 2 Lab (LTC)	1
106-809	Literary 1 Lab - Advanced (LTC)	1
106-811	Literary 2 Lab - Advanced (LTC)	1
106-828	Jury Charge 1 Lab - Advanced (LTC)	1
106-829	Jury Charge 2 Lab - Advanced (LTC)	1
106-857	Testimony 2 Lab - Advanced (LTC)	1
106-859	Testimony 1 Lab - Advanced (LTC)	1
	Total	**65**

Paralegal

Associate of Applied Science Degree: 10-110-1

Paralegals work under the supervision of lawyers in a range of tasks–researching the law; investigating; preparing for hearings, trials and real estate closings; interviewing clients and witnesses; and preparing legal documents and other legal correspondence. Paralegals cannot give legal advice or represent clients in court. If you are detail-oriented, organized, and strong in communications and enjoy researching and analyzing facts, you might find a career as a paralegal very rewarding.

Course Number	Course Title	Credits
MPTC Courses		
101-112	Accounting 1	4
	- OR -	
101-155	Accounting for Professionals (LTC)	3
105-160	Business Law	3
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
804-107	College Mathematics	3
	- OR -	
806-112	Principles of Sustainability	3
809-122	Introduction to American Government	3
	- OR -	
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
809-196	Introduction to Sociology	3
809-198	Introduction to Psychology	3

Course Number	Course Title	Credits
Lakeshore Courses		
110-101	Introduction to Paralegalism and Legal Ethics (Prerequisite to all specialty courses)	3
110-130	**Real Estate Law — Paralegal***	3
110-102	**Civil Litigation I**	3
110-104	**Legal Research**	3
110-106	**Family Law***	3
110-103	**Civil Litigation II** (Prerequisite is 110-102 Civil Litigation I)	3
110-105	**Legal Writing** (Prerequisite is 110-104 Legal Research)	3
110-107	**Legal Aspect of Business Organizations**	3
110-114	**Administration of Estates***	3
110-142	Paralegal Internship	2
	- OR -	
110-145	Paralegal Studies (LTC)	2
110-168	**Criminal Law-Paralegal***	3
110-160	Employment Law	3
105-125	Portfolio Introduction	1
105-128	Career Exploration - Paralegal	2
110-179	Portfolio Assessment - Paralegal	1
	Total	**66**

The following classes may be substituted for * courses:

110-115	Administrative Law – 3 crs.
110-122	Debtor and Creditor Relations – 3 crs.
101-123	Accounting Income Tax 1 – 4 crs.

ABA-approved specialty courses that teach skills specific to Paralegals are bold faced. Student must take four of these courses face-to-face or IVC.

Paramedic Technician

Associate of Applied Science Degree: 10-531-1

Moraine Park Technical College's Paramedic Technician program prepares students to perform pre-hospital medical procedures. People's lives often depend on the quick reaction and competent care of emergency medical technicians (EMTs) and paramedics. Paramedics with additional advanced training can perform more difficult and demanding pre-hospital medical procedures. Incidents as varied as automobile accidents, heart attacks, drowning, childbirth and gunshot wounds all require immediate, professional medical attention. As a paramedic, you will provide this vital attention as you care for and transport the sick or injured. Major topics to be covered include patient assessment, pharmacology, pediatrics, ambulance/system operations, trauma, respiratory emergencies and medical emergencies.

The program begins in August every year and requires full-time enrollment. **There is not a part-time option for this program. Students must have a current Emergency Medical Technician license to enroll in the Paramedic Technician program.** General Studies courses may be completed on a part-time basis for this program.

Course Number	Course Title	Credits
Term 1		
531-911	EMS Fundamentals	2
531-912	Paramedic Medical Principles	4
531-913	Patient Assessment Principles	3
531-914	Prehospital Pharmacology	3
531-915	Paramedic Respiratory Management	2
531-916	Paramedic Cardiology	4
531-917	Paramedic Clinical Field 1	3
	Total	**21**
Term 2		
531-918	Advanced Resuscitation	1
531-919	Paramedic Medical Emergencies	4
531-920	Paramedic Trauma	3
531-921	Special Patient Populations	3
531-922	EMS Operations	1
531-923	Paramedic Capstone	1
531-924	Paramedic Clinical Field 2	4
	Total	**17**
Term 3		
801-195	Written Communication	3
801-196	Oral and Interpersonal Communication	3
806-177	General Anatomy and Physiology	4
809-198	Introduction to Psychology	3
	Total	**13**
Term 4		
806-179	Advanced Anatomy and Physiology	4
806-197	Microbiology	4
809-166	Introduction to Ethics: Theory and Application	3
809-196	Introduction to Sociology	3
809-188	Developmental Psychology	3
	Total	**17**
	Total Program Credits	**68**

Exit Assessment

531-923 Paramedic Capstone is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Basic Industrial Maintenance Certificate

Certificate: 97-462-1

The Basic Industrial Maintenance Certificate prepares students to apply a variety of skills to industrial maintenance areas. The coursework provides basic instruction and hands-on experiences to develop broad-based skills in areas such as electricity, machine tools, hydraulics and pneumatics, renewable energy, and robotics to perform in industrial settings.

Course Number	Course Title	Credits
Term 1		
462-301	DC/AC Electricity	4
462-303	Hydraulics/Pneumatics Applications	3
462-305	Mechanical Skills for Technicians	2
462-309	Industrial Control Systems	4
462-313	Blueprint/Schematic Reading	2
	Total	**15**

CNC Set-Up/Operator Certificate

Certificate: 97-444-1

This certificate is designed to develop the skills of an individual who has limited or no manufacturing background in the setup and operation of Computer Numerically Controlled (CNC) equipment. CNC operators operate equipment and maintain quality control of parts being machined. CNC setup operators handle the initial start-up of a program and troubleshoot CNC machine tools.

Areas of study include the following:

- How to operate machine tools
- Computer operations
- Entry-level CNC programming
- CNC setup
- CNC operation
- Industrial trades math
- Blueprint reading
- How to use measuring equipment

Course Number	Course Title	Credits
Term 1		
439-301	Introduction to Basic Machining	1
439-303	Basic Machining - Milling	2
439-305	Basic Machining - Drilling and Grinding	2
439-399	2D AutoCAD Mold and Die Print Reading	2
444-333	Basics of Metrology	1
444-350	Basic Programming	3
804-360	Occupational Mathematics 1	2
	Total	**13**
Term 2		
444-340	Beginning CAM - Mastercam	2
444-355	CNC Machining Center Programming	2
444-365	CNC Machining Center Operation	2
804-361	Occupational Mathematics 2	2
	Total	**8**
	Total Program Credits	**21**

CNC/Tool and Die Technologies

Technical Diploma: 32-444-2

Moraine Park's CNC/Tool and Die Technologies students operate machine tools (lathes, milling machines, grinders, drill presses), read blueprints, perform entry-level CNC programming, operate two-dimensional computer-aided machining, set up and operate molding press, set up and operate punch press, and use measuring equipment. Students prepare for a lean and green manufacturing environment.

The program focuses on programming and operation of coordinate measuring machine (CMM) and vertical and horizontal machining centers, as well as turning centers, the electrical discharge machine (EDM), tooling and workholding, and three-dimensional computer-aided machining. Students build and run mold and stamping dies; perform advanced milling, drilling and lathe work, precision surface grinding, and heat treating.

Graduates can program online (at the machine) or offline using a computer and a CAD/CAM system in a job shop or a tool and die environment. Graduates analyze specs, lay out metal stock, construct and design dies and molds, and set up various machine tools. Graduates may earn credit toward apprenticeship.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem-solving strategies, apply mathematical reasoning, think critically and adapt to change.

Course Number	Course Title	Credits
Term 1		
439-301	Introduction to Basic Machining	1
439-303	Basic Machining - Milling	2
439-305	Basic Machining - Drilling and Grinding	2
439-399	2D AutoCAD Mold and Die Print Reading	2
444-302	CNC Controls	2
444-333	Basics of Metrology	1
444-350	Basic Programming	3
804-360	Occupational Mathematics 1	2
	Total	**15**
Term 2		
439-306	Basic Machining - Turning	2
444-310	Material Selection	1
444-311	Tooling and Workholding	2
444-340	Beginning CAM - Mastercam	2
444-342	Advanced CAM 2D	2
444-346	Design for 3D Machining	2
444-355	CNC Machining Center Programming	2
444-365	CNC Machining Center Operation	2
804-361	Occupational Mathematics 2	2
	Total	**17**
Term 3		
439-324	Pierce and Die Making	3
439-329	Compound Die Making	3
444-312	Product Engineering - Lean Manufacturing	1
444-343	Beginning CAM 3D	2
444-344	Advanced CAM 3D	2
444-375	Turning Center Operation	2
444-385	Turning Center Programming	2
804-362	Occupational Mathematics 3	2
	Total	**17**
Term 4		
439-334	Single Cavity Mold Making	3
439-339	Multi Cavity Mold Making	3
444-313	Product Manufacturing	2
444-386	Advanced Machining Center	2
444-391	Coordinate Measuring Machine	3
444-394	Advanced Turning Center	2
801-310	Occupational Communication	2
	Total	**17**
	Total Program Credits	**66**

Exit Assessment

Capstone projects are the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Computer Numerical Control Certificate

Certificate: 97-628-1

Manufacturers are continually looking for employees skilled in Computer Numerical Control (CNC) setup, operations and programming. The Computer Numerical Control Certificate provides the fundamental concepts of CNC as well as hands-on coursework with Computer-Aided Drafting (CAD) software and operation of CNC equipment.

Individuals who have experience in manufacturing and are looking for short-term training will find this certificate a good option. Courses are directly transferable to Moraine Park's Process Engineering Technology associate of applied science degree if students wish to further their education in this field.

Course Number	Course Title	Credits
Term 1		
103-159	Computer Literacy - Microsoft Office	1
606-176	CAD 2-D, AutoCAD	3
623-110	Technical Print Reading	2
	- OR -	
623-122	Print Reading Principles	2
623-162	Manufacturing Processes	3
628-122	Basic CNC Programming and Operation	3
628-132	Advanced CNC Programming and Operation	3
	Total	**15**

Die Design Certificate

Certificate: 97-617-1

Die designers utilize their creativity to develop die designs for production environments. They are typically detail oriented and have an interest in machines and mechanical processes.

This certificate is designed to develop the metal stamping die design skills of an individual who has completed the Mechanical Design Technology associate of applied science degree, has previous die set-up or manufacturing experience, or a background in a machining role. This would include journey person tool and die makers interested in moving into a design role in their field.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem solving strategies, apply mathematical reasoning, think critically and adapt to change. Students are exposed to the concepts of lean manufacturing, as well as green sustainable technologies.

Graduates are prepared to immediately enter the industry as designers working on new die tooling projects. Employers are looking for individuals who have the strong skill and knowledge base provided by this certificate.

Course Number	Course Title	Credits
Term 1		
617-114	CAD 3-D, SolidWorks	3
617-115	Jig and Fixture Design	3
617-123	Advanced SolidWorks Assembly Modeling	3
617-146	Die Design 1	3
617-147	Die Design 2	3
617-148	Die Design 3	3
	Total	**18**

Fabrication Technologies

Associate of Applied Science Degree: 10-457-1

The Fabrication Technologies program enables students to acquire high-performance knowledge and skills needed to help boost the productivity, innovation and competitiveness of local manufacturers. Students gain fabricating skills in automated cutting, forming and welding processes that prepare them for obtaining the Precision Sheet Metal Certification from the Fabricators and Manufacturers Association. The coursework also includes topics in computer-aided design (CAD); computer numerical control, advanced manufacturing planning and production; lean manufacturing practices; and quality applications used in today's advanced manufacturing companies. Students will apply sustainable recycling methods throughout the program. The general studies courses in communications, economics and math prepare students for career advancement and provide transfer opportunities to four-year colleges and universities.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem-solving strategies, apply mathematical reasoning, think critically and adapt to change.

Course Number	Course Title	Credits
Term 1		
442-109	Welding for Fabricators	4
457-145	Metal Fabrication	4
623-110	Technical Print Reading	2
801-196	Oral and Interpersonal Communication	3
804-113	College Technical Math 1A	3
	Total	**16**
Term 2		
457-146	Advanced Fabrication Techniques	4
457-147	Metallurgy	2
457-148	Metal Cutting and Forming Processes	3
623-162	Manufacturing Processes	3
801-195	Written Communication	3
804-114	College Technical Math 1B	2
	Total	**17**
Term 3		
457-110	Integrated Manufacturing Planning - Fabrication Technologies	2
617-114	CAD 3-D, SolidWorks	3
623-151	Lean Manufacturing	3
623-196	Geometric Dimensioning and Tolerancing	3
806-137	Comprehensive Technical Physics	4
	Total	**15**
Term 4		
457-111	Integrated Manufacturing Production - Fabrication Technologies	2
628-122	Basic CNC Programming and Operation	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
809-199	Psychology of Human Relations	3
	Total	**14**
	Total Program Credits	**62**

Exit Assessment

Capstone Projects are the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Industrial Maintenance Technician

Technical Diploma: 32-462-1

This program is currently under review – The college is not accepting applicants for this academic year. If interested in this program, please e-mail recruitment@morainepark.edu or call 262-335-5884.

The Industrial Maintenance Technician program prepares students to enter several technology-driven fields; i.e., manufacturing, food and beverage processing and building maintenance. The skills for installation, preventive maintenance, troubleshooting and repair continue to be in high demand. The Industrial Maintenance Technician program provides students training in the areas of fluid power (hydraulics and pneumatics), industrial electrical/electronics and instrumentation, machining, welding, programmable logic control (PLC), motor control automation and renewable energy sources.

Students will develop a wide variety of technical skills in electrical/electronics, fluid power, mechanical systems, computers and computer-controlled interface units. Programmable logic controllers, motors and drives, servo hydraulic systems and closed loop positioning will be studied. A comprehensive understanding of how these technical skill areas are linked together to create automated systems is developed through hands-on project coursework that allows the student to put together the various technologies into a computer-integrated system.

Course Number	Course Title	Credits
Term 1		
442-313	General Welding	2
462-301	DC/AC Electricity	4
462-305	Mechanical Skills for Technicians	2
462-326	Industrial Safety	2
801-322	Occupational Writing	1
804-360	Occupational Mathematics 1	2
	- OR -	
804-113	College Technical Math 1A	3
	Total	**13**
Term 2		
462-309	Industrial Control Systems	4
462-311	Machine and Equipment Installation	3
462-313	Blueprint/Schematic Reading	2
462-323	Semi-Conductors and Digital Electronics	3
801-310	Occupational Communication	2
804-361	Occupational Mathematics 2	2
	- OR -	
804-114	College Technical Math 1B	2
	Total	**16**
Term 3		
462-303	Hydraulics/Pneumatics Applications	3
462-317	Preventative/Predictive Maintenance	3
462-319	Programmable Logic Controllers	3
462-321	Power Transmission Systems	3
462-324	Integrated Manufacturing Center Project Planning	2
	Total	**14**
Term 4		
462-315	Microprocessor Applications	3
462-325	Robotics/Material Handling Operations	3
462-327	Electro-Hydraulic/Mechanical Systems	4
462-330	Integrated Manufacturing Center Project Implementation	3
	Total	**13**
	Total Program Credits	**56**

Exit Assessment
A Capstone Project is an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Mechatronics

Associate of Applied Science Degree: 10-620-2

Mechatronics integrates theories and applications in mechanical, electrical and electronic systems, fluid power, robotics and computer software to prepare students to work effectively in a variety of industrial settings. The Mechatronics program teaches students a broad array of job-ready skills that involve integrating technologies and systems-thinking required to effectively problem solve, program, operate and maintain electromechanical and automated equipment.

Course Number	Course Title	Credits
Term 1		
620-101	DC Circuits	3
620-102	AC Circuits	3
801-195	Written Communication	3
804-113	College Technical Math 1A	3
804-114	College Technical Math 1B	2
	Total	**14**
Term 2		
620-103	Semiconductor Devices	3
620-105	Industrial Hydraulics and Pneumatics 1	2
620-115	AC-DC Machinery	4
804-116	College Technical Math 2	4
809-166	Introduction to Ethics: Theory and Application	3
809-199	Psychology of Human Relations	3
	- OR -	
809-198	Introduction to Psychology	3
	Total	**19**
Term 3		
620-104	Digital Electronics	2
620-110	Integrated Manufacturing Planning - Mechatronics	2
620-133	Mechatronics Controls	3
620-135	Programmable Controllers	3
620-150	PC Interfacing and Communications	3
806-137	Comprehensive Technical Physics	4
	Total	**17**
Term 4		
620-111	Integrated Manufacturing Production - Mechatronics	2
620-136	Advanced Programmable Controllers	3
620-146	Control Logics	4
620-151	Servomechanisms	3
801-197	Technical Reporting	3
	Total	**15**
Required Elective Credits		3
	Total Program Credits	**68**

Exit Assessment
Successful completion of course 620-110 and 620-111 is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Metal Fabrication

Technical Diploma: 31-457-2

Moraine Park's two-semester Metal Fabrication technical diploma helps individuals develop fabrication skills that are used in today's industries. Students gain skills in fabricating that can lead to FMA Precision Sheet Metal certification through hands-on experience. Students build metal products start to finish. Students read prints and learn automated cutting, forming and welding using lean practices. Students learn gas metal arc welding, shielded metal arc welding, gas tungsten arc welding and oxy-fuel cutting. The coursework also provides instruction in math, communications skills, lean manufacturing practices and quality applications used in today's advanced

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Metal Fabrication (cont.)

manufacturing companies. Graduates of the program can directly transfer their credits into Moraine Park's Fabrication Technologies associate of applied science degree if they decide to continue their education.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem-solving strategies, apply mathematical reasoning, think critically and adapt to change.

Course Number	Course Title	Credits
Term 1		
442-109	Welding for Fabricators	4
457-145	Metal Fabrication	4
623-110	Technical Print Reading	2
804-113	College Technical Math 1A	3
	Total	**13**
Term 2		
457-146	Advanced Fabrication Techniques	4
457-147	Metallurgy	2
457-148	Metal Cutting and Forming Processes	3
623-162	Manufacturing Processes	3
801-195	Written Communication	3
	Total	**15**
	Total Program Credits	**28**

Exit Assessment
Capstone Project is the exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

Mold Design Certificate
Certificate: 97-617-2

Mold designers utilize their creativity to develop mold designs for production environments. They are typically detail oriented and have an interest in machines and mechanical processes.

This certificate is designed to develop the mold and die cast die design skills of an individual who has completed the Mechanical Design Technology associate of applied science degree program, has previous mold set-up or manufacturing experience, or a background in a machining role. This would include journey person tool and die makers interested in moving into a design role in their field.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem solving strategies, apply mathematical reasoning, think critically and adapt to change. Students are exposed to the concepts of lean manufacturing, as well as green sustainable technologies.

Graduates are prepared to immediately enter the industry as designers working on new mold tooling projects. Employers are looking for individuals who have the strong skill and knowledge base provided by this certificate.

Course Number	Course Title	Credits
Term 1		
617-114	CAD 3-D, SolidWorks	3
617-115	Jig and Fixture Design	3
617-123	Advanced SolidWorks Assembly Modeling	3
617-151	Mold Design 1	3
617-152	Mold Design 2	3
617-153	Mold Design 3	3
	Total	**18**

Quality Assurance Certificate
Certificate: 97-623-1

The Quality Assurance Certificate is designed for quality control technicians responsible for implementing a quality plan and function within a manufacturing organization. Students gain knowledge and skills in:

- Quality assurance concepts.
- Basic statistics.
- Quality and process control (SPC and acceptance sampling).
- Quality planning (ISO-9000, benchmarking, quality costs).
- Metrology and geometric tolerancing.
- Preparing for the American Society for Quality Control (ASQC) Certified Quality Technician Exam.

This certificate allows students to take associate of applied science degree or technical diploma courses without the time commitment of a full-time program. Several of the certificate's credits are directly transferable into the Process Engineering Technology associate of applied science degree.

Course Number	Course Title	Credits
Term 1		
623-118	Gage Calibration, Repeatability and Reproducibility	3
623-134	Basic CMM Programming and Operation	3
623-158	Certified Quality Technician Primer Course	2
623-167	ISO 9000/2000 and Auditing	3
623-190	Basic Metrology	3
623-196	Geometric Dimensioning and Tolerancing	3
628-136	Statistical Process Control	3
804-113	College Technical Math 1A	3
	Total	**23**

Welding
Technical Diploma: 31-442-1

Moraine Park's Welding technical diploma program trains individuals to develop welding and fabrication skills that are needed in today's industries. Through hands-on experience in a welding laboratory, students gain skills in all welding positions leading to welder certification. Students learn gas metal arc welding, shielded metal arc welding, gas tungsten arc welding and oxy-fuel cutting. The coursework also provides instruction in print reading, math and communications skills, lean processes and sustainability practices.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem-solving strategies, apply mathematical reasoning, think critically and adapt to change.

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Welding (cont.)

Course Number	Course Title	Credits
Term 1		
442-309	Introduction to Welding Processes	4
442-310	Shielded and Gas Metal Arc Welding (SMAW/GMAW)	4
442-331	Welding Print Reading	2
804-360	Occupational Mathematics 1	2
	- OR -	
804-113	College Technical Math 1A	3
	Total	**12 or 13**
Term 2		
442-315	Gas Tungsten Arc Welding	4
442-316	Advanced Welding Techniques	4
442-345	Fabrication for Welders	4
801-310	Occupational Communication	2
	- OR -	
801-196	Oral and Interpersonal Communication	3
	Total	**14 or 15**
	Total Program Credits	**26 or 28**

Exit Assessment
Completion of the TSA Rubric and 2 Certification tests are the exit assessment graduation requirements for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **2nd** semester

Marketing

Digital Marketing

Associate of Applied Science Degree: 10-104-3

The associate of applied science degree in Digital Marketing presents digital marketing courses that utilize digital communication channels such as the Internet, social networks and mobile devices as marketing vehicles to attract and retain customers. Students explore how the traditional marketing fundamentals of product, pricing, promotion and place apply in the digital realm. Students will apply key tactics and technologies to effectively create and implement an innovative marketing plan and strategy.

Course Number	Course Title	Credits
Term 1		
102-110	Introduction to Business	3
104-102	Marketing Principles	3
204-112	Digital Graphic Design	3
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**15**
Term 2		
102-135	Business Technology and Innovation	3
104-117	Digital Marketing, Public Relations, and Social Media	3
104-125	Advertising and Social Media Campaign	3
152-106	Web Site Design	3
206-110	Video / Sound Editing	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-198	Speech	3
	Total	**18**
Term 3		
101-184	Principles of Accounting	3
104-104	Web Research and Analytics	3
104-110	Global Marketing	3
104-140	Integrated Marketing Communications	3
152-109	Search Engine Optimization	3
809-196	Introduction to Sociology	3
	Total	**18**
Term 4		
105-140	Business Decision Making	3
105-150	Business Practice Firm	3
809-166	Introduction to Ethics: Theory and Application	3
809-195	Economics	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**15**
	Total Program Credits	**66**

Exit Assessment
Completion of 105-150 Business Practice Firm is the exit assessment graduation requirement for the program

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Science, Technology, Engineering and Mathematics

Engine Research and Development Technician

Associate of Applied Science Degree: 10-606-5

The Engine Research and Development Technician program trains students to assist engineers in engine development and design. Engine technicians conduct tests to determine engine characteristics such as torque and horsepower curves, engine efficiencies, exhaust emissions and durability. Data is collected using technologies such as engine dynamometers, engine transducers and data acquisition systems.

Graduates of the program become test lab technicians and other technical employees for manufacturers of internal combustion engines. Engine research and development technicians need strong mechanical aptitude, sound math and science skills, and an interest in internal combustion engines.

Course Number	Course Title	Credits
Term 1		
106-138	Computer Essentials	2
606-150	Electronics and Instrumentation	3
606-164	Engine Fundamentals	3
606-167	Engine Development and Design	2
623-162	Manufacturing Processes	3
804-113	College Technical Math 1A	3
	Total	**16**

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Engine Research and Development Technician (cont.)

Course Number	Course Title	Credits
Term 2		
606-155	Ignition Fuels and Combustion	4
801-195	Written Communication	3
804-114	College Technical Math 1B	2
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**12**
Term 3		
606-168	Engine Testing and Testing Equipment	5
628-135	Principles of Machining	2
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
806-137	Comprehensive Technical Physics	4
809-195	Economics	3
	Total	**17**
Term 4		
606-169	Engine Emission Testing and Control	3
606-173	Engine Problems	3
606-174	Transmission of Power	3
606-176	CAD 2-D, AutoCAD	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**15**
Required Elective Credits		3
	Total Program Credits	**63**

Exit Assessment
Capstone Projects are an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Mechanical Design Technology

Associate of Applied Science Degree: 10-606-1

Moraine Park's Mechanical Design Technology program prepares students to assist engineers in the design of products and the preparation of computerized drawings for all types of machines and manufacturing industries. Coursework emphasizes computer-aided design (CAD) techniques, project and product development, and understanding various materials used in design and manufacturing. Coursework also includes designing fixtures, parts, molds and stamping dies with the latest CAD software. Students are exposed to the concepts of lean manufacturing, as well as green sustainable technologies.

Successful mechanical design technicians have strong computer and visualization skills, are detail oriented, have sound math skills and have a mechanical aptitude.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the Critical Core Manufacturing Skills (CCMS) throughout all the manufacturing classes. These skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem solving strategies, apply mathematical reasoning, think critically and adapt to change.

Graduates find jobs with a variety of manufacturing industries including metal fabrication companies; industrial equipment manufacturers; paper equipment manufacturers; consumer product companies; recreational equipment firms; and tool, die, metal stamping and mold making companies.

Course Number	Course Title	Credits
Term 1		
606-176	CAD 2-D, AutoCAD	3
617-114	CAD 3-D, SolidWorks	3
623-162	Manufacturing Processes	3
801-195	Written Communication	3
804-113	College Technical Math 1A	3
804-114	College Technical Math 1B	2
	Total	**17**
Term 2		
606-104	Engineering Materials	2
606-116	Machine Elements	3
617-115	Jig and Fixture Design	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
804-116	College Technical Math 2	4
809-195	Economics	3
	Total	**18**
Term 3		
606-112	Integrated Manufacturing Planning-Mechanical Design	2
606-114	Design of Components	3
606-128	Design Statics	3
617-146	Die Design 1	3
623-196	Geometric Dimensioning and Tolerancing	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**17**
Term 4		
606-111	Integrated Manufacturing Production-Mechanical Design	2
606-125	Product Design	4
606-130	Strength of Materials	3
617-151	Mold Design 1	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**15**
Required Elective Credits		3
	Total Program Credits	**70**

Exit Assessment
A Comprehensive Project is the required exit assessment for this program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Process Engineering Technology - Industrial/Manufacturing

Associate of Applied Science Degree: 10-623-8

The Process Engineering Technology program combines the foundational skills related to industrial engineering with the skills of computerized manufacturing. Students learn the planning, setup, monitoring, analyzing and controlling of integrated systems in order to improve efficiencies in a manufacturing environment, standardize and streamline processes, and initiate cost savings for businesses. Applications in safety, sustainability, problem solving and automated technologies are emphasized.

Although a broad range of manufacturing skills are covered, students in the final stages of coursework select a specialized training emphasis in either Industrial/Manufacturing or Quality Assurance.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the critical core manufacturing skills throughout all the manufacturing classes. The critical core manufacturing skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work

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Process Engineering Technology - Industrial/ Manufacturing (cont.)

environment, demonstrate integrity, communicate clearly, follow directions, apply problem solving strategies, apply mathematical reasoning, think critically and adapt to change.

Graduates are trained to work as members of teams consisting of engineers and production workers in a variety of industrial and manufacturing settings.

Course Number	Course Title	Credits
Term 1		
606-176	CAD 2-D, AutoCAD	3
606-170	CAD 3-D, NX (Unigraphics)	3
	- OR -	
617-112	CAD 3-D, Pro-Engineer	3
	- OR -	
617-114	CAD 3-D, SolidWorks	3
623-162	Manufacturing Processes	3
801-195	Written Communication	3
804-113	College Technical Math 1A	3
	Total	**15**
Term 2		
617-115	Jig and Fixture Design	3
623-190	Basic Metrology	3
628-136	Statistical Process Control	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
804-114	College Technical Math 1B	2
809-166	Introduction to Ethics: Theory and Application	3
	Total	**17**
Term 3		
623-118	Gage Calibration, Repeatability and Reproducibility	3
	- OR -	
628-122	Basic CNC Programming and Operation	3
623-151	Lean Manufacturing	3
623-170	Process Planning	2
623-196	Geometric Dimensioning and Tolerancing	3
628-110	Integrated Manufacturing Planning - Process Engineering Technology	2
806-137	Comprehensive Technical Physics	4
	Total	**17**
Term 4		
628-111	Integrated Manufacturing Production - Process Engineering Technology	2
628-132	Advanced CNC Programming and Operation	3
628-133	Robotics and Automated Material Handling	3
628-142	Computer-Aided Manufacturing	3
809-195	Economics	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**17**
Required Elective Credits		3
	Total Program Credits	**69**

Exit Assessment
Completion of SME Certified Manufacturing Technologist Practice Exam is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **3rd** semester

Process Engineering Technology - Quality Assurance

Associate of Applied Science Degree: 10-623-8

The Process Engineering Technology program combines the foundational skills related to industrial engineering with the skills of computerized manufacturing. Students learn the planning, setup, monitoring, analyzing and controlling of integrated systems in order to improve efficiencies in a manufacturing environment, standardize and streamline processes, and initiate cost savings for businesses. Applications in safety, sustainability, problem solving and automated technologies are emphasized.

Although a broad range of manufacturing skills are covered, students in the final stages of coursework select a specialized training emphasis in either Industrial/Manufacturing or Quality Assurance.

Representatives from business and industry have identified skills that are essential to success in manufacturing. Students will be expected to demonstrate the critical core manufacturing skills throughout all the manufacturing classes. The critical core manufacturing skills include: work cooperatively, work productively, listen effectively, demonstrate a positive attitude, maintain a safe work environment, demonstrate integrity, communicate clearly, follow directions, apply problem solving strategies, apply mathematical reasoning, think critically and adapt to change.

Graduates are trained to work as members of teams consisting of engineers and production workers in a variety of industrial and manufacturing settings.

Course Number	Course Title	Credits
Term 1		
606-176	CAD 2-D, AutoCAD	3
606-170	CAD 3-D, NX (Unigraphics)	3
	- OR -	
617-112	CAD 3-D, Pro-Engineer	3
	- OR -	
617-114	CAD 3-D, SolidWorks	3
623-162	Manufacturing Processes	3
801-195	Written Communication	3
804-113	College Technical Math 1A	3
	Total	**15**
Term 2		
617-115	Jig and Fixture Design	3
623-190	Basic Metrology	3
628-136	Statistical Process Control	3
801-196	Oral and Interpersonal Communication	3
	- OR -	
801-197	Technical Reporting	3
804-114	College Technical Math 1B	2
809-166	Introduction to Ethics: Theory and Application	3
	Total	**17**
Term 3		
623-118	Gage Calibration, Repeatability and Reproducibility	3
	- OR -	
628-122	Basic CNC Programming and Operation	3
623-151	Lean Manufacturing	3
623-170	Process Planning	2
623-196	Geometric Dimensioning and Tolerancing	3
628-110	Integrated Manufacturing Planning - Process Engineering Technology	2
806-137	Comprehensive Technical Physics	4
	Total	**17**
Term 4		
623-106	Quality Tools	3
623-134	Basic CMM Programming and Operation	3
623-167	ISO 9000/2000 and Auditing	3
628-111	Integrated Manufacturing Production - Process Engineering Technology	2
809-195	Economics	3
809-198	Introduction to Psychology	3
	- OR -	
809-199	Psychology of Human Relations	3
	Total	**17**
Required Elective Credits		3
	Total Program Credits	**69**

Exit Assessment
Completion of SME Certified Manufacturing Technologist Practice Exam is the exit assessment graduation requirement for the program.

Institutional Requirements
890-125 Student Success - take **1st** semester
103-159 Computer Literacy/Advanced Standing - take **1st** semester
890-130 Career Development - take **3rd** semester

Transportation, Distribution and Logistics

Automotive Technician

Technical Diploma: 32-404-2

The Automotive Technician program is offered as a four-semester technical diploma. Students learn to diagnose, service and repair all eight major systems of the automobile, which includes engine mechanical, engine performance, automatic transmission/transaxle, manual drive train, brakes, steering and suspension, climate control, and electrical and electronic systems. Mechanical aptitude, communication skills and an interest in the automotive industry are important to a successful automotive technician career. Graduates of the program may find employment as technicians in dealerships or other automotive repair facilities, service specialists and parts specialists, or as service writers/consultants. This program prepares students for ASE certification.

Automotive Technician is accredited or approved by the National Automotive Technicians Education Foundation

Course Number	Course Title	Credits
Term 1		
602-104	Brake Systems	3
602-107	Auto Service Fundamentals	2
602-124	Steering and Suspension Systems	3
602-125	Electrical and Electronic Systems 1	2
623-105	Metals for Technicians	1
804-360	Occupational Mathematics 1	2
	- OR -	
804-107	College Mathematics	3
	Total	**13**
Term 2		
602-103	Engine Repair 1	2
602-127	Electrical and Electronic Systems 2	3
602-128	Electrical and Electronic Systems 3	3
602-133	Shop Simulation/Internship 1	2
602-197	Engine Performance 1	3
442-101	Welding for Automotive Technicians	1
801-310	Occupational Communication	2
	- OR -	
801-195	Written Communication	3
806-376	Applied Physics	2
	- OR -	
806-137	Comprehensive Technical Physics	4
	Total	**18**
Term 3		
602-123	Engine Repair 2	3
602-134	Shop Simulation/Internship 2	2
602-196	Climate Control Systems	3
602-198	Engine Performance 2	4
809-300	Occupational Success Strategies	2
	- OR -	
801-195	Written Communication	3
	Total	**14**
Term 4		
602-109	Auto Transmission/Transaxle	4
602-132	Light Duty Diesel Engine Operation	2
602-135	Shop Simulation/Internship 3	2
602-149	Manual Drive Train and Axles	4
602-195	Advanced Chassis Systems	2
	Total	**14**
	Total Program Credits	**59**

Exit Assessment
Licensure/certification exams are an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - take **1st** semester
890-130	Career Development - take **3rd** semester

Automotive Technology

Associate of Applied Science Degree: 10-602-3

The Automotive Technology program is offered as a four-semester associate of applied science degree. Students learn to diagnose, service and repair all eight major systems of the automobile, which includes engine mechanical, engine performance, automatic transmission/transaxle, manual drive train, brakes, steering and suspension, climate control, and electrical and electronic systems. Mechanical aptitude, communication skills and an interest in the automotive industry are important to a successful automotive technician career. Graduates of the associate of applied science degree program have opportunities to further their education that may lead beyond the projected career paths of technicians in dealerships or other automotive repair facilities, service specialists, parts specialists, or as service writers/consultants. This program prepares students for ASE certification.

Course Number	Course Title	Credits
Term 1		
602-104	Brake Systems	3
602-107	Auto Service Fundamentals	2
602-124	Steering and Suspension Systems	3
602-125	Electrical and Electronic Systems 1	2
623-105	Metals for Technicians	1
801-195	Written Communication	3
804-107	College Mathematics	3
	Total	**17**
Term 2		
442-101	Welding for Automotive Technicians	1
602-103	Engine Repair 1	2
602-127	Electrical and Electronic Systems 2	3
602-128	Electrical and Electronic Systems 3	3
602-197	Engine Performance 1	3
806-137	Comprehensive Technical Physics	4
	Total	**16**
Term 3		
602-123	Engine Repair 2	3
602-196	Climate Control Systems	3
602-198	Engine Performance 2	4
801-196	Oral and Interpersonal Communication	3
809-166	Introduction to Ethics: Theory and Application	3
	Total	**16**
Term 4		
602-109	Auto Transmission/Transaxle	4
602-132	Light Duty Diesel Engine Operation	2
602-149	Manual Drive Train and Axles	4
602-195	Advanced Chassis Systems	2
809-195	Economics	3
809-199	Psychology of Human Relations	3
	Total	**18**
	Total Program Credits	**67**

Exit Assessment
Licensure/certification exams are an exit assessment graduation requirement for the program.

Institutional Requirements

890-125	Student Success - take **1st** semester
103-159	Computer Literacy/Advanced Standing - talk **1st** semester
890-130	Career Development - take **3rd** semester

Small Engine Service Certificate

Certificate: 97-606-1

The Small Engine Service Certificate is designed for individuals that are seeking employment in the home and garden and recreational vehicle repair industry. Students learn the fundamentals of engines and engine electricity and apply this knowledge in a small engine service course.

Graduates of this certificate may transfer their credits into Moraine Park's Engine Research and Development Technician associate of applied science degree if they wish to continue their education.

Course Number	Course Title	Credits
Term 1		
606-150	Electronics and Instrumentation	3
606-164	Engine Fundamentals	3
606-165	Small Engine Service	4
606-174	Transmission of Power	3
	Total	**13**

091-128 Large Animal Nursing - *2 Crs.* Builds on veterinary nursing skills from 091-172 Animal Care and Management 2. Covers large animal surgical nursing and anesthesia. (Prerequisites: 091-153 Medical Nursing. Completion of or concurrent enrollment in 091-152 Surgical Nursing 2)

091-140 Animal Anatomy and Physiology - *4 Crs.* Covers terminology, function, location, identification and organization of anatomical structures as parts of body systems. Emphasizes interrelationships between structure and function using body system approach. Discusses comparative anatomy and disease. (Prerequisites: 091-106 Animal Husbandry; 091-107 Infectious Animal Disease)

101-102 Hospitality Accounting (Lakeshore Technical College Course) - *4 Crs.* Provides students with an understanding of the basic structure of accounting in the hospitality area and how to interpret and understand financial statements to learn some internal controls. Students will learn some bottom-up cost control and some budgeting. The student will recognize the differences in hotel/hospitality accounting and emphasis is placed on analysis and interpretation as well as recording, classifying, and summarizing processes. (Corequisite: Microsoft Excel or equivalent)

101-112 Accounting 1 - *4 Crs.* Emphasizes accounting requirements for sole-proprietorship service businesses. Covers the accounting cycle, from the original business transaction to closing the books at year-end, including the preparation and interpretation of financial statements. Cash and reconciliation of cash are also covered. (Prerequisite: Completion of or concurrent enrollment in 103-180 Microsoft Excel)

101-114 Accounting 2 - *4 Crs.* Concentrates on accounting for merchandising operations and the importance of inventory. Accounting information systems, current and long-term receivables, as well as fixed and intangible assets are also covered throughout the course. (Prerequisite: 101-112 Accounting 1)

101-115 Accounting 3 - *4 Crs.* Focuses on financial reporting. Students will produce a complete set of annual reports that are in compliance with GAAP accompanied by a comprehensive analysis of the financial statements. (Prerequisite: 101-114 Accounting 2)

101-123 Income Tax Accounting - *3 Crs.* Provides the basic and intermediate information needed for preparing moderately difficult income tax returns for individual taxpayers. Includes training in the rudiments and applications of the Internal Revenue Code.

101-125 Cost Management - *3 Crs.* Emphasizes the need for accurate product costing for industrial and service organizations. Develops principles of job order costing, planning and budgeting. A thorough study of material, labor and indirect expenses is presented. The role cost accounting plays in planning and controlling operations is emphasized throughout the course. (Prerequisite: 101-114 Accounting 2)

101-126 Advanced Cost Management - *3 Crs.* Focuses on the basic methods of accumulating and reporting cost data. Develops principles of process costing. Special emphasis is placed on analyzing cost data to assist management in controlling costs and making decisions. (Prerequisite: 101-125 Cost Management)

101-128 Auditing - *3 Crs.* Covers standards and procedures used by accountants in determining the fairness of a client's financial statements. Integrates accounting standards, accounting systems, internal control structures, evidence and financial reporting. Topics of discussion include types of audit reports, importance of ethics and internal control. (Prerequisite: 101-114 Accounting 2)

101-129 Applied Income Tax - *3 Crs.* Students participate in the Volunteer Income Tax Assistance Program (VITA) sponsored by the Internal Revenue Service. Students prepare income tax returns (Forms 1040EZ, 1040A, 1040, Schedule A and Child Care) for the low-income and elderly populations as a practical work experience. Students learn to file tax returns electronically. (Prerequisite: 101-123 Income Tax Accounting)

101-134 Introduction to Finance - *3 Crs.* Introduces topics in financial planning for business, including purchasing fixed assets, investing, generating funds needed, and cash and debt management.

101-141 Payroll Accounting - *3 Crs.* Provides experience in the calculation of payroll and payroll taxes and in the preparation of those records and reports that form the foundation of an efficient payroll system.

101-145 Integrated Accounting Applications - *3 Crs.* This is a capstone course in the Accounting program. Students will use software to integrate a variety of technological skills and accounting concepts. Students will also be prepared for obtaining and retaining an accounting position. (Prerequisites: 101-114 Accounting 2; 101-154 Microcomputer Accounting Applications; 103-190 Advanced Microsoft Excel)

101-154 Microcomputer Accounting Applications - *3 Crs.* Provides hands-on experience with a microcomputer-based general accounting system. Students record transactions and generate journals, ledgers, financial statements and schedules. Emphasizes conversion of a manual accounting system to a microcomputer-based system. (Prerequisite: 101-112 Accounting 1)

101-155 Accounting for Professionals (Lakeshore Technical College Course) - *3 Crs.* Study the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format.

101-184 Principles of Accounting - *3 Crs.* Analyzes the fiscal components of a business. Students evaluate financial statements, accounts and annual reports relevant to the supervisor as a nonaccountant. Students evaluate and review several ratios, trends, business cycles and budgets. Students also discuss internal controls and business ethics and their effect on the firm.

102-101 Customer Service Essentials - *3 Crs.* Provides a solid foundation in the areas of customer service and service excellence and applies techniques to retain customers and maintain loyalty in both a face-to-face environment and in remote settings via telephone and the Internet. Students should be able to prepare the assessments using Microsoft Word or Microsoft PowerPoint. (Prerequisite: Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office)

102-110 Introduction to Business - *3 Crs.* Introduces the student to the world of business. Examines the areas of business such as human resources, operations management, financial management and marketing. Gives the students an overview of the types of business ventures available and the advantages and disadvantages of each.

102-120 Principles of Management - *3 Crs.* Students learn about the four managerial functions of planning, organizing, controlling and leading in contemporary organizations. A series of self-assessment questionnaires provides insights into personal behaviors and helps students turn managerial theories into potential personal managerial practices. Students learn how management processes apply to a global environment. (Prerequisite: Completion of or concurrent enrollment in 102-110 Introduction to Business)

102-130 Introduction to Human Resources - *3 Crs.* Introduces issues in human resource management in a changing environment and suggests possible ways of leveraging and managing human resources. Topics covered include the nature of employee management including recruiting, hiring, training and developing human resources, equal employment opportunity laws, compensation, and performance appraisal. Current trends and innovations related to human resource management are also integrated throughout the course. (Prerequisites: 102-110 Introduction to Business; 102-120 Principles of Management)

102-135 Business Technology and Innovation - *3 Crs.* Students will build on existing software and technology skills to further develop the expertise needed by business managers to perform the many tasks for which a computer or other technology is the primary tool. Students will enhance their hands-on ability with current software packages and technology currently being used in the industry. Activities focus on using technology effectively and efficiently to address typical business management situations.

102-182 Business Operations - *3 Crs.* Assesses the role of business, its internal structure and its relationship to the external environment. Students analyze the supervisor's role in the functions of business planning, information systems, operations management, information technology, marketing, and how they interact and drive business activities.

103-159 Computer Literacy - Microsoft Office - *1 Cr.* Develops basic computer skills in Windows, Internet communication, professional use of Social Media, word processing with MS Word, spreadsheets with Microsoft Excel, and presentations with Microsoft PowerPoint. This course is a "hands-on" computer class and cultivates skills for college and work. Students must be comfortable using a computer. Students not familiar with a computer should enroll in Microsoft Windows. Keyboarding skills recommended.

103-160 Microsoft Word - *2 Crs.* Introduces word processing applications, functions and features. Emphasizes creating, editing, saving and retrieving files; using wizards and templates; creating organized tables; and using grammar, formatting and spelling tools. Produces documents with charts generated from tables. Integrates information with other Microsoft applications. Windows-based Microsoft Word software is used. May be taken alone, as part of the Office Software Suite Certificate or to prepare for certification exams. It is recommended (but not required) that entry-level students complete Computer Literacy - Microsoft Office before enrolling in this course.

103-164 Advanced Microsoft Integration - *2 Crs.* Provides hands-on experience integrating files from programs in the Microsoft Office Software Suite. Students use advanced features in Word, Access, Excel and PowerPoint to link formulas, information and data.

Students create documents, databases, worksheets and presentations and integrate the applications in a professional compilation. This course is typically taken as a final step in completing the Advanced Office Suite Certificate. (Prerequisites: 103-183 Advanced Microsoft PowerPoint; 103-188 Advanced Microsoft Access; 103-190 Advanced Microsoft Excel; 106-159 Advanced Microsoft Word)

103-165 Exploring the Internet With Client Software - *1 Cr.* Provides an overview of the Internet and connectivity issues. Develops practical skills in accessing and using basic Internet tools such as browsers, e-mail clients, search tools and basic Internet utilities. Designed for the novice Internet user.

103-168 Microsoft Office Publisher - *2 Crs.* Prepares students to design newsletters, brochures, flyers, stationery and more. Applies basics of design for layout and typography to publications. Applies Microsoft Publisher software package. Online students will need Microsoft Publisher 2007 to complete coursework.

103-170 Beginning Photoshop - *2 Crs.* Introduces Adobe Photoshop software. Uses software tutorial exercises to focus on learning Photoshop's user interface, tools, image creation, and editing techniques and procedures. Basic computer skills, Internet connection and current version of Adobe software required for online course.

103-172 QuarkXPress - *2 Crs.* Introduces techniques and procedures for creating publications using QuarkXPress. Uses software tutorial exercises with user interface, fonts and typographic controls, integrating images, and working with color. Basic computer skills, Internet connection and current version of QuarkXPress software required for online course.

103-174 InDesign - *2 Crs.* Introduces basic page layout document construction techniques. Uses software tutorial exercises to focus on learning Adobe InDesign's user interface and document creation procedures. Basic computer skills, Internet connection and current version of Adobe software required for online course. (Prerequisites: 103-159 Computer Literacy - Microsoft Office. Completion of or concurrent enrollment in 890-125 Student Success)

103-180 Microsoft Excel - *2 Crs.* Introduces spreadsheet applications, functions and features using data tables, solver and document review. Emphasizes creating, editing, saving and retrieving files, applying formulas and managing large workbooks, charts and amortization schedules. May be taken alone, as part of the Office Software Suite Certificate, or as the first step in preparation for the Microsoft Certification test. Students should have a basic understanding of a computer system. For entry-level students, Microsoft Windows or Computer Literacy - Microsoft Office is recommended before starting this course.

103-181 Microsoft Access - *2 Crs.* Develops skills to manage relational databases by completing various activities using Microsoft Access in a hands-on format. Builds skills essential to unlocking the potential of a fully functional RDBMS (relational database management system). Access is a database program which keeps track of large amounts of data and organizes it in a useful manner. It provides a cost-effective method of leveraging key database functionality with easy-to-use graphical interface. Students must have a working knowledge of a computer system. Windows and Excel courses (or a working knowledge of both) are recommended before completing this course.

103-182 Microsoft PowerPoint - *2 Crs.* Introduces Microsoft PowerPoint, Windows-based software that facilitates the design and creation of presentations in the form of text, clip art, animation, organizational charts and tables. Students produce interactive presentations with sound and other enhancements. May be taken alone, as part of the Office Software Suite Certificate or as the first step in preparation for the Microsoft Certification test on PowerPoint. Students should have a basic understanding of a computer system. For entry-level students, Microsoft Windows or Computer Literacy - Microsoft Office is recommended before s tarting this course.

103-183 Advanced Microsoft PowerPoint - *2 Crs.* Develop skill in professional presentation and public speaking. Students organize a speaking event, apply customized features to slide shows, create custom designs, generate Web-based presentations, link and embed files from a variety of sources, prepare handouts and workbooks to complement presentations and utilize professional presentation technique. (Prerequisite: 103-182 Microsoft PowerPoint or dean consent)

103-188 Advanced Microsoft Access - *2 Crs.* Introduces students to advanced features of Microsoft Access. Includes creating advanced queries; customizing advanced forms and reports; creating macros, Pivot Tables and Pivot Charts; integrating Access with other applications; introduction to database administration, database security, SQL statements, and VBA code. This course may be taken alone or as part of the Advanced Office Software Suite Certificate. (Prerequisite: 103-181 Microsoft Access or dean consent)

103-189 Microsoft Windows - *1 Cr.* Provides basic overview of Windows. Focuses on concepts and terminology. Students develop skills in using a mouse, working with icons, using Windows Explorer, file/folder manipulation and print controls. May be taken alone, as part of the Office Software Suite Certificate, or as a step in preparation for Microsoft Certification. Students should have basic knowledge of a computer system. Support services and/or tutoring are available and recommended for very entry-level students.

103-190 Advanced Microsoft Excel - *2 Crs.* Explores intermediate and advanced features of Microsoft Excel including multiple worksheet and workbook applications; importing data; using database features; creating macros and Pivot Tables; and Nesting functions. Provides hands-on experience in using Excel, building and designing advanced worksheet solutions. This course may be taken alone or as part of the Advanced Office Software Suite Certificate. (Prerequisite: 103-180 Microsoft Excel or dean consent)

103-193 Dreamweaver/Flash - *3 Crs.* Design/develop a standards-compliant Web site with Adobe Dreamweaver software and publish to Web host. Design/develop a basic animation with Adobe Flash software for integration into a Web site. Experience with HTML and CSS is recommended. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

103-195 Microsoft Project - *2 Crs.* Participants control simple or complex projects by scheduling and tracking activities on the computer. Communicate schedule information, delegate tasks, get status updates and report project details so others can be informed. Keep track of project budget and all costs involved. Record project information with Microsoft Project software. Trial version of Microsoft Project 2007 software is available for downloading at the Microsoft Web site. (Prerequisite: 103-159 Computer Literacy - Microsoft Office)

104-102 Marketing Principles - *3 Crs.* Provides an integrated overview of the marketing concept and functions. Major topics include the marketing environment, distribution, pricing, product planning, promotion, market analysis and segmentation, marketing opportunities, and consumer and business-to-business buying behavior. (Prerequisite: Completion of or concurrent enrollment in 102-110 Introduction to Business)

104-104 Web Research and Analytics - *3 Crs.* Teaches the fundamentals of how to use web analytic concepts, tools, and techniques to harness the power of an organization's website to create measurable business value, increase customer retention, and build customer loyalty. Students learn online research methods. Topics will include qualitative and quantitative research methodology, literature reviews and information literacy.

104-105 Selling - *3 Crs.* Applies fundamental selling principles and allows practice in the basic skills needed to succeed in a sales career. Explores the sales process and demonstrates ability to approach, secure desire, handle resistance and close the sale. Examines buyer behavior, communication styles, ethics, international selling, partnership and value-added selling.

104-107 Merchandising Management - *3 Crs.* Emphasizes strategic merchandise management. Students complete a situation analysis, select a target market, gather information, choose a store location, manage a retail business, manage merchandise, correct pricing and communicate with the customer. Includes development of buying, human resources management and retail operation skills.

104-109 Customer Service Techniques (Lakeshore Technical College Course) - *2 Crs.* Assess participants' skills in customer relations, judgment and business development and provides training in connecting with customers, healing customer relationships, and dealing with customer needs.

104-110 Global Marketing - *3 Crs.* Focuses on global issues that challenge today's international marketer. Expands on the strategic implications of marketing in different country cultures, as well as identifies marketing management techniques necessary to accommodate cultural differences. (Prerequisite: Completion of or concurrent enrollment in 104-102 Marketing Principles)

104-111 Customer Interaction Skills (Lakeshore Technical College Course) - *2 Crs.* Prepares the student for effective communication. Content includes writing memos, reports, drafting e-mail messages, developing effective speaking skills, resolving customer disputes, and promoting excellent customer relations.

104-117 Digital Marketing, Public Relations and Social Media - *3 Crs.* Gives students an in-depth understanding of digital marketing strategies and techniques and how to apply them to help business and organizations achieve their online sales and marketing objectives. Key areas of focus include e-mail marketing, social media, and online public relations.

104-125 Advertising and Social Media Campaign - *3 Crs.* Focuses on creating and implementing advertising plans. Through a variety of assignments, participants are given the opportunity to create ad layouts, use desktop publishing, design an advertising

campaign and create a video or audio advertisement. Through practical and theoretical approaches, students prepare and present an advertising and social media campaign for a specific business or organization. Students with a background in graphics may take with dean approval. Digital Marketing students are encouraged to take 104-117 Digital Marketing, Public Relations and Social Media concurrently with this course.

104-140 Integrated Marketing Communications - *3 Crs.* Provides an integrated overview of marketing promotional tools and concepts for today's business environment. Students examine the marketing environment, tools of promotion, advertising tools, Integrated Marketing Communications (IMC), evaluation and measurement. Through practical and theoretical approaches, students prepare an IMC plan for a business including appropriate promotional strategies, tactics and cost estimates. (Prerequisite: 104-102 Marketing Principles)

104-160 Marketing Basics - *1 Cr.* Provides an introduction to marketing concepts and functions. Focuses on the marketing principles of product, price, place (distribution) and promotion and how these principles impact every company or organization. You must have access to the Internet at home or on campus and access to an e-mail account.

104-170 Marketing Tourism and Hospitality (Lakeshore Technical College Course) - *3 Crs.* Introduces the student to various aspects of tourism, the development and classification of hotel businesses, the hotel and rooms division operation, the duties and responsibilities of the key food and beverage executives, the history and development of the restaurant business, noncommercial food service segments, beverage management and liquor liability, recreation and leisure, the history of gaming entertainment, and the different types of meetings, conventions, and expositions. (Corequisite: Microsoft PowerPoint or equivalent)

105-120 Business Organization - *3 Crs.* Introduces the student to the world of business. Examines the areas of business such as human resources, operations management, financial management and marketing. Gives the students an overview of the types of business ventures available and the advantages and disadvantages of each.

105-124 Portfolio Introduction (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to develop a personal and professional portfolio, to identify self-awareness through various self assessments and apply these results to the workplace and other environments, to write goal statements and understand their value, to develop an individual history of events and achievements, and to identify significant learning experiences throughout the student's life.

105-126 Career Assessment (Lakeshore Technical College Course) - *3 Crs.* Prepares the student to develop a career plan, write a résumé, create a cover letter, prepare for an interview, search for work on the Internet, adapt a résumé for an electronic scan, and post a résumé and cover letter on the Internet. (Prerequisite: 10105124 Portfolio Introduction)

105-127 Portfolio Assessment (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to identify what they have learned throughout the program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities and program outcomes. (Prerequisites: 10105124 Portfolio Assessment; 10105126 Career Assessment)

105-140 Business Decision Making - *3 Crs.* Students will analyze case studies and real-life scenarios, make recommendations, and present those recommendations to simulated management teams using integrated software sets of Internet searching, word processing, spreadsheet, database, and presentation skills. Emphasizes decision making, analytical, and problem-solving skills and the presentation of recommendations in written or graphic forms. (Prerequisites: 101-184 Principles of Accounting or 101-108 Accounting for Non-Accountants; 104-102 Marketing Principles)

105-150 Business Practice Firm - *3 Crs.* Provides students with an opportunity to apply concepts acquired throughout the program in a simulated or actual business setting. Students can choose one of the three workplace environments offered. (See the program description for the best environment that fits the program.) Students are required to apply technology, communication and problem-solving skills throughout the course. (Prerequisite: Completion of 30 program credits or sophomore status)

105-154 Career Internship, Business and Culinary Arts (90 Hours) - *2 Crs.* Provides an opportunity to apply concepts, principles and skills learned in the workplace. Emphasis is placed on applying skills to job tasks, writing a cover letter and résumé, preparing for an interview and using professional etiquette.

105-155 Career Internship, Business and Culinary Arts (162 Hours) - *3 Crs.* Provides an opportunity to apply concepts, principles and skills learned in the workplace. Emphasis is placed on applying skills to job tasks, writing a cover letter and résumé, preparing for an interview and using professional etiquette.

105-156 Career Internship-Business - *4 Crs.* Provides an opportunity to apply concepts, principles, and skills learned in the workplace. Emphasizes applying skills to job tasks, writing a cover letter and résumé, preparing for an interview, and using professional etiquette.

105-160 Business Law - *3 Crs.* Provides a general background to the elements and characteristics of business law. Emphasis is placed on how business law is structured and how it functions in our society. The main portion of the course is devoted to an understanding of contracts and contract structure.

106-103 Keyboarding - *1 Cr.* Introduces students to the touch operation of keyboard characters through the use of computer software. Focuses on the development of speed and accuracy at the keyboard to a minimum speed of 20 words a minute. Document creation is not included.

106-104 Realtime Reporting I (Lakeshore Technical College Course) - *5 Crs.* Prepares the student to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms and phases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting I Lab is required. (Condition: 101071 Broadcast Captioning or 101061 Judicial Reporting or 321071 Broadcast Captioning or 321061 Judicial Reporting)

106-105 Realtime Reporting II (Lakeshore Technical College Course) - *5 Crs.* Prepares the student to write multi-syllabic words; punctuation and special symbols, short forms and phrases, prefixes and suffixes; numbers, frequently used words and phrases, contractions using the Zrule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory and write dictation using a realtime theory at a minimum speed of 110 wpm. Concurrent registration in Realtime Reporting II Lab is required. (Prerequisite: 10106104 Realtime Reporting I; 10106804 Realtime Reporting I Lab)

106-108 Realtime Reporting Speed Development (Lakeshore Technical College Course) - *2 Cr.* Further develops skills acquired in Realtime Reporting II on literary, jury charge, and testimony material beginning at 120 wpm. Scheduled during the summer term, students must pass two, 3-minute timings at a minimum speed of 110 words per minute. (Prerequisite: 10106105 Realtime Reporting II)

106-109 Literary I (Lakeshore Technical College Course) - *2 Crs.* Prepares the student to write literary material at 150 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Concurrent registration in Literary I Lab is required. (Prerequisite: 10106108 Realtime Reporting Speed Development)

106-111 Literary II (Lakeshore Technical College Course) - *2 Crs.* Expands the student's ability to write literary material at 180 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Concurrent registration in Literary II Lab is required. (Prerequisite: 10106109 Literary I)

106-111 Business Communications - *3 Crs.* Analyze business situations, determine the specific communication strategies required, the audience, and the purpose as you prepare the most effective business communication format to address the situation. Applies concepts to team collaboration, various types of business correspondence, report writing and business presentations. Proofreading skills, word processing skills and keyboarding skills are strongly recommended. Online students are required to create an audio recording and should have access to a computer microphone or other audio recording device with the ability to submit the recording to the instructor. (Prerequisite: 801-195 Written Communication)

106-112 Information Storage and Retrieval - *2 Crs.* Prepares students to inspect, index, code, sort, store and retrieve business information according to ARMA indexing rules using alphabetic and numeric storage and retrieval systems. Students apply the principles and practices of effective information control through practical simulated experience.

106-113 Business Publications - *3 Crs.* Prepares students to design newsletters, brochures, flyers, forms and more for business publication. Applies basics of design for layout and typography to publications. Applies Microsoft Publisher and Adobe Acrobat software packages. Explores options for both print and digital distribution. Online students will need Microsoft Publisher 2007, Adobe Acrobat Professional 8, and Microsoft Office to complete coursework. (Prerequisite: 103-159 Computer Literacy – Microsoft Office)

106-117 Fundamentals of Interpretation and Translation - *2 Crs.* Provides an introduction to the study of interpretation and translation. Explores the basic theoretical concepts and teaches to apply this knowledge. Focuses on the processes for understanding, analyzing, interpreting and translating different kinds of written content from a source language into a target language.

Course Descriptions

106-120 Document Processing - *1 Cr.* Introduces basic formatting of business letters, one- and two-page reports, tables and memorandums using Windows word processing software. Skill building is provided to enable students to develop an ending speed beyond 38 words a minute requirement. (Prerequisite: "A" Grade in 106-103 Keyboarding or demonstrated 30 words a minute for 3 minutes with 3 or fewer errors using correct fingering. Enroll in Keyboarding Pretest to determine placement)

106-120 Business Etiquette and Professionalism (Lakeshore Technical College Course) - *2 Crs.* Prepares the student to feel confident in the business setting and to understand business protocol in a culturally diverse, international market. Areas of study will include proper etiquette, introductions, professional body language, cultural sensitivity, dining and social skills, and conflict management.

106-121 Advanced Document Processing - *1 Cr.* Develops job-ready production skills while preparing business documents such as correspondence, tables, forms and reports from unarranged and rough draft copy. Includes hands-on, office-oriented applications. Skill building is provided to enable students to develop an ending speed beyond 45 words a minute requirement. (Prerequisite: Completion of or concurrent enrollment in 106-120 Document Processing)

106-122 Customer Service Applications - *2 Crs.* Apply techniques to gain loyalty and retain customers. Emphasizes assessing customer needs, developing customer relations skills and implementing a customer service improvement plan to meet customer needs. (Prerequisite: Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office)

106-123 Editing Applications - *1 Cr.* Prepares students to edit documents generated from voice-recorded material and text files applying proofing techniques to produce mailable copy. Mailable copy includes accuracy in English usage, punctuation, number usage, spelling and formatting documents. Keyboarding skills in word processing are applied. (Prerequisite: 106-139 Business Proofreading Skills)

106-124 Keyboarding, Speed and Accuracy Improvement - *1 Cr.* Provides speed and accuracy drill for students entering at various speeds. Through diagnostic tests, goals are determined for practice relevant to the needs of the student. Grading is based on individual improvement. To get the best results, students should plan on class time of one hour a day, four days a week. (Prerequisite: 106-120 Document Processing or demonstrated 25 wpm for 5 minutes with 3 or fewer errors)

106-127 Office Software for Multilingual - *3 Crs.* Utilize Microsoft Word, Excel, PowerPoint and Access in multiple languages. Convert target language to English and learn language specific computer commands. Create, edit, and proof a variety of documents in multiple languages. Modify user interface for use with other languages. (Prerequisite: 103-159 Computer Literacy - Microsoft Office)

106-128 Technology and Services for Translation - *2 Crs.* Provides an introduction to various technologies relating to translation. Students will apply online tools and services, software, social networking, voice recognition technology, hardware (such as fax and storage media) and communication technologies.

106-128 Jury Charge I (Lakeshore Technical College Course) - *2 Crs.* Prepares the student to write jury charge material at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Concurrent registration in Jury Charge I Lab is required. (Prerequisite: 10106108 Realtime Reporting Speed Development)

106-129 Multilingual Business Essentials - *3 Crs.* Develop strategies for verbal and nonverbal communication relating to customer service. Identify cultural differences in business relationships. Develop procedures and business documents for a bilingual office environment. (Prerequisite: 106-127 Office Software for Multilingual)

106-129 Jury Charge II (Lakeshore Technical College Course) - *2 Crs.* Expands the student's ability to write jury charge material dictated at a minimum speed of 200 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Concurrent registration in Jury Charge II Lab is required. (Prerequisite: 10106128 Jury Charge I)

106-134 Communication Technologies - *3 Crs.* Focuses on skills to manage business and personal information using contact lists, e-mail and e-calendar functions. Students transfer information to a personal digital assistant, capture digital video and still images for business presentations and documents, establish videoconferencing to collaborate on documents, scan images and text into documents, scan paper forms for electronic fill-in, and apply recognition technologies. (Prerequisite: 103-159 Computer Literacy - Microsoft Office)

106-138 Computer Essentials - *2 Crs.* Emphasizes the impact of computers, both personally and in business. Examines the fundamentals of computers, with respect to computer hardware, software, and the Web. Students use the computer to access the Internet and create documents. THIS IS A CONCEPTS COURSE; STUDENTS DO NOT LEARN HOW TO USE MICROSOFT OFFICE SUITE.

106-139 Business Proofreading Skills - *2 Crs.* Improves proofreading skills through a review of common business errors in punctuation, number usage, grammar, capitalization, word choice and spelling. Computer-editing tools and reference resources are used to produce error-free copy. Basic word processing skills are recommended.

106-142 Business Meeting and Event Planning - *3 Crs.* Focuses on coordinating business meetings and planning successful business events. Students develop skills in meeting logistics including scheduling, preparing, organizing, managing and participating in business meetings. Students engage in all aspects of the event management process including goal setting and objectives, establishing event themes, planning event logistics, financial management, promotion and event evaluation. (Prerequisite: Completion of 30 program credits or sophomore status)

106-142 Judicial Reporting Procedures (Lakeshore Technical College Course) - *2 Crs.* Introduces the student to reporting procedures for which reporters are responsible in the courtroom, deposition, and real-time reporting environments, including preparing salable transcripts, researching legal citations, and developing professional development plans.

106-143 Judicial Reporting Internship (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to write machine shorthand verbatim for a minimum of 40 hours of actual writing time in the courtroom, classroom, and deposition environment under the supervision of a working reporter; prepare a 40-page transcript, and summarize the internship experience in a narrative report. (Prerequisites: 10106108 Realtime Reporting Speed Development. Corequisites: 10106128 Jury Charge I; 10106109 Literary I; 10106156 Testimony I)

106-144 Realtime Reporting Orientation (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to use computer-assisted, real-time transcription software, Windows, e-mail, a steno machine, and a laptop in writing machine shorthand in court reporting and to complete and submit required coursework.

106-151 Specialized Insurance Claims - *2 Crs.* Emphasizes insurance preparation of claims to Commercial, Medicare, Medicaid and Worker's Compensation. Applies ICD, CPT and HCPCS coding resources to complete CMS 1500 and CMS 1450 insurance claims. (Prerequisite: Completion of or concurrent enrollment in 509-307 Medical Office Insurance and Finance)

106-152 Electronic Patient Billing - *2 Crs.* Emphasizes the use of Medisoft billing software. Includes creating and editing patient databases, making entries to accounts, preparing billing statements and insurance forms, and generating financial reports. Differentiates between the manual and static coding process; students perform static coding. Emphasizes collection practices for overdue accounts and establishes a format for collection policies in a medical office. (Prerequisite: 509-307 Medical Office Insurance and Finance)

106-154 Medical Office Applications - *3 Crs.* Simulates handling patients, applying customer service skills, and the use of computers in a medical/clinical setting. Hands-on experience in scheduling appointments, work in electronic medical records, transcribing progress notes, reading a fees chart and billing, preparing insurance forms, and establishing confidentiality standards for releasing medical records. Utilizes Microsoft Word, Medisoft billing software, SpringCharts electronic medical record software, telephone systems, Internet, fax and e-mail. (Prerequisite: 509-301 Medical Assistant Administrative Procedures)

106-156 Testimony I (Lakeshore Technical College Course) - *3 Crs.* Prepares the student to write 2-voice testimony at 160 words per minute for 3 minutes and transcribe with a minimum of 95 percent accuracy. Concurrent registration in Testimony I Lab is required. (Prerequisite: 10106108 Realtime Reporting Speed Development)

106-157 Testimony II (Lakeshore Technical College Course) - *3 Crs.* Expands the student's ability to write 2-voice testimony at 225 words per minute and transcribe with 95 percent accuracy a minimum of three 5-minute, 2-voice timings at 225 words per minute; complete a mock RPR exam. Concurrent registration in Testimony II lab is required. (Prerequisite: 10106156 Testimony I)

106-158 Realtime Reporting Technology (Lakeshore Technical College Course) - *2 Crs.* Prepares the student to use CAT (Computer-Assisted Transcription) and real-time software; build personal dictionaries; and read, translate, and edit transcripts. Students are introduced to real-time translation procedures in court, depositions, captioning, and educational environments.

106-159 Legal Terminology (Lakeshore Technical College Course) - *1 Cr.* Provides the student with the ability to spell, pronounce, and define legal terms.

106-159 Advanced Microsoft Word - *2 Crs.* Applies word processing features including tables, columns, merges, templates and integration of graphic elements. Emphasizes production of correspondence, reports and proposals, labels, forms and tables. Microsoft Word 2007 software is used. Recommend students have keyboarding skills and knowledge of Microsoft Word.

106-160 Medical Office Practicum - *2 Crs.* Provides students with on-the-job medical office experience in a medical facility. Application of ethical standards in confidentiality is required. Expands student's knowledge of the requirements (both employment skills and adaptive skills) necessary for employment in the medical profession through creation of a career portfolio. Students must be eligible for graduation the semester they enroll in the practicum. (Prerequisites: Completion of or concurrent enrollment in 106-154 Medical Office Applications. CPR and First Aid for Health Professionals, proof of immunizations, and caregiver background check must be completed prior to Medical Office Practicum)

106-161 Realtime Reporting Technology Advanced (Lakeshore Technical College Course) - *2 Crs.* Prepares the student to expand their knowledge of computer-assisted transcription and realtime software, dictionary management, specialized editing functions, transcript preparation, auto-included block files, and specialized macros for Steno-related tasks.

106-163 Database and Spreadsheet Essentials - *3 Crs.* Prepares students to design their own databases and spreadsheets from the ground up. Develops skills in creating formulas and functions to solve business problems. Develops skills in database tables, relationships and queries. Develops formatting skills for spreadsheets and charts. Online students need Microsoft Excel 2007 and Microsoft Access 2007 software.

106-164 Business Applications for MS Office - *3 Crs.* Apply various Microsoft Office business applications using numerous features in Excel, Microsoft Access, and PowerPoint. Project Management and Accounting software products will also be covered. Applications include integration concepts such as importing/exporting, linking/embedding, multimedia concepts, templates and macros. Online students will need Microsoft Excel 2007, Access 2007 and PowerPoint 2007. (Prerequisites: 103-159 Computer Literacy - Microsoft Office; 106-163 Database and Spreadsheet Essentials)

106-167 Legal Processes and Systems - *3 Crs.* Explores the history, components and processes of today's laws and court systems. Specific areas of the law that are addressed include civil and criminal litigation, family law, real estate, small claims, estate planning and administration. Students view actual court sessions.

106-169 Law Office Applications - *3 Crs.* Emphasizes the application of skills required in the law office. Develops skill in legal billing, specialized legal software, banking and filing procedures, tax matters, processing insurance and investments. Students prepare a legal portfolio.

106-171 Medical Reporting and Terminology (Lakeshore Technical College Course) - *2 Crs.* Prepares the student to write medical terminology in machine shorthand using appropriate medical terminology from material dictated at a minimum speed of 150 wpm for 5 minutes with a minimum of 95 percent accuracy. The student will research medical information, prepare salable transcripts, and submit timings. (Prerequisite: 10106156 Testimony I)

106-175 Legal Documents Production 1 - *2 Crs.* Focuses on the preparation of litigation documents for court filing in civil, criminal and small claims cases. Students apply legal concepts to actual court and non-court documents, utilize legal terminology in document preparation and transcribe legal dictation in court and non-court format. (Prerequisite: 106-120 Document Processing or Keyboarding Pretest - 30 wpm with 3 or fewer errors)

106-176 Legal Documents Production 2 - *2 Crs.* Focuses on the preparation of legal documents for real estate, contracts, family law, estate planning and administration (probate and nonprobate), corporate law, bankruptcy and foreclosures. Emphasis is on speed and accuracy in applying legal terminology in document preparation. (Prerequisite: 106-175 Legal Documents Production 1)

106-178 Legal Office Professional - *3 Crs.* Introduces the student to the role of the legal professional. Develops professionalism, receptionist and client conferencing skills, telephone techniques in a legal setting, law office ethics, confidentiality, and legal office accounting skills.

106-180 Business Protocol - *3 Crs.* Provides opportunities to apply business etiquette to your professional life. Enhances your professional image through appearance, work habits, manners and communications. Explores handling of ethical dilemmas and workplace relationships. Recognizes the diversity of other cultures in business relationships. Provides opportunity to plan for your career success and job search. Recommended to be taken near the end of your program, in one of the last semesters.

106-181 Document Standards and Expectations – *3 Crs.* Prepares students to edit business documents generated from voice-recorded materials and text files, applying proofreading techniques to produce distributed copy. Computer-editing tools and reference resources are used to produce error-free copy. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 106-103 Keyboarding or 106-120 Document Processing)

106-182 Document Management – *3 Crs.* Applies word processing features including tables, mail merge, templates, forms, and macros within business documents to enhance workflow. Integrate business proofing and editing skills. Incorporate principles and practices of effective document management through simulated practice. (Prerequisite: 106-181 Document Standards and Expectations)

106-184 English for Realtime Reporters (Lakeshore Technical College Course) - *1 Cr.* Enhances the student's ability to use proper English grammar, spelling, punctuation, capitalization, and vocabulary techniques in the transcription of the spoken word.

106-804 Realtime Reporting I Lab (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms and phrases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting I is required. (Corequisite: 10106104 Real Time Reporting I Condition: 101701 Broadcast Captioning or 101061 Judicial Reporting or 321701 Broadcast Captioning or 321061 Judicial Reporting)

106-805 Realtime Reporting II Lab (Lakeshore Technical College Course) - *1 Cr.* Expands the student's ability to write multi-syllabic words; punctuation and special symbols, short forms and phrases, prefixes and suffices; numbers, frequently used words and phrases, contractions using the Zrule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory and write dictation using a realtime theory. Concurrent registration in Realtime Reporting II is required. (Corequisite: 10106105 Realtime Reporting II)

106-809 Literary I Lab (Lakeshore Technical College Course) - *1 Cr.* Expands the student's ability to write literary material dictated at a speed of 150 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy. (Corequisite: 10106109 Literary I)

106-811 Literary II Lab (Lakeshore Technical College Course) - *1 Cr.* Expands the student's ability to write literary material at 180 words per minute for 5 minutes and transcribe at least three timings with 95 percent accuracy. Concurrent registration in Literary II is required. (Corequisite: 10106111 Literary II)

106-828 Jury Charge I Lab (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to write jury charge material dictated at a speed of 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy. (Corequisite: 10106128 Jury Charge I)

106-829 Jury Charge II Lab (Lakeshore Technical College Course) - *1 Cr.* Expands the student's ability to write jury charge material at 200 words per minute for 5 minutes and transcribe at least three timings with 95 percent accuracy. Concurrent registration in Jury Charge II is required. (Corequisite: 10106129 Jury Charge II)

106-857 Testimony II Lab (Lakeshore Technical College Course) - *1 Cr.* Expands the student's ability to write 2-voice testimony at 225 words per minute and transcribe with 95 percent accuracy a minimum of three, 5-minute, 2-voice timings at 225 words per minute; complete a mock RPR Exam. Concurrent registration in Testimony II is required. (Corequisite: 10106157 Testimony II)

106-859 Testimony I Lab (Lakeshore Technical College Course) - *1 Cr.* Expands the student's ability to write 2-voice testimony at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy. (Corequisite: 10106156 Testimony I)

109-101 Issues in Hotel/Hospitality Management (Lakeshore Technical College Course) - *1 Cr.* Introduces special topics pertinent to the hotel and hospitality industry. International, national, and local issues are discussed. (Prerequisite: 10109121 Introduction to Hotel/Hospitality)

109-110 Front Office Procedures and Management (Lakeshore Technical College Course) - *3 Crs.* Emphasizes front office techniques and management principles for the organization and operation of the lodging facility. The human and public relations responsibilities of the front office as well as routine procedures are an integral part of the course.

109-111 Housekeeping Management (Lakeshore Technical College Course) - *2 Crs.* Investigates the functions of the housekeeping department and the role of its managers in operating the department and introduces students to requirements for guest satisfaction with room and facility appeal, order, and cleanliness.

109-112 Sanitation for Food Service (Lakeshore Technical College Course) - *1 Cr.* Develops skills to follow sanitation and hygiene provisions in state codes. The NRA certification test is included.

109-113 Food and Beverage Operations (Lakeshore Technical College Course) - *2 Crs.* Introduces and applies principles of menu planning, food preparation, laws and sale of alcoholic beverages. Emphasis is on operation of a professional food and beverage facility.

109-115 Hospitality Law (Lakeshore Technical College Course) - *3 Crs.* Applies the skills and tools necessary for a hospitality manager to function in today's legal work environment. Students will demonstrate the application of legal practices in hospitality environments, analyze of the impact U.S. employment laws, the impact of global economy, vendor/supplier contract negotiations, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing hospitality/culinary employees.

109-120 Facilities Operations and Security (Lakeshore Technical College Course) - *2 Crs.* Explores the technical information necessary to establish effective facilities operations. An effective energy management program is discussed. Common mechanical problems and the procedures to correct them are emphasized. Security management to protect guests is emphasized. (Prerequisite: 10109121 Introduction to Hotel/Hospitality)

109-121 Introduction to Hotel/Hospitality Management (Lakeshore Technical College Course) - *3 Crs.* Traces the development of the hotel/motel industry from early inns to modern high-rise and commercial hotels and highway motels. The organization of the hotel, including food and beverage operations, is discussed. (Corequisite: Microsoft Word or equivalent)

109-122 Field Study/Experience (Lakeshore Technical College Course) - *1 Cr.* Allows students to examine and apply advanced concepts in hotel and hospitality management. Requires instructor approval to enroll.

109-144 Hospitality Internship (Lakeshore Technical College Course) - *4 Crs.* Affords students on-the-job experience while providing instructor and workplace supervision. Students are responsible for seeking and obtaining the internship position with instructor approval. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. Students meet periodically at LTC. (Condition: Verification of eligibility by the Instructor)

110-101 Introduction to Paralegalism and Legal Ethics (Lakeshore Technical College Course) - *3 Crs.* Introduces the student to the paralegal profession, including civil, criminal, and administrative procedure; state and federal judicial systems; legal research; case briefing; ethical rules that regulate paralegals; law office systems and administration; and substantive civil law. (Corequisite: Microsoft Word skills equivalent)

110-102 Civil Litigation I (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to evaluate causes of action and defenses; conduct an initial client interview; perform an initial investigation; draft a summons and complaint, answer, counterclaim, cross complaint, motions and supporting documents, select appropriate discovery devices; draft interrogatories and responses; prepare for depositions; draft a Notice of deposition and Subpoenas; analyze fact patterns; and evaluate evidentiary objections. (Corequisite: 10110101 Intro to Paralegalism)

110-103 Civil Litigation II (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skill to evaluate and summarize depositions; evaluate evidentiary challenges; prepare a witness list; draft settlement documents; locate expert witnesses; prepare witnesses; prepare for presentation of evidence at trial; prepare a trial notebook; draft a Bill of Costs; prepare post trial motions; evaluate and research appellate issues. (Prerequisite: 10110102 Civil Litigation)

110-104 Legal Research (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to differentiate between primary or secondary authority, locate statutes and constitutional provisions, locate case law, locate administrative regulations, locate secondary authority, use correct citation form, verify and update legal authority, formulate legal issues, use effective research strategies, evaluate solutions to legal problems, and use computer assisted and internet legal research strategies. Some classes will be held off campus in a law library. (Corequisite: 10110101 Introduction to Paralegalism)

110-105 Legal Writing (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to draft legal correspondence, operative legal documents, case briefs, and legal and office memoranda; analyze and synthesize legal authority; use correct citation form; draft a civil pleading, affidavit, trial brief, and appellate brief; and apply rules of civil procedure. (Prerequisite: 10110103 Legal Research)

110-106 Family Law (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to conduct an initial client interview for a family law matter, including divorce and domestic violence; draft initial pleadings for divorce, financial family law documents, divorce discovery documents, and concluding documents in divorces; assess the need for post-divorce modification and enforcement; and outline factors involving child custody and support. (Corequisite: 10110101 Introduction to Paralegalism)

110-107 Legal Aspect of Business Organizations (Lakeshore Technical College Course) - *3 Crs.* Provides students with the skills to analyze legal aspects of the formation, operation, and dissolution of sole proprietorships, partnerships, limited liability entities, and corporations; draft documents related to various business entities such as Certificates of Limited Partnership; Articles of Organization and Incorporation, Name Reservation Applications, Organizational Resolutions, Form SS-4 and 2553, Stock Certificates, Resolutions and Minutes, and Amendments and Articles of Dissolution. (Prerequisite: 10110101 Introduction to Paralegalism)

110-114 Administration of Estates (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to assist attorneys to administer estates, differentiate between probate and nonprobate property, contrast various forms of marital property, gather appropriate factual and financial information, select and draft appropriate forms to open an estate, prepare an inventory, draft a final accounting and documents to close an estate, draft tax documents, prepare powers of attorney and simple wills, and assist in the valid execution of estate planning documents. (Prerequisite: 10110101 Introduction to Paralegalism)

110-115 Administrative Law (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to summarize the administrative legal process including the creation and interpretation of administrative rules and regulations as well as the adjudication of administrative law cases, with emphasis on Workers Compensation and Social Security Disability law. (Prerequisite: 10110101 Introduction to Paralegalism)

110-130 Real Estate Law - Paralegal (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to analyze types of real estate ownership; analyze the effect of the Marital Property Act on real estate; determine the requirements of listing contracts; draft legal descriptions; draft an offer to purchase; negotiate a real property sale; prepare financing documents; compare abstracting and title insurance; record deeds; compare land contracts; summarize foreclosure procedure; draft closing documents; compare landlord and tenant rights and responsibilities. (Corequisite: 10110101 Introduction to Paralegalism)

110-141 Computer Applications - Legal (Lakeshore Technical College Course) - *3 Crs.* Provides the student with skills to use computer applications typical to a law office including spreadsheets; database; e-mail; timekeeping and billing software; litigation management software; and the Internet. (Prerequisite: 10110101 Introduction to Paralegalism)

110-142 Paralegal Internship (Lakeshore Technical College Course) - *3 Crs.* Enhances the participant's ability to perform the duties of a paralegal; to seek and obtain employment as a paralegal; apply paralegal skills in an actual workplace setting; to perform legal research and writing; and understand law office systems and administration. Students are responsible for seeking and obtaining an internship position for a minimum of 140 hours in a legal environment under the supervision of an attorney or other qualified professional, completing an internship agreement and learning contract, maintaining a work log and obtaining approval from the internship instructor. (Corequisite: 10110105 Legal Writing)

110-168 Criminal Law - Paralegal (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to analyze state and federal criminal procedures, determine if a search and arrest is in accordance with the Fourth Amendment, analyze the Miranda rules, draft a criminal summons and complaint, determine possible defenses for a defendant, draft motions, analyze a criminal complaint and jury instructions for required elements, create demonstrative evidence, create a trial notebook, conduct a client interview, and contrast prosecution and defense roles. (Prerequisite: 10110101 Introduction to Paralegalism)

111-101 Introduction to Graphic Communication - *3 Crs.* Introduces the student to creating digital documents for reproduction. Topics include hardware and software requirements, materials and workflow issues. Emphasizes the construction of digital documents utilizing Adobe InDesign page layout software. Basic

knowledge of computer operating system and some familiarity with Adobe InDesign (103-174 InDesign), and keyboarding skills of 20 words a minute recommended.

140-190 International Study - 3 Credits - *3 Crs.* Emphasizes the importance of integrating international awareness in the student's program. Students explore the facets of the international environment examining ethical, cultural, social and organizational similarities and differences.

140-191 International Study - 2 Credits - *2 Crs.* Emphasizes the personal and business skills necessary to succeed in a global economy by focusing on a selected culture. Students explore the business practices, customs, norms/taboos and communication styles for a selected culture.

140-192 International Study - 1 Credit - *1 Cr.* Emphasizes the personal skills necessary to succeed in a global economy. Students explore the similarities and differences in cultures and communication styles and develop a plan to minimize personal prejudices and stereotypes.

145-185 Entrepreneurship - *3 Crs.* Explores the components of small business ownership by examining available resources, identifying trends and opportunities, discussing the parts of a business plan, and assessing own readiness to pursue a small business opportunity.

145-189 Writing a Small Business Plan - *3 Crs.* Focuses on the business plan as a necessary component to beginning and/or growing a small business. Students address facets of the business plan, from observing various types of plans to realizing readiness to begin and/or expand one. Preparation of a business plan, as well as presentation of the plan, are required.

150-101 Network+ - *2 Crs.* Investigates and applies concepts, terminology, software, hardware and theory expected of computer network support technicians. Focuses on small to medium networks media and its physical and logical arrangement, protocols and standards, network implementation and support. Helps students prepare for the Microsoft MTA Networking 98-366 certification exam.

150-102 Microsoft Workstations - *3 Crs.* Examines user interface, installation, administration and trouble-shooting of current Microsoft workstation operating systems. Emphasizes operating systems from the viewpoint of the support person. (Prerequisite: Completion of or concurrent enrollment in 150-101 Network+)

150-103 Network Cabling - *2 Crs.* Students apply concepts that are critical to the design of computer networks. Examines inappropriate installation procedures causing degradation in cable performance. Includes applications in the termination and testing of copper cabling. (Prerequisite: 150-122 Virtualization)

150-120 Microsoft Servers - *3 Crs.* Covers the user interface, installation, administration and trouble-shooting of Microsoft server operating systems from the viewpoint of the support person. Students compare and contrast among Microsoft server network operating systems. (Prerequisites: 150-102 Microsoft Workstations. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

150-122 Virtualization - *3 Crs.* This hands-on training course explores the installation, configuration, and management of the components of VMware®, Microsoft, and Oracle software. Students will learn to deploy virtual machines, perform live migrations, and implement full virtualization hypervisors. (Prerequisites: 150-120 Microsoft Servers. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

150-130 IT Administration - *3 Crs.* Presents overview of management, network analysis, help desk, and upgrade aspects of IT administration. Students research security standards for Internet presence, main-frame, networks, firewall configuration and design, and they conduct security reviews for compliance. Using a fictitious company, students budget, staff and establish policies from an administration viewpoint. This class is the exit assessment for IT-Network Support Specialist. (Prerequisites: 150-101 Network+ and 150-141 Computer Network Installation; or 150-143 Linux Network Administration)

150-141 Computer Network Installation - *2 Crs.* Students design a structured cabling system for a computer network, install peer-to-peer computer networks, implement client-server computer networks, and provide wireless connectivity for a computer network. (Prerequisites: 150-101 Network+ and 154-111 Computer System Maintenance; or completion of or concurrent enrollment in 150-103 Network Cabling)

150-143 Linux Network Administration - *2 Crs.* Examines specifically how to perform network administration tasks for a Linux network operating system. Students have extensive hands-on practice carrying out administration tasks on a Linux server network. (Prerequisites: 150-102 Microsoft Workstations; 150-120 Microsoft Servers)

150-191 Principles of Information Security - *3 Crs.* Develops security policies and strategies after exploring the concept of trustworthy computing and the important role that security plays with respect to people, processes and technologies in an organization. Course is structured around three phases of network security: planning, building and managing network security policies.

150-192 Network Security Fundamentals - *3 Crs.* Provides a detailed overview of the fundamentals of network security. Covers security topology, intrusion detection, firewalls, routers and their configuration, access lists, authentication and encryption, in addition to reviewing the different methods of attacks such as viruses, Trojan horses and worms. Also covers wireless technology security. The structure of the course assumes students have a solid understanding of LAN/WAN fundamentals. (Prerequisite: 150-191 Principles of Information Security)

150-193 Network Attacks and Firewalls - *3 Crs.* Introduces strategies to detect and prevent common computer attacks and vulnerabilities using security technologies. Students explore techniques on how to stay current on vulnerabilities and other security topics. (Prerequisite: 150-192 Network Security Fundamentals)

150-194 Network Defense and Countermeasures - *3 Crs.* Examines methods to use to secure a network perimeter. Students examine and use tools to secure computers running versions of Windows. Includes Microsoft Baseline Security Analyzer (MBSA), Solarwinds Remote Management System and other RSA standard security tools. Network encryption and authentication tools are examined. Upon completion of 150-191 thru 150-194, students prepare for the Microsoft MTA Security 98-367 certification exam. (Prerequisite: 150-193 Network Attacks and Firewalls)

152-105 Relational Databases - *3 Crs.* Explore relational database concepts and the use of Structure Query Language while working within a Database Management System (DBMS). Design, build and query a relational database and its tables. Manipulate a DBMS using concepts such as stored procedures and triggers.

152-106 Web Site Design - *3 Crs.* Design, develop and publish a Web site using Microsoft Expression Web software with an introduction to the code being produced by the software. Enhance Web sites using advanced features of MS Expressions Web including DWT templates, master data pages, CSS navigation, alternative media techniques, ASP.NET data connectivity, and validation techniques. Experience converting a Web to mobile device delivery recommended.

152-107 Graphics for the Web - *2 Crs.* Optimize graphics and photos so they download quickly in a Web browser. Gain skills in image slicing and learn practical skills for designing layouts, backgrounds, navigation bars and buttons in Photoshop.

152-109 Search Engine Optimization – *3 Crs.* Gives students an in-depth understanding of search engine optimization and search engine marketing strategies and techniques. It will provide students with the knowledge necessary to make web sites search engine friendly, optimize pages with target keywords, monitor search engine ranking and maintain search engine placement in the most popular engines and directories worldwide.

152-112 HTML/XML - *3 Crs.* Learn how to write XHTML and HTML, document structure, block and inline-level tags, float images, control white space, phrase and font markup, and tables. Build a complete working Web site. Gain a working knowledge of CSS. Learn about CSS fundamentals, including the benefits and limitations of the language. Format text, images and backgrounds; position elements on the page; apply styles, both inline and via an external style sheet. CSS best practices and browser support issues are also addressed. Experience converting a web to mobile device delivery recommended. Learn about the basic rules of XML, XML syntax, and more. Integrate XML into your site; create style sheets and Schema Definitions.

152-113 JavaScript - *3 Crs.* Develops skills in using programing concepts by employing the JavaScript language to create Web-based applications and to add animation and interactivity to a Web site. Addresses utilizing preexisting scripting sources, modifying script from other sources and creating original scripting features. Utilize skills gained to develop a content based mobile application. (Prerequisites: 152-112 HTML/XML. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

152-115 Web Site Design, Implementation and Maintenance - *3 Crs.* Perform the tasks involved in the process and documentation of strategic planning, implementing and maintaining a Web site in a team-

based environment. Addresses specific tasks in the Web site design, planning and development process such as project scope and proposals, budgeting, scheduling, specifications, obtaining domain names, registering Web sites, end-user analysis, statistics, testing and troubleshooting, training, and presentation topics. (Prerequisites: 152-103 Introduction to Web Site Design or 152-106 Web Site Design or 152-112 HTML/XML. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

152-117 Emerging Web Technologies and Trends - *1 Cr.* Evaluates new technologies, emerging trends, new standards and specifications in the Web development field by performing application of these in the Web site design/development process. Investigation and use of resources and tools for maintaining up-to-date skills in the field will be done. Self-directed learning skills will be developed. (Prerequisite: 152-113 JavaScript)

152-118 Database-Driven Web Sites - *3 Crs.* Build a dynamic, data-driven, interactive Web site. Using PHP 5.2.x and MySQL 5.0.x, learn the entire process of building a content management system. Learn the basics of the PHP language (variables, arrays, loops, functions, etc.) and work up to building dynamic Web pages with a MySQL back end. Cover blueprint applications; structure and interact with databases; build, validate and process forms; and regulate user access with passwords. Cover best practices and demonstrate refactoring techniques for improving exiting code. (Prerequisites: 152-104 Intermediate Web Site Design or 152-106 Web Site Design or 152-127 Visual Studio Developer. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

152-119 Web Developer Concepts - *2 Crs.* Provides a conceptual overview of PC computer, network, Internet, and Web site concepts. Students focus on developing and applying core Internet and Web terminology in regards to network and Internet infrastructures and development concepts.

152-120 Web Developer Internship - *3 Crs.* Provides an opportunity to apply skills learned in prior Web Design/Development coursework to internship situations. Emphasis is on seeking a job, applying skills to job tasks, adapting to company culture, modeling the core abilities, and demonstrating online collaboration and communication. Employment-ready work samples are required upon course entry. (Prerequisite: Completion of or concurrent enrollment in 152-124 e-Commerce: Designing and Marketing Web Sites)

152-124 e-Commerce: Designing and Marketing Web Sites - *3 Crs.* Investigates benefits of e-commerce technologies and solutions. Will plan design and develop a Web site incorporating e-commerce technologies to sell products and services including SEO, traffic building, and marketing techniques. Explores integrating with the company's current technology structure and business processes including financial, marketing and distribution. (Prerequisite: 152-118 Database-Driven Web Sites)

152-125 Programming Logic - *2 Crs.* Studies structured flowcharting logic for business application programs. Students examine flowcharting concepts, along with required logic, to solve business problems. Students design and then draw the required structure flowcharts. Problem-solving techniques are presented as they apply to business application computer programming.

152-126 Introduction to Systems Analysis - *3 Crs.* Introduces the System Development Life Cycle (SDLC) as the logical sequence of steps for successful completion of a system project. All phases of the SDLC are investigated along with their rationale. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

152-127 Visual Studio Developer - *3 Crs.* Engages students in a hands-on, lab-oriented course to create object-oriented, event-driven programs. Students use control structures, variables, arrays, procedures and functions to manipulate VB objects and methods. Online sections: On-campus lab instruction available.

152-128 Visual Basic, Database Connectivity - *3 Crs.* Create object-oriented, event-driven applications that incorporate several programming techniques and interfaces. Develop competencies in database management using ADO and Sequential Query Language (SQL). Build applications incorporating Windows Common Controls, MDI forms, and Crystal Reports. Online sections: On-campus lab instruction available. (Prerequisites: 152-127 Visual Studio Developer. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

152-129 Visual Basic, Business Applications - *3 Crs.* Introduces Web services and class objects in programming. Students create distributed applications by means of XML Web services and object remoting and explore uses of Visual Basic 2005 and Microsoft SQL Server while developing reusable .NET class objects that incorporate ASP.NET objects. Online sections: On-campus lab instruction available. (Prerequisite: 152-127 Visual Studio Developer)

152-134 Visual Basic, SQL Applications - *3 Crs.* Introduces students to developing relational database applications using the Microsoft SQL Server database and Visual Basic.NET. Students create and modify database tables using SQL Server, then manipulate table data using Visual Basic. Introduces students to querying an SQL Server database using Transact-SQL. Students create complex queries that join multiple database tables and stored procedures that interact with database tables, then use those objects inside a VB.NET application. Online sections: On-campus lab instruction available. (Prerequisite: 152-128 Visual Basic, Database Connectivity or 152-129 Visual Basic, Business Applications)

152-137 Java Programming - *2 Crs.* Introduces an overview of Java and explains its role in the computing environment. Students learn the fundamentals of the Java language, including classes and objects. Highly recommended students have prior programming experience.

152-136 MySQL – *3 Crs.* Students will work with simple data retrieval and progress to more complex topics including the use of joins, subqueries, regular expression and full text based searches, stored procedures, cursors, triggers, table constraints, and much more. Additional topics include reviewing MySQL's use as a popular database management system for small development projects to some of the best known and most prestigious sites on the Web.

152-138 Advanced Java Programming - *2 Crs.* Students gain skills employing advanced topics such as JavaBeans, Enterprise JavaBeans, network programming, J2EE features, and security through code examples, sample programs, and application exercises. Take your Java programming skills to the next level with this course! (Prerequisite: 152-137 Java Programming)

152-139 C# Development - *3 Crs.* Introduces the principles of programming in C#. Students will write, test, debug and execute programs. Students use the Visual Studio.NET development suite to create control structures, methods, arrays, data files and object classes. Online sections: On-campus lab instruction available. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

152-140 Animation Application - *3 Crs.* Introduces the fundamentals of developing programming for animation. Students explore the unique qualities of the medium through a series of hands-on projects that can be adapted to their own personal interests. Concept and character development, storyboarding, prototyping, testing and implementation will be discussed. Students will gain hands-on experience in animation programming.

152-141 Interactive Media Programming - *3 Crs.* Provides students with fundamental concepts of interactive media programming. Students learn about the development process and techniques and how to apply design principles to create components of interactive media. The focus of the class will be on the creation and use of different types of content, key development issues, process management and professional practices.

152-146 Database Automation - *3 Crs.* Students add functionality to databases by manipulating forms, reports, queries and tables using built-in programming tools and techniques. Students also import and export data, create procedures and functions, create validation routines and perform debugging. Structured Query Language (SQL) is also exposed to the developer as well as interaction with outside programs and the Internet. Online sections: On-campus lab instruction available. (Prerequisite: 152-105 Relational Databases)

152-147 Systems Analysis and Design - 3 Crs. Examines the process of developing information systems that use hardware, software, data, processes and people to support a company's business objectives. Provides fundamentals for a potential systems analyst to develop business systems that will support operations, improve productivity and provide information so managers can make sound business decisions. (Prerequisites: 152-126 Introduction to Systems Analysis; 152-125 Programming Logic or 152-127 Visual Studio Developer)

152-148 Systems Analysis and Implementation - *3 Crs.* Designed as a capstone experience, this course provides hands-on development and implementation of the case study project that was designed in the prerequisite class 152-147 Systems Analysis and Design. Students work as a team to code RPG/400 and Visual Basic programs that are then implemented on the AS/400 and evaluated. This working system finalizes the System Development Life Cycle. (Prerequisites: 152-128 Visual Basic, Database Connectivity; 152-147 Systems Analysis and Design)

152-199 Applications Developer Internship - *3 Crs.* Provides field experience as a micro programmer specialist. Students spend 216 hours working at the job site with training supervised by Moraine Park in cooperation with the business site. (Prerequisites: 103-181 Microsoft Access; 103-188 Advanced Microsoft Access; 152-127 Visual Studio Developer; 152-128 Visual Basic, Database Connectivity)

154-101 e-Commerce Management Decisions - *3 Crs.* Introduces students to e-commerce and its benefits. Students explore the factors a company must assess in deciding whether to implement e-commerce and research the challenges companies address as they implement e-commerce. (Prerequisite: 103-159 Computer Literacy - Microsoft Office)

154-111 Computer System Maintenance - *3 Crs.* Presents processes, techniques, resources and tools to provide computer system support to users. Emphasizes logical troubleshooting rather than relying on symptoms/solution lists. Students will use these skills at the Computer Clinic at Moraine Park. Students will have an opportunity to provide technical support to individuals who bring their computer to the Computer Clinic for service. Customer service skills will be emphasized throughout the practicum course. (Prerequisites: 150-101 Network +; 154-112 Hardware/Software Support)

154-112 Hardware/Software Support - *3 Crs.* Focuses on installing, modifying, configuring and upgrading computer hardware and software items; performing preventative maintenance on computers; and optimizing a computer system. General computer maintenance and tools to maintain and configure computers will be covered. (Prerequisites: 150-101 Network +; 150-102 Microsoft Workstations. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

154-113 Help Desk Concepts - *3 Crs.* Focuses on help desk functions, analyzing help desk software and tools, customer service skills for help desk employees, creating training sessions for end users, creating documentation for computer end users, and researching marketing and communications tools for a help desk. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

154-115 Training and Development in Office Systems - *3 Crs.* Apply the principles of adult learning theory, analyze training needs based on skill or job performance deficiencies, conduct a needs and cost analysis, write learning plans and compose documents reflecting the levels of training evaluations. Students will be required to make training session presentations. (Prerequisite: 801-195 Written Communication)

154-119 Technical Support Internship - *3 Crs.* Provides field experience as a technical support specialist. Students earn one credit per 72 hours in on-the-job training supervised by Moraine Park in cooperation with a business or industry. The student is responsible for obtaining an instructor-approved position and internship site before enrolling in the course. This course can be used for the exit assessment for the IT-Technical Support Specialist program.

154-120 Microcomputer Operating Systems - *2 Crs.* Introduces operating system functions and commands. Includes operating system concepts, disk and file formats, and disk and file management. Students will learn how to work through the command line of the operating system and create and use batch files for automated system tasks using Windows command line.

154-122 Introduction to MAC - *3 Crs.* Focuses on maintaining and configuring a MAC operating system, performing preventative maintenance on a MAC and investigating the different MAC operating systems. (Prerequisites: 150-101 Network +; 154-112 Hardware/Software Support)

194-178 Real Estate Brokerage - *2 Crs.* Prepares students to sit for the Real Estate Broker's License exam. Develops skills in identifying elements and uses of market analysis and real estate sales. Introduces concepts of sales management and staff compensation. Orients students to concepts in contract law and explores forms used in real estate brokerage. Meets Wisconsin's 36-hour educational requirement for those seeking a broker's license. Note: A real estate sales license is required before a broker's license will be issued by the State of Wisconsin.

194-190 Real Estate Preparation - *3 Crs.* Introduces the fundamentals required for acting as a salesperson in the brokering of real estate. Develops skills in the topical items identified in current Wisconsin Administrative Code. Meets Wisconsin's 72-hour educational requirement for those seeking a sales license.

196-105 Recruitment and Retention of Employees (Lakeshore Technical College Course) - *3 Crs.* Applies and skills and tools necessary to hire and retain qualified employees. Legal issues, testing, screening, interviewing, selecting and negotiating techniques will be demonstrated and assessed for each student.

196-134 Legal Issues in the Workplace - *3 Crs.* Provides an overview of the general legal responsibilities of an organization. Analyzes the current employment laws in the United States and their impact on employers/employees. Examines the supervisor's role in dealing with harassment in the workplace. Compares how appeals can be addressed in both a union and nonunion environment.

196-136 Safety in the Workplace - *3 Crs.* Introduces safety and loss prevention in the workplace with an emphasis on the supervisor's responsibility for maintaining a safe, productive environment. Studies safety concepts, hazard controls, developing safety and health programs, and federal- and state-mandated regulations.

196-151 Employee Relations - *3 Crs.* Enhances the ability to understand and develop employee-focused programs, policies and procedures such as formal and informal communications, employee recognition and conflict resolution. Valuing diversity in the workforce is emphasized.

196-152 Orientation and Training - *3 Crs.* Evaluates training and development skills through practice and skill-building activities. Students develop training strategies using a variety of delivery formats. Needs and cost analysis, competency and performance standards, and facilitation skills are incorporated.

196-153 Compensation and Benefits - *3 Crs.* Focuses on the various components that make up a total employee compensation package. Base pay, merit pay and variable pay programs are covered. Students examine benefits including governmental regulation, group welfare plans, pension plans and flexible benefit plans. Students explore the impact of current trends.

196-154 Recruiting and Hiring - *3 Crs.* Focuses on recruiting, selection and hiring practices. Students examine what today's workforce expects, how to efficiently use the recruitment budget and all steps within the hiring process.

196-160 Leadership Capstone - *3 Crs.* Through a capstone project that benefits the community, participants develop leadership skills in team building, problem solving, priority management, proactive listening, constructive feedback, change navigation, conflict resolution, and influence strategies. In addition, participants explore various volunteer leadership opportunities within a community by examining the impact of city and county government, educational institutions, business and industry, and nonprofit organizations upon a community through presentations, discussions and tours.

196-164 Personal Skills for the Workplace - *3 Crs.* Applies the skills and tools necessary to deal with time management, stress and related challenges to a supervisor. Students demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness and dealing effectively with stress.

196-168 Organizational Development - *3 Crs.* Addresses organizational issues related to how we work and exist within an organizational setting. Explores the environment of organizations, technology, personality and attitudes of members of an organization. Analyzes how these themes affect organizational behavior. Equips managers with skills to manage behavior of people and to develop processes within an organization.

196-169 Diversity and Change Management - *3 Crs.* Addresses changes in the workforce and their effect on the organization. Explores diversity, including values, age, gender, disabilities, education and culture. Provides a framework to gain advantage by blending and capitalizing on the different skills and perspectives of people and creating an organization where everyone gives their best.

196-188 Project Management - *3 Crs.* Introduces the project management process including needs assessment, identification of project resources and costs, establishment of a project schedule, managing the project and assessing the results. In teams, project management concepts are used to analyze problems and create solutions. Students complete true-to-life projects. Basic computer skills recommended.

196-189 Team Building and Problem Solving - *3 Crs.* Provides opportunities to explore the benefits and challenges of group work, identify the stages of team development, and recognize roles of team players. Examines a systematic problem-solving process. Students apply skills and tools to facilitate problem solving in a team environment.

196-190 Leadership Development - *3 Crs.* Applies the skills and tools necessary to fulfill his/her role as a modern leader. Each student will demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution.

196-191 Supervision - *3 Crs.* Builds skills necessary for a supervisor to direct individuals and the work that needs to be done within the structure of an organization. Emphasizes the human behavioral aspect of supervision. Focuses on the practical application of supervisory principles of organizing, staffing, leading and controlling.

196-192 Managing for Quality - *3 Crs.* Examines the role of the supervisor in assisting an organization to produce a quality product and/or service. Examines the Total Quality Management concepts and tools needed in

the workplace to stay competitive. Ways to incorporate these concepts and tools will be examined in detail.

196-193 Human Resource Management - *3 Crs.* Applies the skills and tools necessary to effectively value and apply employees' abilities to organization goals. Demonstrates the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies.

196-194 Human Resources Recordkeeping – *3 Crs.* Applies the skills and tools necessary to effectively manage the required human resources paperwork for employees as well as the organization. Students learn to perform human resource database tasks related to HR administration. Prepares documents for state and federal paperwork requirements for all aspects of human resources. Coordinates the paperwork for all aspects of the hiring process for recruitment, selection, conducting job interviews, orientation, training and performance management. (Prerequisite: 102-130 Introduction to Human Resources)

204-100 Imaging Editing – *2 Crs.* Introduces basic electronic pixel-based image manipulation using Photoshop software. Builds on the student's required skills of using a computer and its operating system to manage files and search the Internet. (A basic knowledge of computer operating systems and familiarity with Photoshop recommended.)

204-102 Digital Illustration and Design – *2 Crs.* Use Adobe Illustrator, a Postscript-compatible, vector-based drawing program, to aesthetically design documents for print, illustration, layout and multimedia projects including Web, print and animation.

204-111 Typography - *3 Crs.* Covers basic principles of typography and designing with type. Includes laboratory experience in typographic specifications, computerized copyfitting, creating comprehensive layouts, the application of grid systems, and the use of typographic letterforms in publication design. Uses Adobe InDesign. A basic knowledge of computer operating system and some familiarity with Adobe InDesign (103-174 InDesign) recommended. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

204-112 Digital Graphic Design – *3 Crs.* Introduces students to the basic formal elements and principles of two-dimensional graphic design. Uses visual exercises and practical projects to explore visual and creative thinking strategies to develop more effective visual communication. Basic computer skills are recommended. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

204-116 Digital Graphic Imaging – *3 Crs.* Students will concentrate on the graphic design process, research, concept development, comping, stylistic approaches and efficient production techniques. Assignments focus on typography, page composition and production for digital publications. Advanced techniques will be used to design and output complex composite files including vector and bitmap graphics. Topics include working with clients, teamwork, efficient workflow, best practices and creating trouble-free files for reproduction. (Prerequisite: 204-112 Digital Graphic Design or 206-112 Digital Graphic Design or 204-165 Principles of Graphic Design)

204-121 Publishing Principles - *2 Crs.* Develops an overview of the printing and publishing process, including paper, inks, press operation and bindery. Students gain experience and knowledge in the area of publication planning, printing specifications and customer/printer relations.

204-134 Design, Production and Planning: Workflow - *3 Crs.* Applies principles of pdf workflow with an emphasis in design concepts, using design elements developed in 204-1112 Digital Graphic Design and 204-116 Digital Graphic Imaging. Students will incorporate their individual design framework on real world output projects.

204-143 Electronic Illustration With CorelDRAW - *2 Crs.* Provides hands-on experience with object-oriented illustration software for the creation or modification of artwork for electronic publication. Procedures from fundamental image-creation concepts through autotracing and colorizing black and white images are covered. Software for this course is CorelDRAW. The student should be familiar with Adobe Illustrator software.

204-144 Electronic Illustration 2 With Vector Graphics - *3 Crs.* Explores vector graphic creation tools and procedures used in the design and construction of vector-based images. Emphasizes process-color reproduction. Students build skills in creating, modifying, editing and applying image content to match reproduction requirements. Reflects required skills for advertising signage and imprinting applications. (Prerequisite: 204-102 Digital Illustration and Design or 206-102 Digital Illustration and Design or 204-141 Electronic Illustration With Adobe Illustrator)

204-163 Acrobat PDF - *2 Crs.* Covers the fundamental concepts and features of Adobe Acrobat needed to create and edit PDF files. Students use software tutorials to focus on learning Adobe Acrobat Pro user interface and PDF document creation and editing procedures. Basic computer skills, Internet connection and current version of QuarkXPress software required for online course. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

204-168 Design, Production and Planning II: Digital Output - *3 Crs.* Focuses on designing using the creative approach to electronic files client specific print production projects. Print document publications will be utilized to deliver instruction. Brings together layout, typography, image acquisition, creation and modification software skills learned in page layout, illustration, photographics and typography classes. (Prerequisite: 204-134 Design, Production and Planning: Workflow)

204-181 Prepress Process (Color) - *3 Crs.* Provides participants with an understanding of the theory of color as it relates to prepress. Topics explored include the basics of color, the properties of color, the four-color process and color management applications. These topics will be delivered via lectures, text readings and exercises in color management processes.

204-185 Press Technologies 1 - *3 Crs.* Introduces offset press principles, press setup and hands-on press operation. Features problem solving on the press and basic press maintenance. Students develop skill in printing on papers of various kinds, weights, textures and sizes as well as various inks.

204-186 Press Technologies 2 - *3 Crs.* Continues to develop skill in hands-on press operation. Complex jobs are printed employing decision-making and problem-solving skills. Jobs are printed with less direction. Student exercises independent judgment and completes jobs entailing interpretation of job ticket, setting up the press, printing the job and performing press cleanup. (Prerequisite: 204-185 Press Technologies 1)

204-187 Postpress Technology - Finishing and Binding - *2 Crs.* Introduces finishing processes and concepts employed in the printing industry. Focuses on trimming, folding, gathering, booklet making, padding, binding, stitching, drilling and ink jet operations.

204-188 Color Theory - *3 Crs.* Provides an understanding of basic color principles essential for making informed decisions during the color reproduction process. Explores the history and theory of color. Applies the theory of color to everyday life.

204-189 Introduction to Printing Estimating - *3 Crs.* Provides students with procedures necessary for estimating and pricing graphic products and services. The two general procedures, cost estimating and price estimating, will be examined. Skills used to estimate paper and ink cost will be practiced. Estimate procedures required for prepress, press and postpress production will be covered.

204-190 Digital Printing Concepts - *3 Crs.* Addresses digital printing technologies, processes and benefits. Explores the differences of digital printing versus conventional and offset printing. The market where digital printing is employed will be defined.

204-191 Postpress Technologies - Distribution - *3 Crs.* Introduces distribution processes employed in the printing industry. Focuses on developing skills in designing mail streams by presort level and applying postal and technological criteria to mail classifications for periodicals and standard A and B mail. Rules of the domestic mail manual are applied.

204-192 Press Internship - *3 Crs.* Provides an opportunity for Printing and Publishing program students, who have completed at least two semesters of study, to apply in the workplace the concepts and skills they have learned operating press equipment. Emphasis is on printing of jobs employing press setup, operation and cleanup skills. (Prerequisite: 204-186 Press Technologies 2)

204-193 Postpress Internship - *3 Crs.* Applies concepts and skills to operating finishing equipment. Emphasis is on performing finishing operations such as trimming, folding, gathering, booklet making, padding, binding, stitching and drilling. (Prerequisite: 204-187 Postpress Technology - Finishing and Binding)

206-100 Image Editing - *2 Crs.* Introduces basic electronic pixel-based image manipulation using Photoshop software. Builds on the student's required skills of using a computer and its operating system to manage files and search the Internet.

206-102 Digital Illustration and Design - *2 Crs.* Use Adobe Illustrator, a Postscript-compatible, vector-based drawing program, to aesthetically design documents for print, illustration, layout and multimedia projects including Web, print and animation.

206-104 Interactive Design and Authoring - *3 Crs.* Design/develop original vector based artwork, type

and animations using Adobe Flash software including an introduction to ActionScript for movie control and interactivity. Incorporate imported graphics, music and video into Flash movie production. Develop skills outputting Flash Movies for desktop and web delivery. Experience with HTML and CSS is recommended.

206-106 Introduction to the Interactive Media Industry - *1 Cr.* Explores the Interactive Media industry including history, trends, career paths, opportunities and applications. Provides an introduction to the types of terminology, software/hardware and equipment used in the field.

206-108 Motion/Visual Effects – *2 Crs.* Utilizes After Effects software to create motion graphics and animation. Explores green screen techniques, motion tracking, and compositing video and animation. Focuses on keyframing, masking and using alpha channels. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

206-110 Video/Sound Editing - *3 Crs.* Covers fundamental techniques of sound capturing, digitizing sound, mixing audio, synchronizing audio to animation (lip sync), and audio as a storytelling medium. Explores the history of audio and film making process. Students perform basic sound and video editing to create a short film. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

206-112 Digital Graphic Design - *3 Crs.* Introduces students to the basic formal elements and principles of two-dimensional graphic design. Uses visual exercises and practical projects to explore visual and creative thinking strategies to develop more effective visual communication. Basic computer skills are recommended.

206-114 Flash Animation Application - *3 Crs.* Incorporates advanced Flash applications to design dynamic Web advertisements, interactive games and animation. Explores basic Action Script programming. (Prerequisite: 206-104 Interactive Design and Authoring)

206-116 Digital Graphic Imaging - *3 Crs.* Students will concentrate on the graphic design process, research, concept development, comping, stylistic approaches and efficient production techniques. Assignments focus on typography, page composition and production for digital publications. Advanced techniques will be used to design and output complex composite files including vector and bitmap graphics. Topics include working with clients, teamwork, efficient workflow, best practices and creating trouble-free files for reproduction. (Prerequisite: 206-112 Digital Graphic Design)

206-118 Designing for Mobile Applications - *3 Crs.* Focuses on designing apps for smart phone technologies (such as the iPad or iPhone). (Prerequisites: 206-100 Image Editing; 206-102 Digital Illustration and Design; 206-104 Interactive Design and Authoring)

206-120 Team Production - *3 Crs.* Students from graphics, programming and animation work together in teams to design and create a final project for a business or internal customer. Project scope can range from building a dynamic Web site, interactive Web advertisement, corporate multi-media presentation, or smart phone app. Emphasizes the project management process, teamwork, problem solving and decision making. (Prerequisites: 206-114 Flash Animation Application; 207-128 3-D Animation 2. Completion of or concurrent enrollment in 206-118 Designing for Mobile Applications; 207-132 Virtual Worlds and Game Applications)

206-122 Video Camera and Lighting Techniques – *3 Crs.* Review the basics of video production theory and practice, compare technologies, identify techniques for operating the video camera, and learn concepts of the moving camera. Techniques of lighting placement and operation will also be covered.

206-124 Pre-Production – *3 Crs.* Examine the details of planning the production of a digital video or film. (Prerequisite: 206-110 Video/Sound Editing)

206-126 Post-Production – *3 Crs.* Examine editing techniques including engineering, media management, and digital video effects. (Prerequisite: 206-110 Video Sound Editing)

207-122 Basic Drawing for Animation - *3 Crs.* Provides an overview of the drawing process and fundamentals of art and design through a variety of techniques and materials including pencil, paper and computer software. Focuses on anatomy, life and perspective drawing. Introduces fundamentals of character design.

207-124 Animation 1 - *3 Crs.* Introduces animation principles including basic storyboards, layout, walk cycles, timing, and overlapping action and character design. Explores 2-D vector-animation. (Prerequisites: 204-100 Imaging Editing; 206-104 Interactive Design and Authoring. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

207-126 Introduction to 3-D Animation - *2 Crs.* Focuses on basic modeling techniques, material creation, lighting, and animation and using 3-D Max software. Students learn to create and modify cameras, helpers, and space warps. Different rendering techniques will also be explored throughout the class by students. Students create interior and exterior scenes and render the animations to files. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success)

207-128 3-D Animation 2 - *3 Crs.* Focuses on creating and animating a 3-D character. Students learn how to match camera movement from live footage and incorporate an animation into their scene. Covers staging, posing, and assembling shots to create short animation sequences. (Prerequisite: 207-126 Introduction to 3-D Animation)

207-130 Animation 2 - *3 Crs.* Applies 2-D, pixel and vector animation concepts from Animation 1 to create a short animation sequence with sound. Utilizes storyboarding, character design, animation and principles of acting. (Prerequisites: 207-124 Animation 1; 207-126 Introduction to 3-D Animation)

207-132 Virtual Worlds and Game Applications - *3 Crs.* Focuses on animation used for interactive games and online virtual worlds. Explores virtual world creation, game design, development and execution. (Prerequisites: 206-114 Flash Animation Application; 207-128 3-D Animation 2)

207-134 Figure Drawing – *3 Crs.* Translate basic structural relationships, both skeletal and muscular, through the drawing medium. (Prerequisite: 207-124 Animation 1)

207-136 Advanced Image Manipulation – *3 Crs.* Further develop 2-D drawing animation skills, with focus on complex movement, animation dialogue, and drawing backgrounds. (Prerequisite: 207-124 Animation 1)

207-138 Introduction to Maya – *3 Crs.* Establish modeling skills and knowledge necessary to create a character that can be animated using Maya software application. Course work will help to establish a solid understanding of polygonal modeling, rigging, lighting, rendering, and animation using this application. (Prerequisite: 207-128 3-D Animation 2)

207-140 Texture Mapping – *3 Crs.* Prepare images for use in texturing, texture 3D objects, create texture maps for 3D and identify mapping tools for the art pipeline. (Prerequisite: 207-128 3-D Animation 2)

207-142 Lighting and Rendering – *3 Crs.* Light 3D scenes, set-up shading networks and render 3D images with alpha channels for compositing. Students will demonstrate an understanding of composition through lighting, camera, and color manipulation. (Prerequisite: 207-128 3-D Animation 2)

307-102 ECE: Preschool Capstone - *3 Crs.* Capstone is the last course students take prior to completing the Preschool Credential. Covers and revisits important themes from the prior five courses. Students synthesize information and demonstrate mastery of the competencies through the completion of a portfolio. (Prerequisites: 307-148 ECE: Foundations of Early Childhood Education; 307-167 ECE: Health, Safety and Nutrition; 307-178 ECE: Art, Music and Language Arts; 307-179 ECE: Child Development or 522-106 IA: Child and Adolescent Development; 307-188 ECE: Guiding Children's Behavior or 522-111 IA: Guiding and Managing Behavior; criminal background check; Background Information form; completed health form)

307-110 Behavioral and Emotional Challenges - *3 Crs.* Covers specific discipline and guidance strategies and individualized intensive interventions based on the CSEFEL (Center on Social and Emotional Foundations for Early Learning) curriculum with additional inclusion strategies related to autism, attention deficit disorder, bipolar disorder, reactive attachment disorder, conduct disorder, oppositional defiant disorder, obsessive compulsive disorder, brain injuries, etc., while focusing on building rapport with families and communicating the need for positive, consistent, team approaches to including children with challenging behaviors in typical community settings.

307-111 Special Healthcare Needs - *3 Crs.* Covers frequently encountered specialized healthcare needs of individuals with disabilities, preparing the student to examine altered body systems function, including sensory, gastrointestinal (tube feedings), bowel and bladder elimination, respiratory (allergies and asthma), cardiovascular/blood, musculoskeletal, neurological, skin/immune, and endocrine (diabetes) related issues. You will not be practicing medicine, but will gain a better understanding of medical issues and professionals who can support you in establishing policies and procedures that assure safe, quality care.

307-112 Family and Team-Centered Practices - *3 Crs.* Students volunteer in an Early Childhood Education (ECE) program with a child who has special needs and spend time with that child's family at home and in the community. Students have the opportunity to participate with a child and a family in daily routines

and community settings, i.e., church, grocery shopping, library, therapy settings, etc. Students complete the required Credential Portfolio and culminate in the Wisconsin Registry Commission process. (Prerequisites: 307-110 Behavioral and Emotional Challenges; 307-111 Special Healthcare Needs; 307-187 ECE: Children With Differing Abilities; criminal background check/BID; completed health form)

307-131 Administration and Supervision - *3 Crs.* An overview of roles and responsibilities of directors, supervisors, coordinators and other administrators in early childhood programs.

307-132 Operations Management - *3 Crs.* Discussion and practical applications related to scheduling, facility management, staffing, equipment acquisition and maintenance, service delivery, recordkeeping and communication.

307-133 Financial Management - *3 Crs.* A review of principles and practices in budget planning and preparation and fiscal management, including hands-on experience with program applications.

307-134 Early Childhood Programs and the External Environment - *3 Crs.* Review of early care and education programs including determination of community child care needs, marketing, laws and regulations, working with government and community agencies, and political and societal issues and trends.

307-135 Best Practices - *3 Crs.* Establishing and maintaining quality programs based on professional standards and the best available information on child growth and development. Includes a review of literature and research studies, examination of guidelines set for licensing, credentialing of staff and national accreditations of programs, funding requirements and performance standards.

307-136 Administrative Seminar - *3 Crs.* Culminating experience in the credential course sequence. Individual projects are required with a focus on the integration of program aspects in developing strategic planning for change. (Prerequisites: 307-131 Administration and Supervision; 307-132 Operations Management; 307-133 Financial Management; 307-134 Early Childhood Programs and the External Environment; 307-135 Best Practices)

307-148 ECE: Foundations of Early Childhood Education - *3 Crs.* Introduces students to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; explore early childhood curriculum models; analyze the principles of the Wisconsin Model Early Learning Standards.

307-151 ECE: Infant and Toddler Development - *3 Crs.* Students will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers; examine the role of brain development in early learning (conception through age three); examine caregiving routines as curriculum.

307-166 ECE: Curriculum Planning - *3 Crs.* Examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; integrate Developmentally Appropriate Practice (DAP) into curriculum; develop activity plans that promote child development and learning; develop curriculum plans that promote child development and learning across all content areas; analyze early childhood curriculum models. (Prerequisites: 307-178 ECE: Art, Music and Language Arts; 307-194 ECE: Math, Science and Social Studies)

307-167 ECE: Health, Safety and Nutrition - 3 Crs. Examines the topics of health, safety and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; follow governmental regulations and professional standards as they apply to health, safety and nutrition; provide a safe early childhood program; provide a healthy early childhood program; provide a nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk-reduction strategies; incorporate health, safety and nutrition concepts into the children's curriculum. Highly recommend taking this course with an ECE practicum course.

307-174 ECE: Practicum 1 - *2 Crs.* Students learn and apply course competencies in an actual child care setting. The course competencies include: document children's behavior; explore the standards for quality early childhood education; explore strategies that support diversity and anti-bias perspectives; implement activities developed by the co-op teacher/instructor; demonstrate professional behaviors; practice caregiving routines as curriculum; practice positive interpersonal skills with children and adults; analyze the guiding principles and the five developmental domains related to the Wisconsin Early Learning Standards; integrate the Wisconsin Early Learning Standards into the program's teaching cycle (ongoing assessment, planning and curriculum goals, and implementation); evaluate learning and assessment activities using the early learning standards for each individual child. (Prerequisites: Completion of or concurrent enrollment in 890-125 Student Success. Concurrent enrollment in 307-178 ECE: Art, Music and Language Arts or 307-194 ECE: Math, Science and Social Studies; Infant Child CPR with AED; health; criminal background check)

307-178 ECE: Art, Music and Language Arts - *3 Crs.* Focuses on beginning-level curriculum development in the specific content areas of art, music, and language arts. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment for art, music, and language arts; develop activity plans that promote child development and learning; analyze caregiving routines as curriculum; create developmentally appropriate language, literature, and literacy activities; create developmentally appropriate art activities; create developmentally appropriate music and movement activities. Highly recommend taking this course with an ECE practicum course.

307-179 ECE: Child Development - *3 Crs.* Examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children age three through age eight; summarize the methods and designs of child development research; analyze the role of heredity and the environment; examine the role of brain development in early learning (age three through age eight).

307-180 Early Childhood Mentor and Teacher Seminar - *2 Crs.* Focuses on developing skills for early childhood mentor teachers to support, model and articulate best practice in the field to less-experienced protégés. Mentors develop their own professional skills, attitudes and knowledge by reading, reflecting and discussing up-to-date issues in early childhood education.

307-181 Early Childhood Mentors and Protégés at Work - *3 Crs.* Provides opportunities for mentors and protégés to share in a joint educational experience. Mentor-protégé pairs examine their early childhood environments and incorporate new ideas of diversity, culture and inclusion into interactions with others. Mentors and protégés use processes of collaboration, problem solving, dialoguing and conflict resolution to set goals.

307-183 Group Care for Infants and Toddlers - *3 Crs.* Examines the principles of developmentally appropriate infant/toddler care in center-based and family-child care settings. Program environment, structure and philosophy are explored as are diversity and inclusion and relevant health and safety issues.

307-187 ECE: Children With Differing Abilities - *3 Crs.* Focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; work collaboratively through the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; work collaboratively with community and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; cultivate partnerships with families who have children with developmental differences.

307-188 ECE: Guiding Children's Behavior - *3 Crs.* Examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; summarize early childhood guidance principles; analyze factors that affect the behavior of children; practice positive guidance strategies; develop guidance strategies to meet individual needs; create a guidance philosophy.

307-192 ECE: Practicum 2 - *3 Crs.* Students will learn about and apply the course competencies in an actual child care setting. The course competencies include:

identify children's growth and development; maintain the standards for quality early childhood education; practice strategies that support diversity and anti-bias perspectives; implement student teacher-developed activity plans; identify the elements of a developmentally appropriate environment; implement positive guidance strategies; demonstrate professional behaviors; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; utilize positive interpersonal skills with adults. (Prerequisite: 307-174 ECE: Practicum 1)

307-194 ECE: Math, Science and Social Studies - *3 Crs.* Focuses on beginning-level curriculum development in the specific content areas of math, science and social studies. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment for math, science, and social studies; develop activity plans that promote child development and learning; create developmentally appropriate science activities; create developmentally appropriate math activities; create developmentally appropriate social studies activities.

307-195 ECE: Family and Community Relationships - *3 Crs.* Students will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity and anti-bias perspectives when working with families and community; analyze contemporary family patterns, trends, and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate for children and families; work collaboratively with community resources.

307-196 Infant/Toddler Capstone - *3 Crs.* Emphasizes the skills needed for students to demonstrate practical application of skills and theory learned in previous courses. Students create individual portfolios of representative examples of their work to submit to the Registry for evaluation. (Prerequisites: Criminal background check, Background Information form; completed health form)

307-197 ECE: Practicum 3 - *3 Crs.* Students will learn about and apply the course competencies in an actual child care setting. The course competencies include: assess children's growth and development; implement the standards for quality early childhood education; integrate strategies that support diversity and anti-bias perspectives; build meaningful curriculum; provide a developmentally appropriate environment; facilitate positive guidance strategies; evaluate one's own professional behaviors and practices; lead caregiving routines as curriculum; utilize positive interpersonal skills with children; utilize positive interpersonal skills with adults. (Prerequisite: 307-192 ECE: Practicum 2)

307-198 ECE: Administering an Early Childhood Education Program - *3 Crs.* Focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze the components of an ECE facility; design an ECE program; analyze the aspects of personnel supervision; outline financial components of an ECE program; apply laws and regulations related to an ECE facility; advocate for the early childhood profession. Highly recommend taking this course in the final semester.

307-199 ECE: Practicum 4 - *3 Crs.* Students learn and apply the course competencies in an actual child care setting. Course competencies include: analyze children's growth and development based on assessment; integrate strategies that support diversity and anti-bias perspectives; promote professional behaviors and practices; implement meaningful curriculum; create respectful, reciprocal relationships; evaluate early childhood education programs for quality; explore professional options in early childhood education. (Prerequisite: Completion of or concurrent enrollment in 307-197 ECE: Practicum 3)

316-100 Food Principles 1 - *3 Crs.* Introduces skills in the Culinary Arts program. Prepares students to identify different cooking processes, operate small and large cooking equipment, make basic recipe conversion and food service math calculations, and perform the basic skills to become a chef. Culinary history and an introduction to game cookery are also provided.

316-101 Food Principles 2 - *1 Cr.* Develops skills in recognizing and defining advanced cooking techniques' flavors and ingredients. Students will explore and research these concepts through classroom and lab assignments and presentations including taste identification, oil and shortening application, exotic fruits and vegetables, seafood and shellfish, herbs and spices, pastas and product procurement. (Prerequisite: 316-100 Food Principles 1)

316-116 Menu Planning, Management and Design - *1 Cr.* Builds upon basic menu planning knowledge from 316-121 Nutrition. Menus are planned for varying food operations and budgets. Projects will include designing for merchandising, menu pricing procedures and menu analysis.

316-121 Nutrition - *2 Crs.* Applies the principles of nutrition from a personal and food service perspective. Information will be applied to the individual and to the food service industry. Applies basic nutritional principles to the selection of recipes and preparation methods that meet special dietary guidelines.

316-133 Food Service Merchandising and Marketing - *2 Crs.* Applies the principles of marketing to service, advertising, promotion, public relations and personal selling to achieve public recognition and goodwill. Students cover the factors that influence the merchandising of food and develop skills and abilities in the artistic preparation of food.

316-142 Restaurant Operations - *3 Crs.* Applies management skills needed to operate a restaurant or other food service. Emphasizes qualitative and quantitative portion control, work simplification and sanitary standards that are applicable to food service operations.

316-147 Sanitation and Safety - *2 Crs.* Provides the student with the skills and knowledge to prepare and serve safe and wholesome food to the public. Focuses on the challenges to food safety, developing a food safety system - Hazard Analysis Critical Control Point, working in a safe environment and maintaining sanitary facilities and equipment.

316-151 Fundamentals of Meat Analysis - *3 Crs.* Develops student's ability to identify meat or poultry by carcass, primal, subprimal and fabricated cuts of meat. Develops student's ability to make wise choices when purchasing meats and poultry by using yield grades, quality grades and pricing structures set in the meat industry. Students will do meat fabricating, meat grinding, meat smoking and sausage making.

316-153 Food Purchasing - *2 Crs.* Develops purchasing skills needed to understand the complex tasks of selection and procurement of products in the different markets. Provides experiences of planning, controlling and organizing systems for purchasing of foods. Explore grades, standards, markets, specifications and terminology needed to purchase food and supplies for a food service operation.

316-160 Baking - *2 Crs.* Develops skills in baking yeast-raised products, quick breads, cookies, cakes, pies, breakfast pastries and specialty desserts that are appealing to the eye and palate. Students convert and cost recipes; requisition supplies; weigh and measure ingredients; and mix, shape, bake, garnish, package and merchandise bakery products. Includes integration of safety and sanitation principles in bakery production.

316-162 Breakfast Pastries - *2 Crs.* Provides students with skills to produce Danish, croissant, puff pastry, sweet dough, strudel and short doughs. Techniques involved in enhancing the flavor and presentation of various breakfast pastries using savory and sweet fillings will be covered. (Prerequisite: Completion of or concurrent enrollment in 316-160 Baking)

316-163 Specialty Baking, Cakes and Pastries - *2 Crs.* Introduces students to a variety of upscale scratch cake and pastry items that can be produced for restaurants, hotels, bakeries or home-based baking. Focuses on basic high-quality ingredients, sound production and finishing techniques. (Prerequisite: 316-160 Baking or equivalent for those pursuing a baking certificate. Industry experience or strong desire for personal or professional growth may substitute with dean consent)

316-164 Specialty Baking, Breads and Yeast Products - *2 Crs.* Produce high-quality baked products using traditional artisan methods and wholesome ingredients for use in bakeries, hotels and restaurants. Products will include lean and enriched breads, sweet dough, croissants, Danish and puff pastry items from scratch. Baker's math and formula conversion will also be covered. (Prerequisite: 316-160 Baking)

316-165 Catering and Special Function Planning - *3 Crs.* Provides hands-on experience in preparing and costing menus for special functions and banquets. Analyzes planning, controlling and organizing of on- and off-premise catering functions, assessing the importance of purchasing needs, supervisional procedures, sales cost analysis, personnel, preparation, service and evaluation.

316-167 Food Styling - *2 Crs.* Explores artistic food displays utilizing different products and using advanced culinary techniques. Students compete in statewide competition with hot and cold plate presentation.

316-168 Artisan Breads - *3 Crs.* Provides students with skills to produce high-quality breads using traditional artisan techniques and wholesome products. Lean, enriched, braided and sourdough breads will be produced. Covers the use of preferments (including sourdough starters), mixing techniques, hand-molding breads and formula development. (Prerequisite: 316-160 Baking)

316-169 Cakes, Tortes and Desserts - *2 Crs.* Introduces students to a variety of upscale scratch cake and pastry items that can be produced for restaurants, hotels, bakeries or home-based baking. Focuses on basic high-quality ingredients, sound production and finishing techniques.

316-171 Restaurant Management - *3 Crs.* Addresses the application of managerial principles of planning, controlling and organizing to a food service operation. Provides hands-on experience in costing, inventory, labor controls, sales analysis and yield testing.

316-175 Specialty Foods and Ethnic Cookery - *3 Crs.* Plan, prepare and serve specialty and ethnic foods in a gourmet restaurant setting. Activities include research of ethnic and specialty foods, advanced food preparation skills, artistic presentation and formal table-side service of those foods. Students perform the following management functions: convert and cost recipes, calculate menu prices, purchase ingredients, plan production, create marketing strategies, and prepare payroll and profit and loss statements. A tetanus shot is recommended prior to the course.

316-180 Gourmet Cooking - *1 Cr.* Emphasizes competencies from throughout the program as related to the offering of the final dinner. Students will attend organizing lecture sessions and receive specific lab assignments for the preparation of the dinner.

316-181 Customer Sales and Service - *1 Cr.* Categorizes trends, business habits and personal attitudes for a deli/bakery business. Analyzes procedures for selling, merchandising and marketing by a salesperson in a deli/bakery. Evaluates product information for cheeses, meats and prepared foods for a deli/bakery.

316-183 Food Production for Vegetables and Potatoes - *2 Crs.* Applies the basic techniques involved with vegetable, potato and breakfast cookery preparation. Focuses on the student's conversion of recipes, requisition of supplies and preparation of food. Students operate large and small food production equipment. Develops strategies to apply safety and sanitary methods of food production. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-184 Food Production for Pastas, Grains and Breakfast Cookery - *2 Crs.* Applies the basic techniques involved with potatoes, grains, legumes and breakfast cookery preparation. Focuses on the student's conversion of recipes, requisition of supplies and preparation of food. Students operate large and small food production equipment. Develops strategies to apply safety and sanitary methods of food production. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-185 Food Production for Stocks and Soups - *2 Crs.* Applies the basic techniques involved with soup and sauce preparation: stocks, thickening agents, clear soups, cream soups and grand sauces and their derivative sauces. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-186 Food Production for Sauces and Specialty Soups - *2 Crs.* Applies the advanced techniques involved with sauces and stock preparation. Focuses on special dietary guidelines of sauces. Analyzes the importance of convenience products used in making sauces and stocks. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-187 Food Production for Cold Food - Salads - *2 Crs.* Develops skills in preparing salads, dressings, cold sandwiches and fillings that appeal to the eye and palate. Focuses on the student's conversion of recipes, requisition of supplies and preparation of food. Students operate large and small food production equipment. Develops strategies to apply safety and sanitary methods to food production. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-188 Food Production for Cold Food - Sandwiches, Desserts, Salads and Dressings - *2 Crs.* Develops skills in preparing salads, dressings, cold sandwiches and fillings that appeal to the eye and to the palate. Focuses on student's conversion of recipes, requisition of supplies and preparation of food. Students operate large and small food production equipment. Develops strategies to apply safety and sanitary methods to food production. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-189 Food Production for Meat, Fish and Poultry - 2 Crs. Develops skills in preparing meat, fish and poultry products. Students convert recipes, requisition supplies, integrate safety and sanitation principles in food preparation, and demonstrate dry- and moist-heat cooking methods using standardized and developed recipes. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-190 Food Production for Hot Sandwiches, Deli and Short-Order Cookery - *2 Crs.* Develops skills in preparing a variety of hot sandwiches and sandwich short orders. Also develops skills to cook luncheon foods to order. (Prerequisite: Completion of or concurrent enrollment in 316-100 Food Principles 1)

316-192 Restaurant Experience - *3 Crs.* Students work with teams to develop menus, plan strategies and operate a student-run restaurant. Other subjects covered included recipe development, service training, financial management and operational management.

404-333 Engine Repair - *5 Crs.* Develops the skills needed to diagnose, service and repair automotive gasoline internal combustion engines in accordance with vehicle manufacturer's procedures and specifications. Focuses on engine repair, not engine rebuilding. This course is for Automotive Technician students only. (Prerequisite: 404-330 Automotive Engine Fundamentals)

410-301 Power Tool Use and Safety - *1 Cr.* Introduces the use, maintenance and related safety practices of both portable and stationary power tools common to the building trades industry.

410-302 Advanced Roof Framing - *1 Cr.* Introduces students to principles of roof layout and framing of complex equal and unequal pitch roofs. Emphasis is on gable and hip roofs and conventional framing. Previous roof framing and layout experience is encouraged.

410-303 Estimating and Scheduling for Building Trades - *1 Cr.* Introduces the basic principles of estimating construction projects. Students perform material take-offs and perform calculations to determine quantities, labor allocations, equipment needs, areas and volumes.

410-305 Advanced Stair Construction - *1 Cr.* Introduces students to layout methods and construction practices as they relate to construction of basic and complicated staircases. Instruction will be based on both theoretical and hands-on applications. Previous stair layout and construction experience is encouraged.

410-306 Wisconsin Uniform Dwelling Code - *1 Cr.* Introduces students to the Wisconsin Uniform Dwelling Code as it relates to residential and light commercial construction. Students investigate different building applications and apply proper building regulations utilizing the code.

410-307 Construction Measurement and Layout - *1 Cr.* Applies trade-related measurement and layout practices to field applications. Students demonstrate use of measurement and layout tools in both lab and field applications. Discusses proper utilization of laser equipment for layout.

410-311 Construction Trades Blueprint Reading - *1 Cr.* Introduces the skills required to read and interpret building trade-related blueprints. Incorporates sketching, interpretation of symbols and line identification. Provides experience in reading plans in both residential and light commercial construction, as well as interpreting specification.

410-456 Rigging for Building Trades - *.45 Cr.* Introduces proper methods for safely securing equipment and materials for transporting, lifting and mobilizing. Emphasizes SAFE practices. Examines rigging equipment and demonstrates applications. Introduces crane safety and signaling.

410-531 ABC Carpentry 1 - *2 Crs.* Introduces students to safety, math, hand and power tools, various building materials, fasteners and adhesives. Must be a state-contracted apprentice to enroll in this course.

410-532 ABC Carpentry 2 - *2 Crs.* Examines floor, wall and roof framing, as well as windows and exterior doors. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-531 ABC Carpentry 1)

410-533 ABC Carpentry 3 - *2 Crs.* Introduces the apprentice to site layout, concrete and reinforcing materials, as well as the installation of reinforced concrete, foundations and flatwork. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-532 ABC Carpentry 2)

410-534 ABC Carpentry 4 - *2 Crs.* Explains the handling and placing of concrete and introduces the apprentice to field-built and patented-form systems. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-533 ABC Carpentry 3)

410-535 ABC Carpentry 5 - *2 Crs.* Provides students with training in exterior finishing and roofing application, thermal and moisture protection, and basic stair construction, as well as metal studs and drywall installation and finishing. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-534 ABC Carpentry 4)

410-536 ABC Carpentry 6 - *2 Crs.* Introduces the apprentice to areas of interior finish work; interior doors; suspended ceilings; window, door, floor and ceiling trim; and cabinets. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-535 ABC Carpentry 5)

410-537 ABC Carpentry 7 - *2 Crs.* Expands the apprentice's understanding of previously studied materials through an in-depth study of advanced floor, wall, stair and roof systems. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-536 ABC Carpentry 6)

410-538 ABC Carpentry 8 - *2 Crs.* Introduces student to project supervision and management including organizational and people-related skills, job site organization tasks, time management, as well as introduction to metal buildings and light equipment. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 410-537 ABC Carpentry 7)

410-557 Estimating and Scheduling for Building Trades - *.75 Cr.* Introduces the elements of manual take-off as related to residential construction. Students create material take-off sheets; calculate quantities and price materials to establish a total project material cost; develop a construction schedule and generate an estimate of project labor costs. Blueprint reading experience is beneficial. An architectural scale and calculator are required.

413-103 Commercial Drivers License (CDL) Preparation - *1 Cr.* Prepares students for taking the written portion of the Class A Commercial Driver's License test. Students, upon completion, will take the written test at the Department of Motor Vehicles test center to acquire the Instruction Permit (temps). The course is restricted to students enrolled in the Electrical Power Distribution program 31-413-2.

413-142 Introduction to Electrical Substations - *3 Crs.* Instructs students in the concepts of electrical substation construction. Explores safety in substation construction. Identifies IEEE engineering symbols. Students learn how to read one-line, wiring and schematic diagrams. Identifies key electrical components in an electrical substation and explains their theory of operation. Interprets name plate information on the substation equipment. Explores the differences between switching stations and substations and their functions in the grid. (Prerequisite: 413-307 Electrical Theory and Safety 1 or Dean consent)

413-144 Substation Control and System Protection - *3 Crs.* Provides a comprehensive overview of how electrical substations are controlled both manually and through automation, modeling the second and third-year substation electrician apprenticeship. Includes substation communications, voltage regulation, power quality, and system protection devices and schemes including circuit breakers, fusing and relays. Provides hands on experience in maintaining load tap changing equipment such as "LTC'S" and voltage regulators. Provides wiring experience on current transformers and potential transformers for metering and relaying applications. (Prerequisites: 413-142 Introduction to Electrical Substations; 413-307 Electrical Theory and Safety 1; 413-317 Electrical Theory and Safety 2; 804-363 Algebraic Applications for Electrical Trades or equivalent)

413-146 Substation Testing and Diagnostics - *3 Crs.* Takes the student through the basic to the more complex testing procedures used for condition assessment and commissioning of electrical substation equipment. Students perform a power transformer inspection and perform a turn's ratio and core ground test. Covers dissolved gas analysis of insulating oil along with proper oil sampling techniques. The principles of infrared testing as it applies to electrical equipment are examined. Power factor testing of substation equipment is explored. Circuit breaker timing and contact resistance testing along with sulfur hexafluoride properties and testing is also covered. Partial discharge testing and vibration applications for power equipment are examined. (Prerequisites: 413-142 Introduction to Electrical Substations; 413-144 Substation Control and System Protection; 413-307 Electrical Theory and Safety 1; 413-317 Electrical Theory and Safety 2; 804-363 Algebraic Applications for Electrical Trades or equivalent)

413-191 Industrial Electrical Safety and Maintenance - *2 Crs.* Explores electrical theory and safety as it relates to maintenance, repair and trouble-shooting of equipment found in an industrial/commercial setting. Topics include basic electrical theory, safety, symbols, test equipment, motor controls and electrical circuits. Knowledge of electrical concepts helpful.

413-307 Electrical Theory and Safety 1 - *3 Crs.* Introduces students to basic electrical theory involving alternating and direct current circuits. Students will determine unknown electrical quantities in single-phase electrical circuit schematics. Must be an Electrical Power Distribution program student. (Corequisites: 413-309 Line Technician 1; 413-310 Line Technician 2)

413-309 Line Technician 1 - *5 Crs.* Provides practical hands-on training, modeling first-year apprentice employment. Introduces pole climbing techniques. Covers safety policies/procedures and PPE. Provides hands-on experience in the design and construction of single-phase power distribution systems. Introduces operation of digger-derrick trucks and bucket trucks. Must be an Electrical Power Distribution program student. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-125 Student Success. Corequisites: 413-307 Electrical Theory and Safety 1; 413-310 Line Technician 2)

413-310 Line Technician 2 - *5 Crs.* Provides practical hands-on training, modeling second-year apprentice employment. Provides hands-on experience in maintaining and constructing of single-phase electrical power systems, concentrating on primarily 600-volt and below utility work. Transformer settings will be constructed and designed. Grounding for personal protection will be performed. Must be an Electrical Power Distribution program student. (Corequisites: 413-307 Electrical Theory and Safety 1; 413-309 Line Technician 1)

413-311 Line Technician 3 - *5 Crs.* Provides practical hands-on training, modeling third-year apprentice employment. Provides hands-on experience in maintaining and constructing of three-phase electrical power systems, bringing together the equipment that make up a distribution system from the substation to the customer. Three-phase lines will be constructed and retired. Grounding for personal protection and rescue procedures will be performed. Must be an Electrical Power Distribution program student. (Prerequisites: 413-309 Line Technician 1; 413-310 Line Technician 2. Corequisites: 413-312 Line Technician 4; 413-317 Electrical Theory and Safety 2)

413-312 Line Technician 4 - *5 Crs.* Provides practical hands-on training, modeling fourth-year apprentice employment. Provides hands-on experience in maintaining and constructing of transmission electrical systems. Three-phase banking principles and URD systems will be focused on. Students will bring together the entire electrical system from generation to the customer. Exit assessment, a college requirement will be performed. (Prerequisites: 413-309 Line Technician 1; 413-310 Line Technician 2. Corequisites: 413-311 Line Technician 3; 413-317 Electrical Theory and Safety 2)

413-317 Electrical Theory and Safety 2 - *3 Crs.* Introduces students to advanced electrical theory involving alternating and direct current circuits. Students determine unknown electrical quantities in multi-phase electrical circuits. Must be an Electrical Power Distribution program student. (Prerequisites: 413-307 Electrical Theory and Safety 1; 413-309 Line Technician 1; 413-310 Line Technician 2. Corequisites: 413-311 Line Technician 3; 413-312 Line Technician 4)

413-350 Beginning Electrical Concepts - *2 Crs.* Provides an overview of the electrical industry with an emphasis on fundamental electrical theory. Basic electricity is explored through concepts of DC electricity. Focuses on the electronic theory, voltage, amperage, resistance, Ohm's law and series/parallel circuits. Must be an Electricity program student. (Prerequisite: Completion of or concurrent enrollment in 804-360 Occupational Mathematics 1)

413-351 Advanced Electrical Concepts - *2 Crs.* This course is a continuation of 413-350 Beginning Electrical Concepts. Provides AC theory, inductance, capacitance and series-parallel circuits, single- and three-phase motors, transformers and circuits. Must be an Electricity program student. (Prerequisites: 413-350 Beginning Electrical Concepts; 804-113 College Technical Mathematics 1A)

413-355 Residential and Commercial Wiring Concepts - *3 Crs.* Develops the skills and concepts necessary for planning and installing electrical equipment in residential and commercial occupancies. Students explore the uses of raceways, conductors, boxes and power distribution equipment in residential and commercial work. Must be an Electricity program student. (Prerequisites: Completion of or concurrent enrollment in 413-361 Intermediate National Electrical Code; 413-363 OSHA Safety Construction Trades)

413-360 Introduction to National Electrical Code - *2 Crs.* Provides an introduction to the uses and applications of the state and national electrical codes. Students examine standard definitions, enforcement issues and the code-making cycle. Focuses on electrical installations to determine compliance with the state and national electrical codes. Must be an Electricity program student.

413-361 Intermediate National Electrical Code - *2 Crs.* Examines standards and procedures used by electricians in determining requirements for electrical installations. Focuses on the process of how the code is used in making decisions and how different occupancies, such as residential, commercial or industrial, affect the electrical installation process. Must be an Electricity program student. (Prerequisite: Completion of or concurrent enrollment in 413-360 Introduction to National Electrical Code)

413-363 OSHA Safety Construction Trades - *1 Cr.* Introduces OSHA policies, procedures and standards as well as construction safety issues. Emphasizes using the OSHA regulations as a guide to working safely on various construction sites and in recognizing potential hazards. Upon successful completion, the student will receive an OSHA construction safety and health 10-hour course card. Must be an Electricity program student.

413-365 Basic Motor Controls - *3 Crs.* Continues the investigation of industrial electricity by introducing more complex theory and techniques. Focuses on timers, control devices, motors and PLCs. Students design control circuits, program PLCs and wire complex control circuits. Must be an Electricity program student. (Prerequisite: Completion of or concurrent enrollment in 413-380 Industrial Wiring Concepts)

413-368 Level 2 NEC - *1 Cr.* Investigates current regulations defined in the current National Electrical Code (NEC). Students will apply regulations to various work-related conditions.

413-369 Electrical Maintenance and Troubleshooting - *1 Cr.* Introduces the maintenance and troubleshooting practices related to electrical systems and devices common to residential applications. Students utilize electrical test equipment to evaluate system status and practice safe system maintenance and repair.

413-370 Construction Trades Blueprint Reading - *2 Crs.* Develops skills in interpreting construction blueprints by categorizing elements of plans by view, size, shape and symbol. Focuses on the essential elements of residential and commercial plans. Students integrate basic blueprint reading skills with the construction process. Must be an Electricity program student. (Prerequisite: Completion of or concurrent enrollment in 413-360 Introduction to National Electrical Code)

413-371 Electrical Estimating for Construction Trades - *1 Cr.* Investigate construction blueprints and perform material, equipment and labor takeoffs to determine project costs. Students work mainly in a manual take-off mode. Students are required to have previous blueprint reading experience.

413-372 Industrial Electrical Code - *1 Cr.* Investigates the current National Electrical Code as it relates to industrial and commercial facilities and construction. Suggested for maintenance and repair technicians as well as plant electricians.

413-373 Level 1 NEC - *1 Cr.* Investigates the current National Electrical Code. Students will learn to move through the Code Book identifying various topics and sections. Emphasis is on applying basic applications, not for continuing education units.

413-374 Advanced NEC - Construction Trade Apprentices - *1 Cr.* In-depth investigation of the current national electrical code applying real-life field applications. An in-depth analysis of specific code regulations, not for continuing education units. Previous Code training required.

413-375 Basic Electrical Blueprint Reading for Construction Trades - *1 Cr.* Introduces the basic elements of construction blueprint reading with major emphasis on interpretation of electrical design and components.

413-380 Industrial Wiring Concepts - *3 Crs.* Introduces the features and functions of electrical equipment in an industrial setting. Students build the skills required to interpret line diagrams and use them to wire control circuits. Emphasizes control circuits most commonly found in a manufacturing setting. Must be an Electricity program student or have dean approval.

413-381 Building Trades National Electric Code - *2 Crs.* Continues more in-depth investigation of the National Electrical Code as it relates to the building trades. Emphasizes code application as it relates to various building practices. Previous NEC experience is suggested.

413-383 NEC Update Review - *1 Cr.* Investigates the current electrical code through classroom review. Identifies changes to the current code. Consult with your instructor for CEU credit.

413-385 Electrical Fabrication - *2 Crs.* Introduces the methods and practices used to build supports for electrical equipment and apparatus. Methods for mounting electrical equipment, supports and related devices to various surfaces are examined through the use of fastening systems and hardware. Must be an Electricity program student. (Prerequisite: 413-355 Residential and Commercial Wiring Concepts)

413-386 Trends in Electricity - *1 Cr.* Explores current trends and recent developments in residential and commercial electricity. Trends change based on current events within the industry. Students focus on code, enforcement issues, new materials, equipment and techniques surrounding the new developments. Students apply their learning in hands-on activities. Must be an Electricity program student. (Prerequisite: 413-361 Intermediate National Electrical Code)

413-390 Industrial Electricity 1 - *2 Crs.* Focuses on fundamental principles of electricity, DC and AC motors, reading electrical diagrams, and identifying electric symbols and components. Students operate basic electrical test equipment. Emphasizes troubleshooting and electrical safety.

413-392 Journeyman Electrical Test Review - *1 Cr.* Provides students with up-to-date code and theoretical information in preparation for completion of the journeyman exam.

413-393 Journeyman/Masters Electrical Test Review - *1 Cr.* Provides students with code and theory in preparation for the state journeyman or masters electrical exam. This course is approved for 36 hours of state CEUs. Consult your instructor at the start of the class for CEU verification.

413-394 Basic Programmable Logic Controls - *2 Crs.* Studies the theory of operation, applications, installation, programming techniques, interfacing and troubleshooting of programmable controllers for industry. Programming instructions include internal relays, timers, counters, math functions and relations.

413-395 Masters Electrical Test Review Online - *1 Cr.* Provides students with code and theory information in preparation for completion of the journeyman exam in an online format.

413-405 Electrical Code Update - *.60 Cr.* Examines national and state electrical codes using the National Electrical Code book. Covers residential, commercial, manufacturing and inspection application; construction installation; motor application services; and review of sample state certification exam. This course is approved for CEU training.

413-420 Photo Voltaic (Solar) Systems and Operations - *1 Cr.* Examines photo voltaic systems including how photo voltaic systems work, their components, setup, sizing, wiring, location, NEC requirements, utility interconnections, maintenance, troubleshooting, safety and commissioning.

413-500 OSHA 10 - *.5 Cr.* Introduces OSHA policies, procedures and standards. Emphasizes OSHA regulations as a guide to working safely on various construction sites and in recognizing potential hazards. Satisfies the 10-hour OSHA safety requirement for the 1926 Construction Industry Code.

413-540 ABC Construction Electrician 1 - *2 Crs.* Introduces students to electrical safety with a special emphasis on OSHA requirements, National Electrical Code, blueprint reading, residential wiring, hand-bending of conduit and DC electrical theory. Must be a state-contracted apprentice to enroll in this course.

413-541 ABC Construction Electrician 2 - *2 Crs.* Continues the studies of electrical safety with a special emphasis on OSHA requirements, National Electrical Code, blueprint reading, residential wiring, hand-bending of conduit and DC electrical theory. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-540 ABC Construction Electrician 1)

413-542 ABC Construction Electrician 3 - *2 Crs.* Introduces AC voltage: how it applies to magnetism; electrical symbols; line diagrams; current design and protection of circuits, motor controls, capacitance and inductive circuits, transformers, blueprints, and RC and RL time constants. Students continue studies in Safety and National Electrical Code with emphasis on grounding, over-current protection and box fill. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-541 ABC Construction Electrician 2)

413-543 ABC Construction Electrician 4 - *2 Crs.* Continues the study of AC voltage: how it applies to magnetism; electrical symbols; line diagrams; current design and protection of circuits, motor controls, capacitance and inductive circuits, transformers, blueprints, and RC and RL time constants. Students continue studies in Safety and National Electrical Code with emphasis on grounding, over-current protection and box fill. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-542 ABC Construction Electrician 3)

413-544 ABC Construction Electrician 5 - *2 Crs.* Challenges students into deeper studies in the National Electrical Code, introducing load calculations, conductor selection, motor calculations and HVAC systems. Continues to stress the requirements of safety on the job site through material provided by ABC. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-543 ABC Construction Electrician 4)

413-545 ABC Construction Electrician 6 - *2 Crs.* Continues investigations in the National Electrical Code, introducing load calculations, conductor selection, motor calculations and HVAC systems. Stresses the requirements of safety on the job site through material provided by ABC. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-544 ABC Construction Electrician 5)

413-546 ABC Construction Electrician 7 - *2 Crs.* Examines the areas of high voltage; advanced controls; and practical applications of lighting, fire alarm systems, heat trace and freeze protection paralleling National Electrical Code requirements in these areas with practical applications of installation through text and lab. Students focus on job site safety with OSHA standards. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-545 ABC Construction Electrician 6)

413-547 ABC Construction Electrician 8 - *2 Crs.* Continues examining the areas of high voltage; advanced controls; and practical applications of lighting, fire alarm systems, heat trace and freeze protection paralleling National Electrical Code requirements in these areas with practical applications of installation through text and lab. Students focus on job site safety with OSHA standards. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-546 ABC Construction Electrician 7)

413-548 ABC Construction Electrician 9 - *2 Crs.* Challenges students to test their ability to reference the National Electrical Code to prepare for the state journeyman exam. Introduces voice, data and video cabling. Compares motor control systems such as relay logic and PLC logic with practical applications. Must be

a state-contracted apprentice to enroll in this course. (Prerequisite: 413-547 ABC Construction Electrician 8)

413-549 ABC Construction Electrician 10 - *2 Crs.* Expands student knowledge through in-depth examination of the National Electrical Code to prepare for the state journeyman exam. Introduces voice, data and video cabling. Compares motor control systems such as relay logic and PLC logic with practical applications. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-548 ABC Construction Electrician 9)

413-594 Electrical Line Worker Apprentice 1 - *4.5 Crs.* Introduces ground work: construction, operation, maintenance, safety, first aid, public relations, overhead line layout assistance, rigging and study construction specifications. Students are instructed in climbing poles and working with an aerial device on non-energized poles, vehicle operation, repair/maintenance of materials, tools, equipment, new construction on de-energized lines and tree trimming. Must be a state-contracted apprentice to enroll in this course.

413-595 Electrical Line Worker Apprentice 2 - *4.5 Crs.* Includes a brief review of Electrical Line Worker Apprentice 1. Students examine concepts of power factor, reactive A/C electrical circuits, concepts and fundamentals of underground modular equipment and troubleshooting underground distribution. Explores operation of hotline underground distribution tools and understanding of distribution electrical code. Trig functions are extensively used. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 413-594 Electrical Line Worker Apprentice 1 or test out)

419-105 Introduction to Pneumatic and Programmable Logic Controllers - *2 Crs.* Introduces fundamentals of pneumatics and electrical controls with application to HVAC systems. Students receive hands-on experience designing, building and operating pneumatic and electro-pneumatic circuits using computer simulation software, pneumatic trainers, relay logic and PLC trainers.

420-520 Mold Making - *1 Cr.* Introduces Tool and Die Making apprentices to mold making. Explores construction principles, processes and basic molding applications. Emphasizes plastic injection molding. Must be a state-contracted apprentice to enroll in this course.

420-561 Jigs and Fixtures - *.5 Cr.* Introduces basic theory and skills of jig and fixture making. Must be a state-contracted apprentice to enroll in this course.

420-563 Machine Technology - *1 Cr.* Includes principles and nomenclature of the tool and die industry. Emphasizes terminology, function and operation of basic machine tools. Covers measuring tools and layout tools used in tool making. Must be a state-contracted apprentice to enroll in this course.

420-565 Computer Numerical Control - *1.5 Crs.* Introduces manual Fanuc-Haas programming controlling a three-axis machining center. Students receive a solid background in numerical control theory such as axis designation, measuring and location systems, formats, advantages and disadvantages of NC and CNC. Students work with tape format reading, tape preparation and disk storage, and they write several programs using computers, the CNC machines and tape to produce the part. Must be a state-contracted apprentice to enroll in this course.

420-571 Sinker/Wire EDM - *1.5 Crs.* Introduces students to operation of EDM wire metal cutting machines. Students learn basic machine components as well as layout, maintenance, calibration and programming. Must be a state-contracted apprentice to enroll in this course.

420-572 3D CAD - *1.5 Crs.* Introduces basic SolidWorks parametric-based solid modeling techniques. Exercises will include creating and editing solid parts, assemblies and drawings. Top-down and bottom-up designing techniques will be applied to product design, sheet metal and mold tooling exercises. Exploded views, bill of materials, animations, finite element analysis and configurations will be created. Explores file conversions to and from Pro-Engineer, Unigraphics and AutoCAD software. Must be a state-contracted apprentice to enroll in this course.

420-579 Introduction to Computer-Aided Manufacturing - *1 Cr.* Incorporates computer-aided manufacturing skills in the construction of geometry, developing a tool path, post processing, and basic dimensioning. Previous blueprint reading and computer numerical control programming is very helpful. Must be a state-contracted apprentice to enroll in this course.

420-580 2D CAD - *1 Cr.* Introduces students to computer-aided drafting (CAD) using the latest AutoCAD software. Students develop skills in drawing setup and organization, as well as drawing and editing objects. Students create complex shapes, add dimensions and text, utilize display and layer controls, implement symbols, and plot drawings. No computer experience required, but a background in fundamental blueprint reading and/or drafting skills is recommended. Must be a state-contracted apprentice to enroll in this course.

420-586 Die Making - *1 Cr.* Studies stamping die technology including piercing, blanking, bending and compound dies. Must be a state-contracted apprentice to enroll in this course.

421-331 Welding Print Reading - *2 Crs.* Gives production welders a basic knowledge about the interpretation of drawings and manuals of the sort most frequently encountered in industry. Includes arrangement of views, dimensions and notes, sections, shop sketching, welding symbols, and various welding prints used in the immediate area.

421-555 Blueprint Reading - *1 Cr.* Covers the basics of blueprint reading for the tool and die trade. Emphasizes the student's understanding of orthographic projection, pictorial drawings dimensioning, tolerancing, sectioning, thread representation and sketching. Must be a state-contracted apprentice to enroll in this course.

422-505 Metallurgy - *1 Cr.* Introduces students to the principles and processes of Metallurgy. Students are exposed to the manufacture of iron and steel, alloying elements, material properties, heat treating, quenching, and tempering for both ferrous and nonferrous metals and alloys. Both destructive and nondestructive testing of metal products are introduced. Must be a state-contracted apprentice to enroll in this course.

435-578 Isometric for Building Trades - *.9 Cr.* Introduces the concepts of three-dimensional drawing as it relates to plan views and hidden lines. Students develop the ability to interpret and draw isometric objects and plan views from isometric drawings.

439-301 Introduction to Basic Machining - *1 Cr.* Examines machine tool operation as it applies to today's manufacturing environment. Introduces students to milling machines, lathes, grinders, saws and drill presses. Basic layout and inspection practices, hand tools and job organization used in industry will be outlined. Machine types, components, operations, tooling, machining applications and workholding applications are discussed with an emphasis on safety. Coordinate measuring machines are introduced. Students learn about different materials, machinability and cutting tool terminology. Students must possess fundamental computer skills and have experience with a Windows operating system.

439-303 Basic Machining - Milling - *2 Crs.* Introduces basic machining operations on a manual vertical milling machine. Includes using basic hand tools, part layout, part inspection, bench work, safety and job organization. Basic milling machine setup, controls, tooling, workholding and general operational guidelines will be demonstrated. (Prerequisite: Completion of or concurrent enrollment in 439-301 Introduction to Basic Machining)

439-305 Basic Machining - Drilling and Grinding - *2 Crs.* Introduces students to the basic drilling operations on the drill press which includes drilling, counterboring, countersinking, reaming and tapping. Basic setup along with safety practices are emphasized. Introduces students to the basics of grinding. General maintenance of the surface grinding machine along with wheel mounting and workholding are covered. Students learn a variety of methods for squaring blocks, grinding slots and angular surfaces. (Prerequisites: Completion of or concurrent enrollment in 439-301 Introduction to Basic Machining; 439-303 Basic Machining - Milling)

439-306 Basic Machining - Turning - *2 Crs.* Introduces basic instruction for turning operations on a lathe. Emphasis will be given on lathe setup, controls, tooling, workholding, safety and general operational guidelines. Students learn about different materials, machinability and cutting tool terminology. (Prerequisite: 439-301 Introduction to Basic Machining)

439-324 Pierce and Die Making - *3 Crs.* Introduces basic die making principles and theory to provide a basis for the construction of a pierce and blank die. Students build, assemble and run a stamping die using various tool room equipment including milling machines, surface grinders and CNC lathes. (Prerequisites: 439-305 Basic Machining - Drilling and Grinding; 439-306 Basic Machining - Turning; 444-342 Advanced CAM 2D; 444-365 CNC Machining Center Operation)

439-329 Compound Die Making - *3 Crs.* Focuses on the theory behind the construction of compound and progressive dies. Exposes students to team building and problem-solving strategies used in industry. Provides hands-on experience in the construction of a compound and a progressive die. Students develop skills using various tool room equipment including milling machines, surface grinders, CNC mills, and wire and conventional EDM machines. CNC software is used to construct tool paths needed to machine certain parts of the die. Students work in a group environment to construct the progressive die and use communication skills to work out problems that may arise. (Prerequisite: 439-324 Pierce and Die Making)

Course Descriptions

439-334 Single-Cavity Mold Making - *3 Crs.* Introduces students to fundamental theory of single-cavity mold making construction. Explores basic construction principles, molding processes and molding terminology. Students will develop skills using various tool room equipment including milling machines, surface grinders, CNC mills, and wire and conventional EDM machines. CNC software is used to construct tool paths needed to machine molding components. Emphasis is on plastic injection molding. Exposes students to team building and problem-solving strategies used in industry. (Prerequisites: 439-305 Basic Machining - Drilling and Grinding; 439-306 Basic Machining - Turning)

439-339 Multi-Cavity Mold Making - *3 Crs.* Focuses on the theory of multi-cavity mold making construction. Students will develop skills using various tool room equipment including milling machines, surface grinders, CNC machining centers, and wire and conventional EDM machines. CNC software is used to construct tool paths needed to machine molding components. Emphasis is placed on plastic injection molding. Exposes students to team building and problem-solving strategies used in industry. (Prerequisite: 439-334 Single-Cavity Mold Making)

439-399 2-D AutoCAD Mold and Die Print Reading - *2 Crs.* Emphasizes the fundamentals of mold and die print reading for the tool and die making industry. Reviews basics of measuring systems and methods. Emphasizes orthographic and visual perception of drawings. Stresses areas of dimensioning, tolerancing, detail and assembly drawings. Introduces AutoCAD 2D and its applications in producing two-dimensional prints. Students will use AutoCAD to reproduce part drawings used in industry.

442-109 Welding for Fabricators - *4 Crs.* Provides skill in oxy-fuel cuttings, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW) and Gas Tungsten Arc Welding (GTAW) in flat and horizontal positions. Students apply safe welding standards to a variety of industrial applications on different types of metals in a lab setting. (Prerequisite: Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office)

442-302 Introduction to Welding Processes 1 - *2 Crs.* Introduces students to welding safety and setup procedures appropriate to a welding shop environment. Students develop skills in designing joints, analyzing various welding processes and their applications on carbon, stainless steel and aluminum. Focuses on the welding processes of Gas Metal Arc Welding (GMAW) and Gas Tungsten Arc Welding (GTAW). Articulates with the one-year Welding Diploma program.

442-304 Weld Certification Preparation - *1 Cr.* Provides information about welding certification with opportunity to practice welding techniques and metal preparation needed for welding certification tests. Learn welding codes and their requirements such as: ASW D1.1, ASME Section IX, D1.3, and API 1104. Learn what tests are required to satisfy the codes, and what needs to be in place to maintain company c ertifications.

442-307 Introduction to Welding Process, Part A - *2 Crs.* Provides skill in oxy-fuel cutting and Shielded Metal Arc Welding (SMAW) in the flat and horizontal positions. Students apply safe welding standards to a variety of industrial applications on mild steel in a lab setting.

442-308 Introduction to Welding Process, Part B - *2 Crs.* Provides skill in Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW) and Gas Tungsten Arc Welding (GTAW) in the flat and horizontal positions. Students apply safe welding standards to a variety of industrial applications on mild steel, stainless steel and aluminum in a lab setting.

442-309 Introduction to Welding Processes - *4 Crs.* Provides skill in oxy-fuel cuttings, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW) and Gas Tungsten Arc Welding (GTAW) in flat and horizontal positions. Students apply safe welding standards to a variety of industrial applications on different types of metals in a lab setting. (Prerequisite: Completion of or concurrent enrollment in 998-016 Welding Orientation)

442-310 Shielded and Gas Metal Arc Welding (SMAW/GMAW) - *4 Crs.* Provides skills using Gas Metal Arc Welding (GMAW) and Shielded Metal Arc Welding (SMAW) processes in all positions. Students use welding skills in a variety of industrial applications on carbon. Students perform welding operations in a lab setting. (Prerequisites: Completion of or concurrent enrollment in 442-307 Introduction to Welding Processes, Part A and 442-308 Introduction to Welding Processes, Part B; or 442-309 Introduction to Welding Processes)

442-313 General Welding - *2 Crs.* Develops skills in oxy-fuel welding and cutting, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding and plasma cutting. Students practice safety precautions in handling, setup, maintenance and use of welding equipment while welding on steel, stainless steel and aluminum.

442-314 Basic Welding 1 - *1 Cr.* Acquire a brief overview of the welding processes most widely used that include oxy-fuel, gas metal arc welding, shielded metal arc welding and gas tungsten arc welding processes.

442-315 Gas Tungsten Arc Welding - *4 Crs.* Provides advanced GTAW skills that build upon the basic skills learned previously. Students will be welding on stainless steel and aluminum. Welding operations are performed in a lab setting applying a variety of industrial applications of out of position welding on plate and pipe. (Prerequisite: Completion of or concurrent enrollment in 442-310 Shielded and Gas Metal Arc Welding)

442-316 Advanced Welding Techniques - *4 Crs.* Focuses on maintaining safety skills appropriate to a welding shop environment. Builds on skills acquired in prerequisite courses. Students perform welding operations on carbon steel, stainless steel and aluminum in practical, real-world situations. Introduces welding codes; welds are performed according to code criteria, with the option of being certified. (Prerequisite: Completion of or concurrent enrollment in 442-315 Gas Tungsten Arc Welding)

442-322 Welding for Apprentices - *.05-1 Cr.* Introduces students to welding safety and setup as it relates to a construction setting. Develops skills in oxy-fuel welding and cutting, arc and wire welding.

442-331 Welding Print Reading - *2 Crs.* Gives production welders a basic knowledge about the interpretation of drawings and manuals of the sort most frequently encountered in industry. Includes arrangement of views, dimensions and notes, sections, shop sketching, welding symbols, and various welding prints used in the immediate area.

442-345 Fabrication for Welders - *4 Crs.* Focuses on development of layout and fabrication skills through a sequence of exercises and a final project. Students use equipment including a CNC shear, CNC press brake and CNC plasma table. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office; 442-307 Introduction to Welding Processes, Part A and 442-308 Introduction to Welding Processes, Part B or 442-309 Introduction to Welding Processes; 804-360 Occupational Mathematics 1 or 804-113 College Technical Mathematics 1A)

444-302 CNC Controls - *2 Crs.* Introduces CNC control applications, functions and features. Emphasizes creating, editing, saving and retrieving CNC programs across a variety of communication platforms and controls. Students will learn MDI (Manual Data Input) functions, tool and work piece data settings. Proper program formatting and execution of programs in auto mode as well as DNC will be performed. It is recommended (but not required) that students complete 103-189 Microsoft Windows or 103-159 Computer Literacy - Microsoft Office before enrolling in this course.

444-310 Material Selection - *1 Cr.* Provides skill in determining the physical, mechanical and chemical properties of materials needed for specific applications in the manufacturing environment. Explains the process for manufacturing of tool steels and their alloys. Covers the heat treat processing of steel while examining the basic principles of metallurgy.

444-311 Tooling and Workholding - *2 Crs.* Introduces tooling and workholding applications as it applies to the manufacturing process. Focuses on the selection of tooling and workholding for end use application. Areas of study are general use tooling, tooling specific to end application, open setup fixturing, hard tooling fixtures and soft jaw machining. Emphasizes efficiency and waste elimination will be studied.

444-312 Product Engineering - Lean Manufacturing - *1 Cr.* Applies the principles of lean manufacturing for continuous improvement to the manufacturing setting. Students explore standardized work, workplace organization, visual controls, setup reduction, batch size reduction, point-of-use storage, quality at the source, workforce practices, and pull systems. This course is restricted to CNC Tool and Die Technologies program students. It is recommended that 444-313 Product Manufacturing be taken the semester after completing this course.

444-313 Product Manufacturing - *2 Crs.* Students will simulate a manufacturing environment by producing a product. Emphasizes implementation of a project plan, teamwork, problem solving and decision making. This course is restricted to CNC Tool and Die Technologies program students. It is recommended that this course be taken the semester after completing 444-312 Product Engineering - Lean Manufacturing. (Prerequisite: 444-312 Product Engineering - Lean Manufacturing)

444-333 Basics of Metrology - *1 Cr.* Introduces dimensional metrology with online exposure to various measurement techniques. Provides student with skills and knowledge of vernier calipers, dial calipers, depth micrometers, outside micrometers with both inch and metric scales, indicators, telescoping gages, sine bars, optical comparators, gage blocks, instruments for surface analysis, and coordinate measuring machines. Some concepts of geometric gaging and tolerancing are also developed as part of the coursework.

444-340 Beginning CAM - Mastercam - *2 Crs.* Introduces students to the advanced dimensional (2-D) Computer-Aided Machining (CAM) utilizing Mastercam software. Students run CAM software on a computer to generate a 2-D CNC program. Students develop skills in the generation of 2-D geometry; generation of 2-D toolpath; CNC machine code generation; programming, editing and manipulation; speed and feed calculation; and optimization of programs for maximum efficiency. Working knowledge of CNC programming language is desired. (Prerequisite: 444-350 Basic Programming)

444-342 Advanced CAM 2-D - *2 Crs.* Applies advanced techniques to 2-D CAM such as feature recognition, multiple parts and offsets, and the creation of tool and material libraries. Selection of tooling and machining parameters for end use will be emphasized. (Prerequisites: 103-159 Computer Literacy - Microsoft Office. Completion of or concurrent enrollment in 444-340 Beginning CAM - Mastercam)

444-343 Beginning CAM 3-D - *2 Crs.* Demonstrates the methods of machining 3-D geometry. Students apply cutting methods using various CAM software to machine desired parts. Students generate tool paths and analyze the posting. (Prerequisite: 444-342 Advanced CAM 2-D)

444-344 Advanced CAM 3-D - *2 Crs.* Introduces advanced multi-surface machining applications in CAM environment. Emphasizes proper multi-surface machining techniques including tooling selection, piece-part workholding, proper cutting speeds and feeds and process flow. Four- and five-axis techniques and concepts will be explored. A working knowledge of CNC language is helpful but not required. (Prerequisite: 444-343 Beginning CAM 3-D)

444-346 Design for 3-D Machining - *2 Crs.* Demonstrates the methods of constructing 3-D geometry to be used for generating tool path. Students create geometry, create surfaces and analyze surfaces for dimensional accuracy and usability. Students create tool path and a machined part. Experience with 2-D desirable. Course is designed for the 2011-12 CNC/Tool and Die curriculum. (Prerequisite: 103-159 Computer Literacy - Microsoft Office)

444-350 Basic Programming - *3 Crs.* Exposes manufacturing students to the field of manual programming of Computer Numerical Control (CNC) machine tools. Studies types of CNC controls, machinery, programming formats and basic terminology. Applies programming technique, print interpretation, applied math, computer skills and measuring techniques. (Prerequisite: 103-159 Computer Literacy - Microsoft Office)

444-355 CNC Machining Center Programming - *2 Crs.* Exposes the manufacturing students to advanced manual programming of machining centers. Types of CNC controls, machinery, programming formats and basic terminology will be studied. Advanced programming techniques, print interpretation, applied math, computer skills and measuring techniques will be applied. Working knowledge of CNC programming and CAM is helpful. (Prerequisite: 444-350 Basic Programming)

444-365 CNC Machining Center Operation - *2 Crs.* Develops an understanding of the complete operation of a three-dimensional machining center. Includes setup, fixturing, operation and troubleshooting of the program. (Prerequisite: Completion of or concurrent enrollment in 444-355 CNC Machining Center Programming)

444-375 Turning Center Operation - *2 Crs.* Exposes the manufacturing students to the field of turning center operation. Types of CNC communication, programming formats and basic terminology will be studied. Programming technique, print interpretation, applied math, computer skills and measuring techniques will be applied. (Prerequisite: 444-385 Turning Center Programming)

444-385 Turning Center Programming - *2 Crs.* Applies the knowledge received in Computer-Aided Machining 2-D and Computer-Aided Machining 3-D to a practical application on a turning center and CNC chucker. Covers direct computer control, editing, and speed and feed control overwrite. Working knowledge of CNC programming and CAM desirable. (Prerequisite: 444-350 Basic Programming)

444-386 Advanced Machining Center - *2 Crs.* Introduces advanced machining center applications in the manufacturing environment. Emphasizes proper cutting speeds and feeds, and process flow is applied. Advanced control features such as scaling, mirror imaging, local coordinate setting, offset pre-setting, background editing and parametric family-of-parts programming will be explored. Multi-side "tombstone" and pallet changing methods will be explored. (Prerequisite: 444-355 CNC Machining Center Programming)

444-391 Coordinate Measuring Machine - *3 Crs.* Introduces Brown and Sharpe Programmable CMM with PC-DMIS inspection software. Students receive hands-on exposure to Coordinate Measuring Machine programming techniques. Students will conduct laboratory experiments using the Coordinate Measuring Machine. (Prerequisites: 439-399 2-D AutoCAD Mold and Die Print Reading; 804-361 Occupational Math 2)

444-394 Advanced Turning Center - *2 Crs.* Introduces advanced turning center applications in the manufacturing environment. Emphasizes proper cutting speeds and feeds and process flow is applied. Advanced control features such as automated stock feeding, live tooling and "C" axis contouring, background editing and parametric family-of-parts programming will be explored. (Prerequisite: 444-385 Turning Center Programming)

455-455 Transition to Trainer, Your Role as a Journeyworker - *.2 Cr.* Introduces students to the tools of a job-site trainer. Students explore the role of a journeyworker/trainer, discover how to deliver hands-on training, and examine the process for giving useful feedback. Designed for completing apprentices.

457-110 Integrated Manufacturing Planning - Fabrication Technologies - *2 Crs.* Students complete a project from concept to the point where a product is designed and its manufacturing process is planned. Emphasizes the project management process, teamwork, problem solving and decision making. It is suggested that the student take 457-111 Integrated Manufacturing Production - Fabrication Technologies in the semester after this course. (Prerequisites: 457-146 Advanced Fabrication Techniques; 457-147 Metallurgy; 457-148 Metal Cutting and Forming Processes)

457-111 Integrated Manufacturing Production - Fabrication Technologies - *2 Crs.* Students will simulate a manufacturing environment by building a work cell, producing a product and performing quality assurance checks. Emphasizes implementation of a project plan, teamwork, problem solving and decision making. (Prerequisite: 457-110 Integrated Manufacturing Planning - Fabrication Technologies)

457-145 Metal Fabrication - *4 Crs.* Focuses on development of layout and fabrication skills through a sequence of exercises and a final project. Students use equipment including a CNC shear, CNC press brake and CNC cutting table. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office; 442-109 Welding for Fabricators or 442-309 Introduction to Welding Processes or 442-307 Introduction to Welding Processes, Part A and 442-308 Introduction to Welding Processes, Part B; 623-110 Technical Print Reading; 804-113 College Technical Mathematics 1A)

457-146 Advanced Fabrication Techniques - *4 Crs.* Enhances metal fabrication skills and techniques by developing fixtures, programming CNC press brakes and lasers, and finishing while making a variety of projects. (Prerequisite: 457-145 Metal Fabrication)

457-147 Metallurgy - *2 Crs.* Provides instruction and information on the basic principles of metals. Explores the behavior of metals and the processes which affect them. Explores the most common metals used in industrial processes.

457-148 Metal Cutting and Forming Processes - *3 Crs.* Develops knowledge of plasma, laser and water jet cutting systems and forming processes. Safety and maintenance are emphasized as students practice cutting techniques on projects. (Prerequisite: Completion of or concurrent enrollment in 623-110 Technical Print Reading; 804-113 College Technical Mathematics 1A)

461-321 Job Site Small Engine Maintenance and Repair - *1 Cr.* Introduces students to small engine repair and maintenance including an overview of small engine components, basic engine operation, operational systems, preventative maintenance and troubleshooting.

462-301 DC/AC Electricity - *4 Crs.* Introduces practical DC/AC concepts including electrical quantities, components and measurement instruments for DC and AC circuits. Topics include DC/AC forms of current, circuit construction, voltage, resistance, capacitance, inductance and power. Emphasizes troubleshooting practices and uses computer technologies to enhance abstract theory. Students perform laboratory exercises and instrumentation testing to reinforce theoretical concepts.

462-303 Hydraulics/Pneumatics Applications - *3 Crs.* Emphasizes forms of power transmission used in industry. Determines force and time capabilities for fluid power systems. Develops skills needed to determine directional control valves to use with hydraulic pumps and to select directional control valve components for use in pneumatic systems. Students diagram and build air relay logic circuits.

462-305 Mechanical Skills for Technicians - *2 Crs.* Covers basic mechanical skills needed by a technician. Includes the use and care of hand tools and small power tools, drilling, tapping, removal of broken bolts and studs and helicoil insertion. Covers basic measuring tools and techniques. Includes type and use of fasteners, lubricants and adhesives used in repair and assembly of automated machines.

462-309 Industrial Control Systems - *4 Crs.* Introduces students to the basic principles of physics specific to electro-mechanical systems. Explores basic process control theory, control loop characteristics, and sensor and signal-conditioning devices. Actual industrial controls, instrumentation and sensors are used in lab applications. Students integrate applications of system

interfacing of digital, servo, electric and hydraulic systems through laboratory experimentation. (Prerequisite: 462-301 DC/AC Electricity)

462-311 Machine and Equipment Installation - *3 Crs.* Introduces students to the standard applications of machine installation, leveling and setup. Covers procedures for the alignment of shafts, couplings and bearings for common industry equipment. Covers advanced materials not covered in 462-305. (Prerequisite: 462-305 Mechanical Skills for Technicians)

462-313 Blueprint/Schematic Reading - *2 Crs.* Examines electrical and hydraulic/pneumatic schematics, component symbols and their application in the circuit. Develops skills to assemble basic electrical circuits from a schematic, assemble basic hydraulic/pneumatic circuits from a schematic and draw electrical/hydraulic circuits.

462-315 Microprocessor Applications - *3 Crs.* Studies the hardware, software and operation of the microprocessor. Includes system architecture, microprocessors, number systems, Labview programming, memory organization, types of memory, interfacing and troubleshooting. (Prerequisite: 462-319 Programmable Logic Controllers)

462-317 Preventative/Predictive Maintenance - *3 Crs.* Introduces students to troubleshooting and maintaining manufacturing systems with an emphasis on automated systems. Presents information on preventative/predictive maintenance procedures, lockout/tagout, rigging practices, and industry safety policies. Students design and create a preventative/predictive maintenance program for a given real-world industry setting in a team format.

462-319 Programmable Logic Controllers - *3 Crs.* Studies the operation of the programmable logic controller (PLC) installation, interfacing operation, and programming. Students learn about PLCs connected to Windows-based PCs running state-of-the-art programming tools. Hardware, including various I/O modules, is studied for applications and capabilities. Electrical ladder logic provides the documentation and programming means. Students will write programs, load them into the PLC, troubleshoot any errors, and document the function and input/output of the control. (Prerequisite: 462-323 Semi-Conductors and Digital Electronics)

462-321 Power Transmission Systems - *3 Crs.* Explores power transmission belts, belt problems, pulleys, gears, and variable speed drives. Focuses on performing gear failure and bearing failure analysis, and vibration analysis related to component failures. (Prerequisite: 462-311 Machine and Equipment Installation)

462-323 Semi-Conductors and Digital Electronics - *3 Crs.* Focuses on the theory and application of semiconductors used in basic electronic circuits such as power supplies, amplifiers and logic circuit design. Emphasizes lab activities such as hands-on construction and testing of electronic circuits, including logic design, and use of laboratory equipment such as triggered oscilloscopes and digital multimeters. (Prerequisite: 462-301 DC/AC Electricity)

462-324 Integrated Manufacturing Center Project Planning - *2 Crs.* Emphasizes project management processes, teamwork, problem solving and decision making. Integrates Industrial Maintenance Technician students with Integrated Manufacturing students in the planning of an automated workcell project.

462-325 Robotics/Material Handling Operations - *3 Crs.* Emphasizes the application and management of industrial robots and automated material-handling control system operation. Focuses on diagnosis and repair of operation errors, system shutdowns, and the relationship between system engineers and industrial maintenance technicians. (Prerequisite: 462-319 Programmable Logic Controllers)

462-326 Industrial Safety - *2 Crs.* Selects and uses industrial safety equipment as it relates to industrial manufacturing equipment. The IMC workcell area will be used to employ safety guarding as dictated by OSHA standards.

462-327 Electro-Hydraulic/Mechanical Systems - *4 Crs.* Students draw and interpret electrical ladder diagrams and design electrical control circuits. Select, install and test motor control devices. Connect single-, three-phase and DC motors to control devices. Select, program, install and operate AC variable frequency drives. (Prerequisite: 462-301 DC/AC Electricity)

462-330 Integrated Manufacturing Center Project Implementation - *3 Crs.* Emphasizes project management processes, teamwork, problem solving and decision making. Integrates Industrial Maintenance Technician students with Integrated Manufacturing students in the development and operation of an automated workcell project. The workcell project will produce a product, providing students an opportunity to utilize their skills in a "real-world" setting. (Prerequisite: 462-324 Integrated Manufacturing Center Project Planning)

475-350 Safety Applications - *2 Crs.* Examines safety practices common to the construction industry for a safe working environment. Includes OSHA 10, First Aid and CPR, fire protection, and forklift training. Upon successful completion of this course students will receive a Moraine Park Construction Safety Certificate, OSHA 10, and First Aid/CPR certification cards.

475-351 Building Trades Fundamentals - *5 Crs.* Develops fundamental skills associated with constructing commercial and residential buildings. Includes print reading, building code interpretation, tool usage, building and site layout, and construction materials. (Prerequisites: Completion of or concurrent enrollment in 475-350 Safety Applications; 475-352 Framing Construction)

475-352 Framing Construction - *5 Crs.* Develops skills in the construction of the foundation and framing a structure by building walls, floors, roof and staircases. Students explore the use of wood and steel construction products and green environmentally-friendly technologies. (Prerequisites: Completion of or concurrent enrollment in 475-350 Safety Applications; 475-351 Building Trades Fundamentals)

475-353 Exterior Finish - *5 Crs.* Develops skills in the construction process known as exterior finish which includes installing windows and doors, applying roofing materials, installing exterior siding and soffit, masonry products, and constructing patio decks and/or walkways. (Prerequisites: Completion of or concurrent enrollment in 475-350 Safety Applications; 475-352 Framing Construction)

475-354 Interior Finish - *5 Crs.* Develops skills in the construction process known as interior finish. Consisting of installing interior doors, cabinetry, trim moldings, flooring, and staircase finishing (Prerequisites: Completion or concurrent enrollment in 475-350 Safety Applications; 475-354 Exterior Finish)

475-355 Building Trades Mechanical Systems - *3 Crs.* Investigates the history and functions of electrical, plumbing and HVAC trades as they relate to the construction industry. Students experience different trade practices and observe how the various trades interact during the construction process. Emphasizes developing an understanding of what criteria is necessary to work in these trades. (Prerequisite: Completion of or concurrent enrollment in 475-350 Safety Applications)

475-356 Concrete Masonry Applications - *2 Crs.* Introduces students to the basic principles of masonry and concrete construction. Areas covered will include tool identification and use, related products and materials, applicable safety procedures, interpretation of plans, measurement and layout, brick and block laying, footings and foundations and concrete flat work. Instruction will incorporate a strong hands-on component.

499-100 Apprenticeship Completion - *32 Crs.* Requires the completion of a BAS/BAT Apprenticeship Program of 400 hours. Record of completion of an apprenticeship for the Technical Studies Journeyworker program.

501-101 Medical Terminology - *3 Crs.* Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasizes spelling, definition and pronunciation. Introduces operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

501-104 Principles of Customer Service in Healthcare - *2 Crs.* Introduces customer service for students interested in working in various healthcare settings. Investigates healthcare systems, safety standards and the workforce. Examines professionalism, interpersonal and written communication skills, and confidentiality as they relate to customer service in healthcare.

501-107 Introduction to Healthcare Computing - *2 Crs.* Provides an introduction to basic computer functions and applications utilized in contemporary health care settings. Students are introduced to the hardware and software components of modern computer systems and the application of computers in the workplace. Emphasizes the use of common software packages, operating systems, file management, word processing, spreadsheet, database, Internet, and electronic mail.

501-108 Pharmacology for Allied Health - *2 Crs.* Introduces students to medication classification and basic pharmacology principles. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. (Prerequisites: Completion of or concurrent enrollment in 501-101 Medical Terminology; 509-302 Human Body in Health and Disease)

502-300 Professional Practices - *2 Crs.* Focuses on the study of bacteriology and its relationship to spreading diseases. Examines infection control and the responsibility of the salon professional to practice sanitation. Explores career image of the Barber/Cosmetologist. Practices skills in preparation for clinical experiences. Develops relationships with clientele and coworkers. (Prerequisites: Concurrent enrollment in 502-302 Hairstyling, Basic Techniques; 502-312 Haircutting Techniques; 502-335 Permanent Wave, Design Wraps; 502-346 Lightening and Toning)

502-301 Hairstyling, Shampooing and Scalp Treatments - *2 Crs.* Develops skills in shampooing and scalp treatment procedures and in the use of conditioning products. Focuses on cleansing hair and scalp. Develops skills in pin curling to include flat curls and stand-up curls. Introduces wet sets including Velcro roller setting, blow-drying and iron curling. Also includes electric roller work and skills related to thermal curling and hair pressing. (Prerequisites: Concurrent enrollment in 502-311 Haircutting, Basic Forms; 502-334 Permanent Wave Techniques; 502-345 Hair Color Applications)

502-302 Hairstyling, Basic Techniques - *2 Crs.* Develops higher-level skills, building upon skills learned in 502-301 Hairstyling, Shampooing and Scalp Treatment. Students develop skills in electric and Velcro rollers, thermal curling and pressing, blow-drying techniques and theory associated with each skill area. Provides hands-on application in cosmetology clinic. Students perform and receive services on each other as they develop their skills. (Prerequisites: 502-301 Hairstyling, Shampooing, and Scalp Treatments. Concurrent enrollment in 502-300 Professional Practices; 502-312 Haircutting Techniques; 502-335 Permanent Wave, Design Wraps; 502-346 Lightening and Toning)

502-303 Hairstyling, Updos and Braids - *1 Cr.* Develops skills in updo hairstyling to include different types of twists, curls, bows, petals, loops, rolls, artificial hair techniques and ornamentation techniques. Students create hair designs that incorporate direction, movement, smoothness, balance and creativity in the finished design. (Prerequisites: 502-302 Hairstyling, Basic Techniques. Concurrent enrollment in 502-313 Short and Trend Cuts; 502-322 Salon Services 2; 502-330 Facials/Skin Structure and Its Disorders)

502-309 Nail Care - *1 Cr.* Applies techniques for giving basic and spa manicures, pedicures and polish application in preparation for work on the clinic floor. Hands-on activities help students gain skill at manipulations and accuracy of techniques for professional results. Nail structure and nail disorders and diseases are examined to aid in recommendations to the client. (Prerequisites: Concurrent enrollment in 502-321 Salon Services 1; 502-337 Advanced Design Wraps; 502-348 Highlighting and Corrective Color)

502-311 Haircutting, Basic Forms - *2 Crs.* Analyzes essential factors in creating hair shapes for the individual. Hair is cut using the four main hair-shaping forms with the shears on manikins for practice in preparation for cutting the client's hair. Haircutting services create the basic foundation for hairstyling. (Prerequisites: Concurrent enrollment in 502-301 Hairstyling, Shampooing, and Scalp Treatments; 502-334 Permanent Wave Techniques; 502-345 Hair Color Applications)

502-312 Haircutting Techniques - *1 Cr.* Focuses on cutting uniformly layered haircuts on manikins using shears and razor. Use of the clippers is practiced. Texturizing and slithering techniques are emphasized while the four main shaping forms are reviewed. (Prerequisites: 502-301 Hairstyling, Shampooing, and Scalp Treatments; 502-311 Haircutting, Basic Forms. Concurrent enrollment in 502-300 Professional Practices; 502-302 Hairstyling, Basic Techniques; 502-335 Permanent Wave, Design Wraps; 502-346 Lightening and Toning)

502-313 Short and Trend Cuts - *1 Cr.* Includes hands-on experience in the use of manikins and human models to demonstrate more difficult and challenging hair designs. (Prerequisites: Concurrent enrollment in 502-303 Hairstyling, Updos and Braids; 502-322 Salon Services 2; 502-330 Facials/Skin Structure and Its Disorders)

502-316 Artificial Nails - *1 Cr.* Develops skill in procedure and application of nail extensions, acrylic overlay and sculptured nails including fiberglass application and gel application. Students are introduced to nail art using an airbrush machine, nail art brushes, trend techniques, and the procedure for French manicuring. It is a requirement of this course that students work with assigned partners to complete the learning plans of this course. Students must work on other students in the class and must allow students to practice skills on them. (Prerequisites: 502-309 Nail Care. Concurrent enrollment in 502-323 Salon Services 3; 502-333 Chemical Relaxing and Wigs; 502-381 Salon Operations)

502-321 Salon Services 1 - *2 Crs.* Applies practical techniques, communication skills and core abilities learned in the classroom on clients in a salon-type setting with instructor guidance. Services provided to customers include shampooing, haircutting, hairstyling, hair coloring, permanent waving and scalp treatments. (Prerequisites: 502-300 Professional Practices; 502-302 Hairstyling, Basic Techniques; 502-312 Haircutting Techniques; 502-335 Permanent Wave, Design Wraps; 502-346 Lightening and Toning. Concurrent enrollment in 502-309 Nail Care; 502-337 Advanced Design Wraps; 502-348 Highlighting and Corrective Color)

502-322 Salon Services 2 - *3 Crs.* Applies practical techniques, communication skills and core abilities learned in the classroom on clients in a salon-type setting with instructor guidance. Services provided to customers include shampooing, haircutting, hairstyling, hair coloring, permanent waving, scalp treatments, and manicures and pedicures. (Prerequisites: 502-321 Salon Services 1. Concurrent enrollment in 502-303 Hairstyling, Updos and Braids; 502-313 Short and Trend Cuts; 502-330 Facials/Skin Structure and Its Disorders)

502-323 Salon Services 3 - *3 Crs.* Applies practical techniques, communication skills and core abilities learned in the classroom on clients in a salon-type setting with instructor guidance. Services provided to customers include shampooing, haircutting, hairstyling, hair coloring, permanent waving, scalp treatments, manicures, pedicures, highlighting techniques, corrective coloring and facials. Students are also expected to market products and services. (Prerequisites: 502-322 Salon Services 2. Concurrent enrollment in 502-316 Artificial Nails; 502-333 Chemical Relaxing and Wigs; 502-381 Salon Operations)

502-324 Salon Services 4 - *4 Crs.* Applies practical techniques, communication skills and core abilities learned in the classroom on clients in a salon-type setting with minimal instructor guidance. Services provided to customers include shampooing, haircutting, hairstyling, hair coloring, permanent waving, scalp treatments, manicures, pedicures, highlighting techniques, corrective coloring, facials, artificial nails, chemical relaxing and wigs. Students are also expected to market products and services. (Prerequisites: 502-323 Salon Services 3. Concurrent enrollment in 502-354 Chemistry; 502-356 Laws and Rules)

502-325 Salon Services 5 - *3 Crs.* Applies practical techniques, communication skills and core abilities learned in the classroom on clients in a salon-type setting with little or no instructor guidance. Services provided to customers include shampooing, haircutting, hairstyling, hair coloring, permanent waving, scalp treatments, manicures, pedicures, highlighting techniques, corrective coloring, facials, artificial nails, chemical relaxing and wigs. Students take and evaluate a test curl independent of the instructor. Students are also expected to market products and services. (Prerequisites: 502-324 Salon Services 4. Concurrent enrollment in 502-355 Anatomy/Book Final)

502-330 Facials/Skin Structure and Its Disorders - *3 Crs.* Develop skills in skin care services including facial massage, arching, waxing, chemical hair removal, and mask and pack applications. Students develop skills in applying corrective makeup using techniques to balance eye shapes with eye makeup using safe and sanitary shaving procedures, applying artificial eyelashes, and using an eyelash curler. Students are required to perform and receive services on each other, as assigned by the instructor. (Prerequisites: Concurrent enrollment in 502-303 Hairstyling, Updos and Braids; 502-313 Short and Trend Cuts; 502-322 Salon Services 2)

502-333 Chemical Relaxing and Wigs - *1 Cr.* Focuses on the process of changing natural curly hair forms so that they become either less curly or straight. Combines product information with choice of techniques and hair analysis for a relaxing treatment. Special emphasis is placed on sodium hydroxide. Also includes cleaning and blocking, shaping, coloring, and the setting and styling of wigs and wiglets. (Prerequisites: Concurrent enrollment in 502-316 Artificial Nails; 502-323 Salon Services 3; 502-381 Salon Operations)

502-334 Permanent Wave Techniques - *2 Crs.* Provides the initial skills involved in permanent waving hair including analyzing the hair, the basics of sectioning, subsectioning and wrapping permanent wave rods. Analyzes the effect of the chemicals on the hair shaft during the permanent wave process. (Prerequisite: Concurrent enrollment in 502-301 Hairstyling, Shampooing and Scalp Treatments)

502-335 Permanent Wave, Design Wraps - *1 Cr.* Applies permanent wave wrapping skills to the mohawk and cowlick wrap patterns without basic sectioning. Employs spiraling techniques using permanent wave rods and tensive rings (rounded rods). Product knowledge is introduced. Analyzes the purpose and properties of hair, along with its disorders and diseases. (Prerequisites: 502-334 Permanent Wave Techniques. Concurrent enrollment in 502-300 Professional Practices; 502-302 Hairstyling, Basic Techniques; 502-312 Haircutting Techniques; 502-346 Lightening and Toning)

502-337 Advanced Design Wraps - *1 Cr.* Focuses on advanced permanent wave wrap techniques. Directional wraps for short to medium length hair along with wraps for long hair will be practiced. Examines electricity as it applies to salons, and classification of the effects of light therapy and electrotherapy are discussed. (Prerequisites: Concurrent enrollment in 502-309 Nail Care; 502-321 Salon Services 1; 502-348 Highlighting and Corrective Color)

502-345 Hair Color Applications - *1 Cr.* Practices hair color techniques including artificial color removal, color fillers and tintbacks. (Prerequisites: Concurrent enrollment in 502-301 Hairstyling, Shampooing and Scalp Treatments; 502-311 Haircutting, Basic Forms; 502-334 Permanent Wave Techniques)

502-346 Lightening and Toning - *1 Cr.* Provides instruction and practice using techniques for applying lightening products to hair. Included are first-time lightening, lightening retouch, highlighting and low-lighting cap technique, and toning application. Tint retouch is reviewed according to state board criteria. Students demonstrate skills on peers and/or manikins. (Prerequisites: 502-345 Hair Color Applications. Concurrent enrollment in 502-300 Professional Practices; 502-302 Hairstyling, Basic Techniques; 502-312 Haircutting Techniques; 502-335 Permanent Wave, Design Wraps)

502-348 Highlighting and Corrective Color - *1 Cr.* Develops skills in selecting color formulas, principles applied when coloring grey hair and achieving special effects. Introduces highlighting techniques, corrective hair coloring techniques and brow coloring. (Prerequisites: 502-346 Lightening and Toning. Concurrent enrollment in 502-309 Nail Care; 502-321 Salon Services 1; 502-337 Advanced Design Wraps)

502-354 Chemistry - *1 Cr.* Focuses on the composition and nature of hair and how it is affected by the products used in performing services to change it both chemically and physically. Students will analyze mixture and chemical compounds, physical and chemical changes, the pH scale, acids and bases, cosmetics, solutions and emulsions to develop safe and knowledgeable reasoning skills regarding hair and skin. (Prerequisites: Concurrent enrollment in 502-324 Salon Services 4; 502-356 Laws and Rules)

502-355 Anatomy and Book Final - *1 Cr.* Focuses on the anatomy and physiology of the body by identifying and examining cells and the skeletal, muscular, nervous and circulatory systems. Includes a comprehensive review in preparation for the written portion of the state board examination following the guidelines established by Prometric Testing Services. (Prerequisite: Concurrent enrollment in 502-325 Salon Services 5)

502-356 Laws and Rules - *1 Cr.* Examines Wisconsin barber/cosmetology state statutes and administrative code. The state statutes are studied in relation to the corresponding rules involved with each topic. Focuses on the structure of skin and its disorders and diseases as it relates to the barber/cosmetology industry. (Prerequisites: Concurrent enrollment in 502-324 Salon Services 4; 502-354 Chemistry)

502-361 Nail Technician 1 - *3 Crs.* Introduces the student to theory related to basic and lactol manicure. Focuses on products, procedures, methods and skill development in manicuring, pedicuring and artificial nails. First of three courses preparing students for state Manicurist Licensing Exam. A meeting with an admissions specialist is required prior to enrolling in the course.

502-362 Nail Technician 2 - *4 Crs.* Continuation of theoretical and practical skill development. Part two of a three-part program preparing students for the state Manicurist Licensing Exam. Skills will be practiced in an actual salon setting. (Prerequisite: 502-361 Nail Technician 1)

502-363 Nail Technician 3 - *2 Crs.* Continuation of a three-part Nail Technician program. Student will concentrate on developing skills and acceptable practices in a salon setting in preparation for the state Manicurist Licensing Exam. (Prerequisite: 502-362 Nail Technician 2)

502-381 Salon Operations - *1 Cr.* Provides basic business principles necessary to plan and operate a business establishment. Employer-employee relationships, basic recordkeeping and time management skills are taught. (Prerequisites: Concurrent enrollment in 502-316 Artificial Nails; 502-323 Salon Services 3; 502-333 Chemical Relaxing and Wigs)

502-501 Shampooing, Cutting, Styling and Permanent Waving - *3 Crs.* Focuses on the theoretical knowledge and practical skills in preparation for state licensure as a practitioner in the profession of Barber/Cosmetology, specifically in the subjects of haircutting, beard trimming, shampooing, hair styling, wigs and permanent waves. Must be a state-contracted apprentice to enroll in this course.

502-502 Relaxing, Coloring, Nails and Skin - *3 Crs.* Focuses on the theoretical knowledge and practical skills in preparation for state licensure as a practitioner in the profession of Barber/Cosmetology, specifically in the subjects of hair coloring, chemical relaxing, skin care and nail care. Must be a state-contracted apprentice to enroll in this course.

502-503 Health, Image, Structure and Law - *3 Crs.* Focuses on the theoretical knowledge and practical skills in preparation for state licensure as a practitioner in the profession of Barber/Cosmetology, specifically in the subjects of history, professional image, infection control, properties of the hair, chemistry, anatomy and physiology, state law and salon business. Must be a state-contracted apprentice to enroll in this course.

504-102 Careers in Corrections - *3 Crs.* Focuses on the exploration of corrections-related careers. Students explore options available to them in the corrections field and they assess their skills and interests. Exploration of corrections-related careers occur through tours of facilities, presentations by working professionals, and individual and group activities. Students must be able to secure transportation and attend group tours of correctional facilities within a 75-mile radius.

504-110 Introduction to Criminal Justice Supervision - *3 Crs.* Gives an overview of crime and the criminal justice system. Causes of crime will be examined as well as the impact of crime on the victim. (Prerequisite: Completion of or concurrent enrollment in 890-125 Student Success)

504-113 Criminal Investigation - *3 Crs.* Introduces the study of fundamentals of criminal investigation; knowledge, use and function of scientific aids in crime detection; importance of the criminals' modus operandi; development of sources of information; and the need for investigation in the criminal justice system.

504-116 Alcohol and Drug Awareness in Criminal Justice - *3 Crs.* Using the dualistic approach, the progression of alcohol and other substance abuses are explored. Legal ramifications of substance abuse are investigated. Effects of alcohol and other drug abuse on the family are covered. Examines the composition and effects of the most common substances of abuse.

504-136 Correctional Counseling - *3 Crs.* Develops corrections core skills to effectively counsel, on a paraprofessional level, people in a variety of corrections environments. Emphasizes the how or the conditions under which effective counseling can occur. Students will develop a multiple modality approach for individual and group counseling. (Prerequisite: 504-931 Communication Skills)

504-143 Probation and Parole - *3 Crs.* Develops skills to perform the dualistic roles of a Wisconsin probation and parole agent. Through numerous hands-on activities and the application of pertinent Wisconsin Codes, students become competent in providing safety/security in the community while monitoring and counseling offenders. (Prerequisite: 801-195 Written Communication)

504-155 Stress Management - *3 Crs.* Provides participants with skills and abilities to deal constructively with stressors in the correctional field. Focus is on assessing individual stressors, analyzing the impact of stress, reducing stressors and developing stress-coping mechanisms. Coping mechanisms include assertion, anger management, conflict resolution, time management, relaxation activities, exercise and diet planning.

504-162 Corrections Internship - *2 Crs.* Focuses on developing a corrections-specific résumé and cover letter. Learn how to complete applications. Upon completion of the classroom work, students complete a 72-hour internship at a corrections-related site. (Prerequisites: 504-102 Careers in Corrections; 504-110 Introduction to Criminal Justice Supervision; 504-181 Ethnicity, Corrections and Supervision; 504-930 Security Procedures; 504-931 Communication Skills; 504-937 Juvenile Supervision; criminal background check)

504-181 Ethnicity, Corrections and Supervision - *3 Crs.* Analyzes the elements of ethnicity and how they assist corrections professionals to live and work in multicultural/ethnically diverse environments. Emphasizes distinctions between values, attitudes and behaviors founded on fiction and facts among ethnic groups. Applies knowledge/skills to correctional environments.

504-930 Security Procedures - *3 Crs.* Demonstrate the steps involved in receiving and releasing inmates and maintaining security. Develop the skill needed for mitigation of hostage type situations. Topics include admission, release, and search procedures; use of jail locking and surveillance equipment; and inmate health management procedures.

504-931 Communication Skills - *3 Crs.* Apply correctional professional communication skills including mediation, arbitration, and crisis intervention in a correctional setting.

504-932 Adult Supervision - *3 Crs.* Focuses on practicing supervision skills including: positive behavior control, dispute resolution, and incident debriefing. Explore belief systems, social pressure, moral problems, decision-making and the consequences of decisions.

504-933 Correctional Report Writing - *3 Crs.* Apply basic requirements, guidelines and skills for proper and professional documentation of activities and incidents in a correctional setting. (Prerequisites: 504-931 Communication Skills; 801-195 Written Communication)

504-934 Correctional Law and Code - *3 Crs.* Introduces key concepts and principles underlying legal requirements for jail operations and guidelines for protecting the legal rights of inmates. Key issues covered include introduction to the role of the jail officer, rules and standards governing correctional operations, structure of the court system, overview of civil liability, and key constitutional rights of inmates.

504-935 Corrections Summary Assessment – *3 Crs.* Refine previously learned skill and abilities by applying them to various case studies and simulated situations. (Prerequisites: Completion of or concurrent enrollment in 504-136 Correctional Counseling; 504-933 Correctional Report Writing)

504-936 Emergency Procedures - *3 Crs.* Implement Principles of Subject Control (POSC) in a correctional environment with an emphasis on team tactics. Students apply current fire science concepts to jail fire prevention and response, including search and rescue, fire suppression, and use of safety procedures. (Prerequisite: 504-930 Security Procedures)

504-937 Juvenile Supervision - *3 Crs.* Apply theories of adolescent development to develop strategies for effective supervision, protection and discipline of juveniles.

509-301 Medical Assistant Administrative Procedures - *2 Cr.* Introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, recordkeeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. (Prerequisites: Completion of or concurrent enrollment in 501-107 Introduction to Computing for Healthcare; 890-125 Student Success)

509-302 Human Body in Health and Disease - *3 Crs.* Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize human body anatomy and the causes, signs and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis and prevention of common diseases. (Prerequisite: Completion of or concurrent enrollment in 501-101 Medical Terminology)

509-303 Medical Assistant Laboratory Procedures 1 - *2 Crs.* Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform CLIA waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. (Prerequisites: Admission to the Medical Assistant program. Completion of or concurrent enrollment in 501-101 Medical Terminology; 509-302 Human Body in Health and Disease. Corequisite: 509-304 Medical Assistant Clinical Procedures 1)

509-304 Medical Assistant Clinical Procedures 1 - *4 Crs.* Introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs and patient history, and assist with minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting. (Prerequisites: Admission into the Medical Assistant program. Completion of or concurrent enrollment in 501-101 Medical Terminology; 509-302 Human Body in Health and Disease. Corequisite: 509-303 Medical Assistant Laboratory Procedures 1)

509-305 Medical Assistant Laboratory Procedures 2 - *2 Crs.* Prepares students to perform phlebotomy and CLIA waived hematology, chemistry, immunology and laboratory procedures commonly performed by medical assistants in the ambulatory care setting. (Prerequisites: 509-303 Medical Assistant Laboratory Procedures 1; 509-304 Medical Assistant Clinical Procedures 1. Completion of or concurrent enrollment in 501-108 Pharmacology for Allied Health. Corequisite: 509-306 Medical Assistant Clinical Procedures 2)

509-306 Medical Assistant Clinical Procedures 2 - *3 Crs.* Prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, and assisting with emergency preparedness in an ambulatory care setting. (Prerequisites: 509-303 Medical Assistant Laboratory Procedures 1; 509-304 Medical Assistant Clinical Procedures 1. Completion of or concurrent enrollment in 501-108 Pharmacology for Allied Health. Corequisite: 509-305 Medical Assistant Laboratory Procedures 2)

509-307 Medical Office Insurance and Finance - *2 Crs.* Introduces medical assistant, medical office and medical billing students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance-related duties. (Prerequisites: Completion of or concurrent enrollment in 501-101 Medical Terminology; 501-107 Introduction to Computing for Healthcare; 509-302 Human Body in Health and Disease)

509-309 Medical Law, Ethics and Professionalism - *2 Crs.* Prepares students to display professionalism and perform within ethical and legal boundaries in the healthcare setting. Students maintain confidentiality, examine legal and bioethical issues, and demonstrate awareness of diversity.

509-310 Medical Assistant Practicum - *3 Crs.* The practicum experience requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual ambulatory healthcare settings. Students perform medical assistant administrative, clinical and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. This course must be taken in the last semester. (Prerequisites: 501-107 Introduction to Computing for Healthcare; 509-301 Medical Assistant Administrative Procedures; CPR and First Aid for Health Professionals; proof of immunization; caregiver background check. Completion of or concurrent enrollment in 501-104 Principles of Customer Service in Healthcare; 509-305 Medical Assistant Laboratory Procedures 2; 509-306 Medical Assistant Clinical Procedures 2; 509-307 Medical Office Insurance and Finance; 509-309 Medical Law, Ethics and Professionalism)

510-301 Medication Assistant - *3 Crs.* Prepares experienced nursing assistants to administer medications to residents of a skilled-care nursing facility. Emphasis is in the role of the Medication Assistant, legalities of medication administration, and control and storage of drugs. Provides experience in techniques of administering drugs and recordkeeping. (Prerequisites: Student must be 18 years of age; have a high school diploma or HSED; be on the State of Wisconsin Nurse Aide Directory with current federal eligibility; have at least 2,000 hours experience in direct patient care within the last three years; have worked a minimum of 40 hours, within the last 90 days, with the residents to whom the student will be administering medications; be recommended in writing by the director of nursing and the administrator of the agency in which the student will be working during clinical experience; and be recommended by two licensed charges nurses, one of whom must be a registered nurse. Currently employed as a certified nursing assistant in a skilled-care facility. This course contains 68 hours of theory and 40 hours of clinical)

512-125 Introduction to Surgical Technology - *4 Crs.* Provides the foundational knowledge of the occupational environment. Principles of sterilization and disinfection are learned. Surgical instruments are introduced. Preoperative patient care concepts are simulated. Lab practice is included. (Prerequisites: 806-177 General Anatomy and Physiology; completion of or concurrent enrollment in 501-101 Medical Terminology)

512-126 Surgical Technology Fundamentals 1 - *4 Crs.* Focuses on preparing the patient and operating room for surgery. Principles of sterile technique are emphasized as the student moves into the scrub role. Lab practice is included. (Prerequisites: Completion of or concurrent enrollment in 501-101 Medical Terminology; 512-125 Introduction to Surgical Technology; 806-179 Advanced Anatomy and Physiology)

512-127 Exploring Surgical Issues - *2 Crs.* Explores a variety of issues related to surgical technology. Emphasizes becoming a professional member of the surgical team. (Prerequisites: Completion of or concurrent enrollment in 512-125 Introduction to Surgical Technology; 512-126 Surgical Technology Fundamentals 1)

512-128 Surgical Technology Fundamentals 2 - *4 Crs.* Focuses on enhancing surgical technology skills while functioning as a sterile team member. Includes lab and/or clinical practice. (Prerequisites: 501-101 Medical Terminology; 512-125 Introduction to Surgical Technology; 512-126 Surgical Technology Fundamentals 1. Completion of or concurrent enrollment in 512-127 Exploring Surgical Issues; 512-129 Surgical Pharmacology; 806-197 Microbiology)

512-129 Surgical Pharmacology - *2 Crs.* Basic study of drug classifications, care and handling of drugs and solutions, application of mathematical principles in dosage calculations, terminology related to pharmacology, anesthesia, and drugs used in surgery. (Prerequisites: Completion of or concurrent enrollment in 512-125 Introduction to Surgical Technology, 512-126 Surgical Technology Fundamentals 1)

512-130 Surgical Skills Application - *2 Crs.* Provides a transition from the academic to the clinical setting. Students integrate the surgical technologist skills as they apply to various surgical procedures. (Prerequisites: 512-125 Introduction to Surgical Technology; 512-126 Surgical Technology Fundamentals 1. Completion of or concurrent enrollment in 512-128 Surgical Technology Fundamentals 2; 512-129 Surgical Pharmacology)

512-131 Surgical Interventions 1 - *4 Crs.* Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology, diagnostic interventions, health sciences and surgical techniques for a variety of procedures. (Prerequisites: 512-128 Surgical Technology Fundamentals 2; 512-130 Surgical Skills Application)

512-132 Surgical Technology Clinical 1 - *3 Crs.* Apply basic surgical theories, principles and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel. (Prerequisites: 512-128 Surgical Technology Fundamentals 2; 512-130 Surgical Skills Application. Completion of or concurrent enrollment in 512-131 Surgical Interventions 1. Health requirements; criminal background check; CPR)

512-133 Surgical Technology Clinical 2 - *3 Crs.* Further experience in a clinical setting allows students to continue to improve technical skills while accepting more responsibilities during surgical procedures. (Prerequisites: Completion of or concurrent enrollment in 512-131 Surgical Interventions 1; 512-132 Surgical Technology Clinical 1. Health requirements; criminal background check; CPR)

512-134 Surgical Interventions 2 - *3 Crs.* Expands knowledge of core and specialty surgical procedures by incorporating pathophysiology, diagnostic interventions, health sciences and surgical techniques. (Prerequisites: 512-131 Surgical Interventions 1; 512-133 Surgical Technology Clinical 2. Completion of or concurrent enrollment in 512-135 Surgical Technology Clinical 3; 512-136 Surgical Technology Clinical 4)

512-135 Surgical Technology Clinical 3 - *3 Crs.* Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. (Prerequisites: 512-133 Surgical Technology Clinical 2. Completion of or concurrent enrollment in 512-134 Surgical Interventions 2. Health requirements; criminal background check; CPR)

512-136 Surgical Technology Clinical 4 - *3 Crs.* During this clinical course, the student will function relatively independently. Serves as a transition from a student perspective to an employee by utilizing advanced skills for an entry-level Surgical Technologist. (Prerequisites: Completion of or concurrent enrollment in 512-134 Surgical Interventions 2; 512-135 Surgical Technology Clinical 3. Health requirements; criminal background check; CPR)

513-100 Phlebotomy Essentials - *4 Crs.* Prepares the student to collect blood specimens for laboratory analysis. Students apply medical terminology, basic anatomy and physiology, infection control, safety, communication and professionalism as they relate to the role of the phlebotomist in the medical laboratory. Specimen collection equipment and venipuncture used. This course is for Phlebotomy Technician Certificate students only. Students must be 18 years of age or older.

513-101 Phlebotomy Clinical - *2 Crs.* Provides students with experiences at a hospital, clinic and/or blood center locations in order to complete phlebotomy activities. Students complete venipunctures, perform administration of glucose testing, collect specimens, perform bleeding times, observe or perform arterial blood gas collections and adhere to safety regulations as established by the clinical site. (Prerequisites: 513-100 Phlebotomy Essentials or 513-111 Phlebotomy; criminal background check)

513-105 Phlebotomy for Allied Health - *2 Crs.* Focuses on the introduction to human specimen collection and processing. Provides opportunities for students to perform routine venipuncture, routine capillary puncture, and special collection procedures. Learning venous access skills from a phlebotomy perspective can facilitate enhanced technique in subsequent program courses. Performs administration of some CLIA waived testing, specimen collection, and bleeding times on human subjects. Designed for any healthcare student currently enrolled in or on waiting lists for Allied Health programs.

513-109 Blood Bank - *4 Crs.* Focuses on blood banking concepts and procedures including blood typing, compatibility testing, work ups for adverse reaction to transfusions, disease states and donor activities. (Prerequisites: 513-110 Basic Lab Skills; 513-115 Basic Immunology Concepts. Corequisites: 513-114 Urinalysis; 513-120 Basic Hematology; 513-121 Coagulation)

513-110 Basic Lab Skills - *1 Cr.* Explores health career options and the fundamental principles and procedures performed in the clinical laboratory. Students will utilize medical terminology and basic laboratory equipment. Students will follow required safety and infection control procedures and perform simple laboratory tests. (Prerequisites: 806-177 General Anatomy and Physiology. Completion of or concurrent enrollment in 890-125 Student Success. Corequisites: 513-111 Phlebotomy; 513-113 Quality Assurance and Laboratory Math; 513-115 Basic Immunology Concepts)

513-111 Phlebotomy - *2 Crs.* Provides opportunities for learners to perform routine venipuncture, routine capillary puncture and special collection procedures. (Prerequisite: 806-177 General Anatomy and Physiology. Corequisites: 513-110 Basic Lab Skills; 513-113 Quality Assurance and Laboratory Math; 513-115 Basic Immunology Concepts)

513-113 Quality Assurance and Laboratory Math - *1 Cr.* Focuses on performing the mathematical calculations routinely used in laboratory settings. Students will explore the concepts of quality control and quality assurance in the laboratory and will review regulatory compliance requirements, and certification and continuing education programs. (Prerequisite: 806-177 General Anatomy and Physiology. Corequisites: 513-110 Basic Lab Skills; 513-111 Phlebotomy; 513-115 Basic Immunology Concepts)

513-114 Urinalysis - *2 Crs.* Prepares students to perform a complete urinalysis which includes physical, chemical and microscopic analysis. Students will explore renal physiology and correlate urinalysis results with clinical conditions. (Prerequisite: 513-111 Phlebotomy. Corequisites: 513-109 Blood Bank; 513-120 Basic Hematology; 513-121 Coagulation)

513-115 Basic Immunology Concepts - *2 Crs.* Provides an overview of the immune system including laboratory testing methods for diagnosis of immune system disorders, viral and bacterial infections. (Corequisites: 513-110 Basic Lab Skills; 513-111 Phlebotomy; 513-113 Quality Assurance/Laboratory Math)

513-120 Basic Hematology - *3 Crs.* Covers the theory and principles of blood cell production and function, and introduces students to basic practices and procedures in the hematology laboratory. (Prerequisite: 513-111 Phlebotomy. Corequisites: 513-109 Blood Bank; 513-114 Urinalysis; 513-121 Coagulation)

513-121 Coagulation - *1 Cr.* Introduces the theory and principles of coagulation and explores mechanisms involved in coagulation disorders. Emphasis is placed upon laboratory techniques used to diagnose disease and monitor treatment. (Prerequisite: 513-110 Basic Lab Skills. Corequisites: 513-109 Blood Bank; 513-114 Urinalysis; 513-120 Basic Hematology)

513-130 Advanced Hematology - *2 Crs.* Explores mechanisms involved in the development of hematological disorders. Emphasis is placed upon laboratory techniques used to diagnose disorders and monitor treatment. (Prerequisite: 513-120 Basic Hematology. Corequisites: 513-131 Clinical Chemistry 1; 513-132 Clinical Chemistry 2; 513-133 Clinical Microbiology)

513-131 Clinical Chemistry 1 - *3 Crs.* Introduces Clinical Chemistry techniques and procedures for routine analysis using photometric, potentiometric and separation techniques. Topics in this course include pathophysiology and methodologies for carbohydrate, lipoids, proteins, renal function and blood gas analysis. (Prerequisites: 513-114 Urinalysis; 806-186 Introduction to Biochemistry. Corequisites: 513-130 Advanced Hematology; 513-132 Clinical Chemistry 2; 513-133 Clinical Microbiology)

513-132 Clinical Chemistry 2 - *2 Crs.* A continuation of Clinical Chemistry Diagnostics, this course includes techniques and procedures for analysis using sophisticated laboratory instrumentation. Topics include pathophysiology and methodologies for hepatic, bone, cardiac markers, tumor markers, endocrine function, fetal function, miscellaneous body fluids, and toxicology. (Prerequisite: 513-121 Coagulation. Corequisites: 513-130 Advanced Hematology; 513-131 Clinical Chemistry 1; 513-133 Clinical Microbiology)

513-133 Clinical Microbiology - *4 Crs.* Presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, will also be discussed. (Prerequisites: 806-177 General Anatomy and Physiology; 806-197 Microbiology. Corequisites: 513-130 Advanced Hematology; 513-131 Clinical Chemistry 1; 513-132 Clinical Chemistry 2)

513-140 Advanced Microbiology - *2 Crs.* Provides an overview of acid fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing and identification will be discussed. (Prerequisite: 513-133 Clinical Microbiology. Corequisites: 513-151 Clinical Experience 1; 513-152 Clinical Experience 2; 513-153 Clinical Experience Seminar; 513-170 Introduction to Molecular Diagnostics)

513-151 Clinical Experience 1 - *3 Crs.* Students will practice the principles and procedures of laboratory medicine as an entry-level Clinical Laboratory Technician in a clinical laboratory setting. Students will learn to operate state-of-the-art instruments and report results on Laboratory Information Systems. (Prerequisites: 513-133 Clinical Microbiology; health requirements; criminal background check required. Corequisites: 513-140 Advanced Microbiology; 513-152 Clinical Experience 2; 513-153 Clinical Experience Seminar; 513-170 Introduction to Molecular Diagnostics)

513-152 Clinical Experience 2 - *4 Crs.* Provides continuing practice for the principles and procedures of laboratory medicine as an entry-level Clinical Laboratory Technician in a clinical laboratory setting.

Students will learn to operate state-of-the-art instruments and report results on Laboratory Information Systems. (Prerequisites: 513-133 Clinical Microbiology; health requirements; criminal background check required. Corequisites: 513-140 Advanced Microbiology; 513-151 Clinical Experience 1; 513-153 Clinical Experience Seminar; 513-170 Introduction to Molecular Diagnostics)

513-153 Clinical Experience Seminar - *4 Crs.* Promotes student success for completing the CLT Exit Exam and the Board of Registry Exam. Each topic area of the clinical laboratory will be reviewed in an interactive manner during the semester. (Prerequisite: 513-133 Clinical Microbiology. Corequisites: 513-140 Advanced Microbiology; 513-151 Clinical Experience 1; 513-152 Clinical Experience 2; 513-170 Introduction to Molecular Diagnostics)

513-170 Introduction to Molecular Diagnostics - *2 Crs.* Introduces the principles and application of Molecular Diagnostics in the Clinical Laboratory. (Prerequisites: 513-121 Coagulation; 513-123 Advanced Blood Bank; 513-130 Advanced Hematology; 513-132 Clinical Chemistry 2; 513-133 Clinical Microbiology. Corequisites: 513-140 Advanced Microbiology; 513-151 Clinical Experience 1; 513-152 Clinical Experience 2; 513-153 Clinical Experience Seminar)

515-111 Respiratory Survey - *3 Crs.* Examines the role of the Respiratory Therapist within the healthcare community. Reviews the ethical, legal and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored. (Prerequisites: Completion of or concurrent enrollment in 890-125 Student Success; Acceptance in the Respiratory Therapist program. Corequisite: 515-171 Respiratory Therapeutics 1)

515-112 Respiratory Airway Management - *2 Crs.* Provides a comprehensive exploration of airway management concepts and skills. (Prerequisites 515-171 Respiratory Therapeutics 1; 806-177 General Anatomy and Physiology. Corequisites: 515-172 Respiratory Therapeutics 2; 515-173 Respiratory Pharmacology; 515-174 Respiratory and Cardiac Physiology)

515-113 Respiratory Life Support - *3 Crs.* Focuses on adult respiratory critical care including management of adult ventilator support. (Prerequisites: 515-112 Respiratory Airway Management; 515-172 Respiratory Therapeutics 2; 515-174 Respiratory and Cardiac Physiology; 515-175 Respiratory Clinical 1. Corequisites: 515-176 Respiratory Disease; 515-178 Respiratory Clinical 2; 515-179 Respiratory Clinical 3)

515-171 Respiratory Therapeutics 1 - *3 Crs.* Introduces the topics of medical gas administration and humidity and aerosol therapy. Students apply physics, math and patient assessment concepts to oxygen, aerosol and humidity therapy. (Prerequisite: 806-177 General Anatomy and Physiology. Corequisite: 515-111 Respiratory Survey)

515-172 Respiratory Therapeutics 2 - *3 Crs.* Introduces therapeutic procedures including arterial puncture, bronchial hygiene, lung expansion therapy and pulmonary rehabilitation. (Prerequisite: 515-171 Respiratory Therapeutics 1. Corequisites: 515-112 Respiratory Airway Management; 515-173 Respiratory Pharmacology; 515-174 Respiratory and Cardiac Physiology)

515-173 Respiratory Pharmacology - *3 Crs.* Examines basic pharmacology principles, drug dosage and calculations. Medications for inhalation include mucolytics, bronchodilators and anti-inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers and antimicrobials. (Prerequisites: 515-171 Respiratory Therapeutics 1; 806-177 General Anatomy and Physiology. Corequisites: 515-112 Respiratory Airway Management; 515-172 Respiratory Therapeutics 2; 515-174 Respiratory and Cardiac Physiology)

515-174 Respiratory and Cardiac Physiology - *3 Crs.* Provides the student with an in-depth knowledge of the structure and function of the respiratory and circulatory systems necessary to function as a competent Respiratory Therapist. (Prerequisites: 515-171 Respiratory Therapeutics 1; 806-177 General Anatomy and Physiology. Corequisites: 515-112 Respiratory Airway Management; 515-172 Respiratory Therapeutics 2; 515-173 Respiratory Pharmacology)

515-175 Respiratory Clinical 1 - *2 Crs.* Introduces respiratory therapy practice in the hospital setting. Includes the development of skills such as basic therapeutics, patient assessment, medical record review, safety practices, patient interaction and communication. (Prerequisites: 515-172 Respiratory Therapeutics 2. Completion of or concurrent enrollment in 501-101 Medical Terminology. Health requirements; criminal background check; current certification in CPR for the healthcare provider)

515-176 Respiratory Disease - *3 Crs.* Explores signs, symptoms, causes, progression and treatment of obstructive, restrictive and infectious diseases or disorders of the body that affect the respiratory system. (Prerequisites: 515-112 Respiratory Airway Management; 515-173 Respiratory Pharmacology; 515-174 Respiratory and Cardiac Physiology; 806-177 General Anatomy and Physiology. Corequisites: 515-113 Respiratory Life Support; 515-178 Respiratory Clinical 2; 515-179 Respiratory Clinical 3)

515-178 Respiratory Clinical 2 - *3 Crs.* Continues development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. (Prerequisite: 515-175 Respiratory Clinical 1. Corequisites: 515-113 Respiratory Life Support; 515-176 Respiratory Disease; 515-179 Respiratory Clinical 3. Health requirements; criminal background check; current certification in CPR for the healthcare provider)

515-179 Respiratory Clinical 3 - *3 Crs.* Continues development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. (Corequisites: 515-113 Respiratory Life Support; 515-176 Respiratory Disease 515-178 Respiratory Clinical 2. Health requirements; criminal background check; current certification in CPR for the healthcare provider)

515-180 Respiratory Neonatal and Pediatric Care - *2 Crs.* Provides a comprehensive orientation to the field of neonatal and pediatric respiratory care to include fetal development, birth, neonatal physiology, pulmonary dynamics, abnormal cardiopulmonary conditions, diseases, and noninvasive and invasive therapeutic interventions. (Prerequisite: 515-113 Respiratory Life Support. Corequisites: 515-181 Respiratory and Cardio Diagnostics; 515-182 Respiratory Clinical 4; 515-183 Respiratory Clinical 5)

515-181 Respiratory and Cardio Diagnostics - *3 Crs.* Examines advanced invasive and noninvasive diagnostic cardiopulmonary procedures including pulmonary function, hemodynamics and rescue medicine. (Prerequisites: 515-176 Respiratory Disease; 515-113 Respiratory Life Support. Corequisites: 515-180 Respiratory Neonatal and Pediatric Care; 515-182 Respiratory Clinical 4; 515-183 Respiratory Clinical 5)

515-182 Respiratory Clinical 4 - *3 Crs.* Continues development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. (Prerequisite: 515-179 Respiratory Clinical 3. Corequisites: 515-180 Respiratory Neonatal and Pediatric Care; 515-181 Respiratory and Cardio Diagnostics; 515-183 Respiratory Clinical 5. Health requirements; criminal background check; current certification in CPR for the healthcare provider)

515-183 Respiratory Clinical 5 - *3 Crs.* Focuses on the completion of respiratory therapy competencies and transition to employment. This course includes the complete program competency list. At the completion of this clinical, students must demonstrate competence in all of the required and required/simulated competencies. (Corequisites: 515-180 Respiratory Neonatal and Pediatric Care; 515-181 Respiratory and Cardio Diagnostics; 515-182 Respiratory Clinical 4. Health requirements; criminal background check; current certification in CPR for the healthcare provider)

522-101 IA: Teamwork in School Settings - *3 Crs.* Working together is paramount in helping all children learn. This introductory course will define the role and responsibilities of the instructional assistant. School and educational policies, ethical and moral responsibilities, group dynamics and Wisconsin tribal rights will also be explored. Emphasis placed on collaborating with a team comprised of diverse members.

522-102 IA: Techniques for Reading and Language Arts - *3 Crs.* Focuses on best practices in working with children in their development of reading and language arts as well as the roles of the teacher and the instructional assistant. Students gain an understanding of how to work with all children and reinforce instruction individually and in groups through questioning, listening and guiding, and scaffolding techniques. Current classroom materials plus enrichment and support activities will be examined and created. (Prerequisite: Completion of or concurrent enrollment in 890-125 Student Success)

522-103 IA: Introduction to Educational Practices - *3 Crs.* Includes the study of historical, philosophical and social foundations of education; issues and trends including diversity affecting our schools of today including elementary, middle level and secondary educational settings. An overview of the governmental basis of education; fundamentals of teaching methodologies, learning styles, questioning techniques and basic assessment practices will be addressed.

522-104 IA: Technology and Media Resources - *3 Crs.* Provides the opportunity for the student to develop the knowledge and skills in the area of media and computer resources as it relates to the instructional assistant. Students will gain experience creating and using Web tools including electronic portfolios. Requires the ability to use a computer, navigate the Web, and use common software applications.

522-106 IA: Child and Adolescent Development - *3 Crs.* Provides an overview of physical, motor, perceptual, cognitive, social/emotional, and growth and development birth through adolescence. Analyzes social, parental, cultural, brain, and economic influences on development.

522-107 IA: Overview of Special Education - *3 Crs.* Provides an overview of the special education law. Special education classifications and associated causes and characteristics will be explored as well as state and federal qualification criteria will be examined. Societal responses to students with disabilities as well as the impact of a student with special needs on family dynamics will also be covered in this course.

522-111 IA: Guiding and Managing Behavior - *3 Crs.* Recent trends in education support a shifting paradigm from reactive discipline to proactive, preventive classroom management. Provides the student with research-based concepts and strategies which can be used to prevent behavior problems from occurring in the classroom and respond to misbehavior. Practical application of strategies to organizing instruction, creating a positive classroom climate, building positive student relationships, implementing sound instructional methods, enhancing motivation, and responding effectively to inappropriate classroom behavior will be emphasized. Effective student communication and problem solving will be practiced in class with a focus on developing skills, which will assist in empowering children to take an active role in self-control and classroom management.

522-118 IA: Techniques for Mathematics - *3 Crs.* Addresses techniques for the Instructional Assistant in assisting the classroom teacher in group and individual tutoring activities in math. Current practice including manipulatives, problem solving and assessment will be covered within the framework of state and national standards.

522-120 IA: Techniques for Science - *3 Crs.* The course is an introduction to the content and processes of science. Strategies of teaching science will be studied and practiced and will prepare the student in assisting the classroom teacher in group and individual activities in science. Current science processes, strategies, procedures, assessment options and factors affecting science learning will be explored.

522-122 IA: Advanced Reading and Language Arts - *3 Crs.* Schools focus on integrating reading and writing across the curriculum. In this course, students will explore how to integrate reading and writing within the content areas. Students will also gain the knowledge and skills needed to support and encourage children as independent, strategic readers as well as techniques to support children through the writing process. Children's and young adult literature, poetry and personal writing will be explored and integrated throughout this course.

522-124 IA: Supporting Students With Disabilities - *3 Crs.* Focuses on understanding how service is delivered to students with special education needs in the classroom and through supportive and related services. A review of the law as it relates to special education, and the individual educational program, assessment and planning process will be provided. Based on the premise that all children can learn, students will examine factors which inhibit and enhance learning through a study of various instructional formats such as direct instruction, strategy instruction and task analysis. Students will engage in simulated classroom activities to explore and practice incorporating a wide array of alternative instructional techniques and programs, which can be used to support students with disabilities in all major curricular areas and to help children develop effective study skills. (Prerequisite: 522-107 IA: Overview of Special Education or dean consent)

522-129 IA: Practicum 1 - *3 Crs.* Introduces the student to a diverse classroom setting at an elementary, middle school and/or high school level. The student will observe children and practice techniques under the guidance of a DPI certified teacher. (Prerequisite: Criminal background check)

522-131 IA: Practicum 2 - *3 Crs.* Applies the skills learned in previous program courses in a school setting while under the supervision of a DPI certified teacher. Students support children with special education needs and programming. Job search skills will be addressed and a professional portfolio will be completed. (Prerequisites: Completion of or concurrent enrollment in 522-129 IA: Practicum 1; criminal background check)

522-132 IA: Positive Classroom Management Techniques - *3 Crs.* Examines the impact of issues such as divorce, alcoholism, child abuse, youth suicide, stress, violence and gangs on behavior in the classroom. Conflict resolution techniques and de-escalation strategies with an emphasis on prevention will also be examined.

522-150 Training of Instructional Assistants for Students Who Are Deafblind - *3 Crs.* This Deafblind Training is for Deafblind Technical Assistant Project participants only. Examines the key roles and responsibilities of the instructional assistant in the development of a child who is deafblind. Participants integrate strategies that support an overall understanding of deafblindness and the intervention process.

523-100 Wellness, Health and Healing - *3 Crs.* Presents a modern approach to wellness and healing. Covers wellness assessment tools, nutrition, fitness and exercise, stress management, disease, and methods of healing along with the development of a personal wellness plan.

523-110 Introduction to Chiropractic Philosophy - *2 Crs.* Focuses on the fundamental principles upon which the practice of chiropractic is based. Emphasis is placed on the body's ability to heal itself and maintain health throughout the life of the individual. Describes the role media plays in the healthcare choices.

523-113 Chiropractic Foundations - *3 Crs.* Explores the terminology and rationale fundamental to chiropractic care and practice. Includes subluxation structure and function, conditions secondary to subluxation and diagnostic terminology. Examines body systems associated with the chiropractic approach to healthcare. (Prerequisite: Completion of or concurrent enrollment in 523-110 Chiropractic Philosophy)

523-125 Chiropractic Nutrition - *2 Crs.* Relates chiropractic nutrition to the total health of the patient. Explores vitamins, minerals and herbs and how they can enhance chiropractic care. Includes study of foods and how diet, together with supplementation, creates optimal health in the chiropractic patient. (Prerequisites: 523-110 Introduction to Chiropractic Philosophy. Completion of or concurrent enrollment in 890-125 Student Success)

523-140 Chiropractic Office Procedures - *3 Crs.* Introduces the Chiropractic Technician student to front office procedures in the chiropractic health setting. Topics include telephone techniques, records management, operation of basic office equipment, basic office visit calculations and correspondence, and an introduction in promotions. Students need access to video/DVD recording equipment, audio recording equipment (cassette, CD or DVD), Microsoft Office and Microsoft Publisher. (Prerequisite: Completion of or concurrent enrollment in 523-110 Introduction to Chiropractic Philosophy)

523-145 Chiropractic Office Management Applications - *2 Crs.* Introduces students to the skills needed to manage support staff including interviewing, hiring, training, motivating and conflict resolution. Emphasizes federal and state employment laws, HIPAA standards, as well as OSHA and universal precautions safety laws. Skills necessary to assist with staff meetings are also developed. (Prerequisite: Completion of or concurrent enrollment in Chiropractic Office Procedures Internship 523-190)

523-151 Chiropractic Radiographic Dynamics - *3 Crs.* Prepares students in the skills of X-ray physics for applications in X-ray production, X-ray safety, X-ray processing and X-ray positioning. Applies the information and guidelines set forth by the American Chiropractic Registry of Radiologic Technologists. (Prerequisites: Completion of or concurrent enrollment in 523-110 Introduction to Chiropractic Philosophy; 523-113 Chiropractic Foundations)

523-155 Chiropractic Radiographic Positioning - *3 Crs.* Builds skill in positioning patients for various X-ray views. Emphasis is placed on spinal skeletal views, with overview of extremity positioning. Students work with actual X-ray equipment to build skills in taking usable X-rays and explore osseous anatomy as related to the radiographic goals of each of the views. (Prerequisites: 523-151 Chiropractic Radiographic Dynamics. Completion of or concurrent enrollment in 523-113 Chiropractic Foundations)

523-161 Chiropractic Examination - *3 Crs.* Explores the basic aspects of a chiropractic examination. Emphasizes skills in taking patient health history and vital signs. Students gain in giving and analyzing orthopedic and neurological tests. Students experience simulated clinical settings, small group discussions and role-playing to apply examination skills. (Prerequisite: Completion of or concurrent enrollment in 523-113 Chiropractic Foundations)

523-163 Chiropractic Radiographic and Conjunctive Therapy - *4 Crs.* Expands on the knowledge and practice of prerequisite coursework in conjunctive therapy and radiography in the chiropractic health setting. Increases student's understanding and knowledge of therapeutic modalities and radiography in the chiropractic health setting and presents the application of this information in a clinical setting. Coursework is completed in the classroom, online and at internship sites. (Prerequisites: 523-155 Chiropractic Radiographic Positioning; 523-170 Conjunctive Therapy. Completion of or concurrent enrollment in 501-101 Medical Terminology)

523-165 Chiropractic Insurance - *3 Crs.* Explores patient accounting practices and the calculation of patient billing accounts in a variety of insurance cover-

age situations (general, HMO, PPO, Medicare, Medicaid, secondary and supplemental insurance). (Prerequisite: 523-140 Chiropractic Office Procedures)

523-166 Chiropractic Insurance Applications Internship - *3 Crs.* Provides field experience in the chiropractic health setting for the student in the Chiropractic Technician program. Students participate in two separate clinical internship sites by interacting with staff and patients of the clinic and by performing entry-level tasks. (Prerequisites: 523-165 Chiropractic Insurance; 501-101 Medical Terminology; criminal background check)

523-170 Chiropractic Conjunctive Therapy - *3 Crs.* Explores therapeutic procedures most common to chiropractic practice including essential theory as well as indications and contraindications for their use. Modalities studied are: electrical muscle stimulation, ultrasound, thermotherapy, cryotherapy, laser therapy, and therapeutic exercise relating to stretching, strengthening and proprioception enhancement. (Prerequisite: Completion of or concurrent enrollment in 523-113 Chiropractic Foundations)

523-171 Chiropractic Patient Education - *3 Crs.* Explores communication topics and approaches to build public speaking skills necessary to be an effective chiropractic technician. Students develop skills in speaking techniques and investigating informational sources. All speech content focuses on chiropractic healthcare. (Prerequisite: 523-113 Chiropractic Foundations)

523-190 Chiropractic Office Procedures Internship - *2 Crs.* Provides students with on-the-job office procedure experience in a chiropractic office setting. Expands professional insights as students share internship experiences and practice skills such as scheduling patients, collecting payments, demonstrating phone answering skills and filing records. (Prerequisites: 523-140 Chiropractic Office Procedures; criminal background check. Completion of or concurrent enrollment in 523-165 Chiropractic Insurance)

526-149 Radiographic Anatomy and Procedures 1 - *5 Crs.* Prepares Radiography students to perform routine radiologic procedures on various parts of the body including the upper body, hip, pelvis and ankle. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result. (Prerequisites: 806-177 General Anatomy and Physiology; admission to the Radiography program)

526-150 Cross-Sectional Anatomy - *2 Crs.* Prepares students to learn cross-sectional anatomy on various parts of the body including the cranial bones, thorax, abdomen, pelvis, spine and extremities of the body. Students apply knowledge of human anatomy to correctly evaluate an image for appropriate anatomical demonstration and to identify structures and organs on a radiograph. Introduces students to types of imaging including CT and MRI.

526-158 Introduction to Radiography - *3 Crs.* Introduces students to the role of radiography in healthcare. Students apply medical terminology, legal and ethical considerations to patient care and pharmacology in the radiologic sciences. (Prerequisites: Completion of or concurrent enrollment in 890-125 Student Success. Admission to the Radiography program; health requirements; criminal background check)

526-159 Radiographic Imaging 1 - *3 Crs.* Introduces Radiography students to the process and components of analog imaging. Students determine the factors that affect image quality including contrast, density, detail, and distortion. (Prerequisites: Admission to the Radiography program. Completion of or concurrent enrollment in 804-106 Introduction to College Mathematics or 804-107 College Mathematics)

526-168 Radiography Clinical 1 - *2 Crs.* This beginning-level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a healthcare setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting. (Prerequisites: Admission to the Radiography program; health requirements; criminal background check)

526-170 Radiographic Imaging 2 - *3 Crs.* Explores film processing components as well as the principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Guidelines for selecting exposure factors and evaluating images within analog and digital systems and principles of digital system quality assurance and maintenance are presented. (Prerequisites: 526-158 Introduction to Radiography; 526-159 Radiographic Imaging 1; 526-149 Radiographic Anatomy and Procedures 1; 526-168 Radiography Clinical 1. Corequisites: 526-191 Radiographic Anatomy and Procedures 2; 526-192 Radiography Clinical 2)

526-174 ARRT Certification Seminar - *2 Crs.* Provides preparation for the national certification examination prepared by the American Registry of Radiologic Technologists. Emphasis is placed on the weak areas of the individual students. Simulated registry examinations are utilized. (Prerequisite: Admission to the Radiography program. Corequisite: 526-198 Radiography Clinical 6)

526-189 Radiographic Pathology - *1 Cr.* Prepares Radiography students to determine the basic radiographic manifestations of pathological conditions. Students classify trauma related to site, complications and prognosis and locate the radiographic appearance of pathologies. (Prerequisites: 526-194 Imaging Equipment Operation; 526-195 Radiographic Quality Analysis; 526-196 Modalities; 526-199 Radiography Clinical 4. Corequisites: 526-190 Radiography Clinical 5; 526-197 Radiation Protection and Biology)

526-190 Radiography Clinical 5 - *2 Crs.* This fifth-level clinical course prepares Radiography students to perform radiologic procedures on patients with some supervision. Students apply radiation protection and standard precautions in the production of radiographs in a healthcare setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies. (Prerequisites: 526-194 Imaging Equipment Operation; 526-195 Radiographic Quality Analysis; 526-196 Modalities; 526-199 Radiography Clinical 4; health requirements; criminal background check. Corequisites: 526-189 Radiographic Pathology; 526-197 Radiation Protection and Biology)

526-191 Radiographic Anatomy and Procedures 2 - *5 Crs.* Prepares Radiography students to perform routine radiologic procedures on various parts of the body including the skull and spine. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result. (Prerequisites: 526-149 Radiographic Anatomy and Procedures 1; 526-158 Introduction to Radiography; 526-159 Radiographic Imaging 1; 526-168 Radiography Clinical 1. Corequisites: 526-170 Radiographic Imaging 2; 526-192 Radiography Clinical 2)

526-192 Radiography Clinical 2 - *3 Crs.* This second-level clinical course prepares Radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a healthcare setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting. (Prerequisites: 526-149 Radiographic Anatomy and Procedures 1; 526-158 Introduction to Radiography; 526-159 Radiographic Imaging 1; 526-168 Radiography Clinical Practice 1; health requirements; criminal background check. Corequisites: 526-170 Radiographic Imaging 2; 526-191 Radiographic Anatomy and Procedures 2)

526-193 Radiography Clinical 3 - *3 Crs.* This third-level clinical course prepares Radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a healthcare setting while adhering to legal and ethical guidelines. An emphasis of the course is the demonstration of communication and critical thinking skills appropriate to the clinical setting. (Prerequisites: 526-170 Radiographic Imaging 2; 526-191 Radiographic Anatomy and Procedures 2; 526-192 Radiography Clinical 2; health requirements; criminal background check)

526-194 Imaging Equipment Operation - *3 Crs.* Introduces Radiography students to the principles and application of X-ray technology. Students analyze how X-rays are produced and determine the corrective actions necessary for common equipment malfunctions. (Prerequisite: 526-193 Radiography Clinical 3. Corequisites: 526-195 Radiographic Quality Analysis; 526-196 Modalities; 526-199 Radiography Clinical Practice 4)

526-195 Radiographic Quality Analysis - *2 Crs.* Prepares Radiography students to analyze radiographic images for quality. Students apply quality control tests to determine the cause of image problems including equipment malfunctions and procedural errors. (Prerequisite: 526-193 Radiography Clinical Practice 3. Corequisites: 526-194 Imaging Equipment Operation; 526-196 Modalities; 526-199 Radiography Clinical 4)

526-196 Modalities - *3 Crs.* Introduces Radiography students to imaging modalities with an emphasis in computed tomography and cross-sectional anatomy. (Prerequisite: 526-193 Radiography Clinical 3. Corequisites: 526-194 Imaging Equipment Operation; 526-195 Radiographic Quality Analysis; 526-199 Radiography Clinical Practice 4)

526-197 Radiation Protection and Biology - *3 Crs*. Prepares Radiography students to protect themselves and others from exposure to radioactivity. Students examine the characteristics of radiation and how radiation affects cell biology. Students apply standards and guidelines for radiation exposure. (Prerequisites: 526-194 Imaging Equipment Operation; 526-195 Radiographic Quality Analysis; 526-196 Modalities; 526-199 Radiography Clinical 4. Corequisites: 526-189 Radiographic Pathology; 526-190 Radiography Clinical 5)

526-198 Radiography Clinical 6 - *2 Crs.* This final clinical course requires students to integrate and apply all knowledge learned in previous courses to the production of high-quality images in the clinical setting. Students apply radiation protection and standard precautions in the production of images in a healthcare setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies. (Prerequisites: 526-189 Radiographic Pathology; 526-190 Radiography Clinical 5; 526-197 Radiation Protection and Biology; health requirements; criminal background check. Corequisite: 526-174 ARRT Certification Seminar)

526-199 Radiography Clinical 4 - *3 Crs.* This fourth-level clinical course prepares Radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a healthcare setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies. (Prerequisite: 526-193 Radiography Clinical 3. Corequisites: 526-194 Imaging Equipment Operation; 526-195 Radiographic Quality Analysis; 526-196 Modalities; health requirements; criminal background check)

527-100 Introduction to Wastewater Treatment - *3 Crs.* Provides an overview of the different processes used in wastewater treatment plants, as well as the collection system and sludge disposal procedures. Covers calculations used to determine plant loadings, detention times and percent removal efficiencies. Environmental regulations, preventive maintenance practices and basic safety precautions are covered.

527-103 Conventional Wastewater Treatment - *3 Crs.* Covers the basic biology, chemistry and operational controls of wastewater treatment processes: pre- and primary treatment of wastewater, activated sludge, trickling filters and RBCs (Rotating Biological Contactors). The structure and function of major equipment is explained. Various lab tests and the calculations associated with them are presented. (Prerequisite: Completion of or concurrent enrollment in 527-100 Introduction to Wastewater Treatment)

527-105 Advanced Wastewater Treatment Processes - *4 Crs.* Develops competence in management of wastewater treatment processes including disinfection, nutrient removal, tertiary filtration, and sludge handling. Uses the Internet to locate resources useful in managing wastewater treatment processes. (Prerequisite: Completion of or concurrent enrollment in 527-100 Introduction to Wastewater Treatment)

527-111 Water Chemistry - *4 Crs.* Explores basic chemical concepts and principles such as elements, compounds, states of matter and reactions that are applicable to evaluating and regulating water quality and applies them to water and wastewater treatment. Students also examine laboratory techniques, equipment, quality assurance and recordkeeping and reporting. (Prerequisites: Completion of or concurrent enrollment in 527-100 Introduction to Wastewater Treatment; 804-107 College Mathematics)

527-117 Zeolite Softening, Volatile Organic Compound and Iron Removal - *1 Cr.* Provides information and procedures necessary to treat water with excessive levels of calcium and magnesium. Addresses mineral source, treatment options, mechanisms of cation exchange and laboratory control. Designed for students already having experience at a treatment facility who are seeking WDNR certification.

527-118 Utility Management 1 - *1 Cr.* Provides utility and industry personnel with insight into the need for effective management, planning, organizing and staffing. Essential elements of effective oral and written communications, public relations programs and policy development will be a focus during this course. The course also will include discussion regarding financial management and maintaining financial strength and stability of a utility. Designed for students already having experience at a treatment facility or in a utility who are seeking continuing education.

527-119 Utility Management 2 - *1 Cr.* Provides management personnel with concepts that promote problem identification and solution through working together as a team, utilizing communication and motivation. The course will cover human relations, training and teaching skills, problem-solving skills and decision making. Technical subjects such as regulations, emergency planning, and health and safety programs also will be discussed. Designed for students already having experience at a treatment facility or in a utility who are seeking continuing education.

527-120 Hydraulics of Water and Wastewater - *3 Crs.* Provides information and procedures necessary to predict and manipulate the hydraulics of water transmission and collection. The primary work assignments involve the reading and use of hydraulic principles and then applying them in a real-life case analysis as a laboratory project. (Prerequisites: Completion of or concurrent enrollment in 527-100 Introduction to Wastewater Treatment; 804-107 College Mathematics)

527-125 Industrial Wastes - *3 Crs.* Focuses on the control of wastewater resulting from the processing of a variety of industrial materials. Methods of waste initiation; impact; minimization; and the treatment of waste process streams of metal, pulp and paper, and food and beverage industry operations are emphasized and analyzed. (Prerequisites: 527-100 Introduction to Wastewater Treatment; 527-103 Conventional Wastewater Treatment)

527-129 Utility Management – *3 Crs.* Provides students, utility and industry personnel with concepts and insight into management practices. Fundamentals of managing people in the workplace, budgeting and financial management, legal issues, communication, utility functions, and public relations will be explored. Examining an actual management team and utility will be a part of the students learning experience during the progression through the course competencies.

527-130 Groundwater Supply and Distribution - *3 Crs.* Provides environmental and treatment information necessary to operate a potable groundwater well system. Basic distribution system design and component use will also be detailed. Students examine a groundwater treatment plant and make operational assessments based on established industry criteria. (Prerequisite: Completion of or concurrent enrollment in 890-125 Student Success)

527-131 Surface Water Supply and Treatment - *3 Crs.* Determines operational procedures necessary to produce a safe and aesthetically appropriate water supply for human consumption. Students recommend designs for water treatment plants based on established industry criteria. Basic preventive maintenance and safety programs customized to students' designed facilities are also developed. (Prerequisite: Completion of or concurrent enrollment in 527-130 Groundwater Supply and Distribution)

527-132 Surface Water Certification - *1 Cr.* Focuses on operational procedures necessary to produce safe and aesthetically acceptable water for human consumption. Methods of handling human and natural environmental contamination of raw water is emphasized and analyzed. Specific treatment technologies include preliminary processes, coagulation, flocculation, sedimentation, filtration and chemical conditioning. Designed for students already having experience at a treatment facility who are seeking WDNR certification.

527-133 Groundwater Supply and Distribution Certification - *3 Crs.* Provides environmental and treatment information necessary to operate a potable groundwater well system. Basic distribution system design and component use also will be detailed. Students make operational assessments of a groundwater treatment plant based on established industry criteria. Designed for students already having experience at a treatment facility who are seeking DNR certification.

527-136 Equipment Maintenance and Instrumentation - *4 Crs.* Develops skills in the identification and application of tools, correcting facility and system mechanical problems, and understanding the complete concept of preventative and predictive maintenance. Students will research preventative and predictive maintenance systems. Also, skills will be developed using instrumentation for process control. Supervisory Control and Data Acquisition (SCADA), including control diagrams, designs and applications will be studied. (Prerequisites: Completion of or concurrent enrollment in 527-100 Introduction to Wastewater Treatment; 527-111 Water Chemistry)

527-137 Distribution Certification - *1 Cr.* Provides skills and knowledge to effectively operate a potable water distribution system. Students explore regulations, chemistry, system components, cross-connections, mathematics and laboratory work. This course also addresses the WDNR Classification D certification objective for those who desire information necessary to achieve this certification.

527-150 Advanced Water Treatment - *3 Crs.* Advanced processes and treatments studied during this course include iron, manganese and radium removal, zeolite softening, VOC removal, disinfection precursor and disinfection-by-product reduction, alternative disinfectants, demineralization, lime-softening, and new and emerging technologies. (Prerequisites: 527-130 Groundwater Supply and Distribution; 527-131 Surface Water Supply and Treatment)

527-171 Water Quality Internship - *3 Crs.* Provides an on-the-job learning experience. With direction of an employer and supervision of a Moraine Park instructor, the intern performs duties of a water/wastewater operator in a water/wastewater facility. The intern spends 216 hours working in a municipal, industrial or environmental setting. (Prerequisites: 527-100 Introduction to Wastewater Treatment; 527-103 Conventional Wastewater Treatment; 527-130 Groundwater Supply and Distribution)

530-120 Careers in Allied Health - *3 Crs.* Explores career possibilities within the Allied Health Care industry. Students examine the characteristics and

skills needed for a wide range of careers in healthcare. Students gain perspective about what it takes to be an effective team member working in healthcare. Focuses on nursing, health management, laboratory technology, health information technology, therapy, diagnostics, dental, surgical and other healthcare-related careers.

530-151 Medical Transcription Profession - *1 Cr.* Provides insight into a medical transcription career through examination of the skills and attributes needed by medical transcriptionists, career opportunities, AHDI membership, certification, continuing education options, legal and ethical responsibilities for medical transcriptionists, and the present as well as projected future impacts of technology in this field.

530-160 Healthcare Informatics – *4 Crs.* Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Students develop skills to assist in information systems design and implementation. (Prerequisites: 103-181 Microsoft Access; 106-138 Computer Essentials; 501-107 Introduction to Healthcare Computing; 530-176 Health Data Management)

530-161 Health Quality Management – *3 Crs.* Explores the programs and processes used to manage and improve healthcare quality. Addresses regulatory requirements as related to performance measurement, assessment, and improvement, required monitoring activities, risk management and patient safety, utilization management, and medical staff credentialing. Emphasizes the use of critical thinking and data analysis skills in the management and reporting of data. (Prerequisite: 530-177 Healthcare Stats and Research)

530-176 Health Data Management - *2 Crs.* Introduces the use and structure of healthcare data elements, data sets, data standards, their relationships to primary and secondary record systems and health information processing. (Prerequisite: Completion of or concurrent enrollment in 530-181 Introduction to the Health Record)

530-177 Health Care Stats and Research - *2 Crs.* Explores the management of medical data for statistical purposes. Focuses on descriptive statistics, including definitions, collection, calculation, compilation and display of numerical data. Vital statistics, registries and research are examined. (Prerequisites: 530-176 Health Data Management. Completion of or concurrent enrollment in 890-125 Student Success)

530-178 Health Care Law and Ethics - *2 Crs.* Examines regulations for the content, use, confidentiality, disclosure and retention of health information. An overview of the legal system and ethical issues are addressed. (Prerequisite: 530-176 Health Data Management)

530-181 Introduction to the Health Record - *1 Cr.* Prepares students to illustrate the flow of health information in various health care delivery systems and within the health information department. Prepares students to retrieve data from health records. Professional ethics, confidentiality and security of information are emphasized. (Prerequisite: Completion of or concurrent enrollment in 530-176 Health Data Management)

530-182 Human Diseases for the Health Professions - *3 Crs.* Focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasizes understanding the etiology (cause), signs and symptoms, diagnostic tests and treatment (including pharmacologic) of each disease. (Prerequisites: Completion of or concurrent enrollment in 501-101 Medical Terminology; 806-177 General Anatomy and Physiology or 806-189 Basic Anatomy)

530-184 CPT Coding - *3 Crs.* Prepares students to assign CPT codes, supported by medical documentation, with entry level proficiency. Students apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. (Prerequisites: Completion of or concurrent enrollment in 530-112 Disease Process and Treatment or 530-182 Human Diseases for the Health Professions; 530-181 Introduction to the Health Record)

530-185 Health Care Reimbursement - *2 Crs.* Prepares students to compare and contrast health care payers, illustrate the reimbursement cycle and to comply with regulations related to fraud and abuse. Students assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs) and Resource Utilization Groups (RUGs) with entry-level proficiency using computerized encoding and grouping software. (Prerequisites: 530-197 ICD Diagnosis Coding. Completion of or concurrent enrollment in 530-184 CPT Coding; 530-199 ICD Procedure Coding)

530-190 Health Care Information Systems - *3 Crs.* Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business and health information software applications. Students develop skills to assist in information systems design and implementation. (Prerequisites: 106-138 Computer Essentials; 501-107 Introduction to Computing in Health Care; 530-176 Health Data Management. Completion of or concurrent enrollment in 103-181 Microsoft Access)

530-193 Health Care Quality Management - *2 Crs.* Explores the programs and processes used to maintain quality in health care. Addresses regulatory requirements as related to quality improvement, utilization (case) management, risk management and medical staff credentialing through the use of quality improvement methodologies and tools. (Prerequisite: 530-177 Health Care Stats and Research)

530-194 HIM Organizational Resources - *2 Crs.* A study of the principles of management to include planning, organizing, human resource management, directing and controlling as related to the health information department. (Prerequisite: Completion of or concurrent enrollment in 530-161 Health Quality Management or 530-193 Health Care Quality Management)

530-195 Applied Coding - *2 Crs.* Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation with intermediate level of proficiency. Students will prepare appropriate physician queries in accordance with compliance guidelines and will assign codes to optimize appropriate reimbursement. (Prerequisite: Completion of or concurrent enrollment in 530-185 Health Care Reimbursement)

530-196 Professional Practice 1 - *3 Crs.* The first of a two-semester sequence of supervised clinical experiences in health care facilities. Provides application of previously acquired skills and knowledge with clinical experiences in the technical procedures of health record systems and discussion of clinical situations. (Prerequisites: 530-178 Health Care Law and Ethics. Completion of or concurrent enrollment in 530-177 Health Care Stats and Research; 530-183 ICD Coding or 530-197 ICD Diagnosis Coding; 530-184 CPT Coding; criminal background check; proof of immunizations)

530-197 ICD Diagnosis Coding - *3 Crs.* Prepares students to assign ICD diagnosis codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. (Prerequisites: Completion of or concurrent enrollment in 530-112 Disease Process and Treatment or 530-182 Human Diseases for the Health Professions; 530-181 Introduction to the Health Record)

530-198 Professional Practice 2 - *3 Crs.* The second of a two-semester sequence of supervised technical and managerial clinical experiences in health care facilities. Provides application of previously acquired skills and knowledge, discussion of clinical situations, and preparation for the certification examination and pregraduation activities. (Prerequisites: 530-196 Professional Practice 1. Completion of or concurrent enrollment in 530-160 Healthcare Informatics or 530-190 Health Care Information Systems; 530-194 HIM Organizational Resources; 530-195 Applied Coding. Criminal background check update; proof of immunizations; should be taken in semester of graduation)

530-199 ICD Procedure Coding - *2 Crs.* Prepares students to assign ICD procedure codes supported by medical documentation with entry-level proficiency. Students apply instructional notations, conventions, rules and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. (Prerequisites: Completion of or concurrent enrollment in 530-112 Disease Process and Treatment or 530-182 Human Diseases for the Health Professions; 530-181 Introduction to the Health Record)

530-313 Medical Transcription Basics - *2 Crs.* Builds a foundation for transcribing medical reports and correspondence. Emphasizes English grammar and punctuation usage, style and report format as presented in The AHDI Book of Style for Medical Transcription. Provides practice in the use of medical transcription software and reference materials. (Prerequisites: Keyboarding pretest. Completion of or concurrent enrollment in 501-101 Medical Terminology; 530-151 Medical Transcription Profession; 806-177 General Anatomy and Physiology or 806-189 Basic Anatomy)

530-324 Beginning Medical Transcription - *3 Crs.* Applies the principles and skills from Medical Transcription Basics to transcription of dictated reports in dermatology, neurology, cardiology, pulmonary medicine, otorhinolaryngology, ophthalmology, orthopedics, endocrinology, urology, obstetrics and gynecology, and gastroenterology. Provides experience transcribing chart notes (paragraph and SOAP formats), correspondence, ER reports, history and physical reports, consultations and discharge summaries. Emphasis is on accuracy of transcribed reports. (Prerequisites: 530-313 Medical Transcription Basics. Completion of or concurrent enrollment in 890-125 Student Success)

530-325 Advanced Medical Transcription - *4 Crs.* Provides in-depth experience transcribing history and physical reports, discharge summaries, operative reports, and procedures in the specialty fields of cardiology, gastroenterology and orthopedics. Provides experience transcribing reports in the specialties of radiology and pathology. Continues development of accuracy.

Speed is enhanced utilizing software to create and apply medical transcription shortcuts. (Prerequisites: 530-324 Beginning Medical Transcription. Concurrent enrollment in 530-182 Human Diseases for the Health Professions or completion of 530-112 Disease Process and Treatment)

530-399 Medical Transcription Simulated Internship - *3 Crs.* Provides experience transcribing, editing, and reviewing medical documents through virtual internship in a simulated remote medical transcription environment. Prepares for entry-level employment by supporting transition from student to professional. Prepares student to obtain RMT credential and facilitates professional networking through student membership in the Association for Healthcare Documentation Integrity (AHDI). (Prerequisites: 530-324 Beginning Medical Transcription. Completion of or concurrent enrollment in 530-325 Advanced Medical Transcription; criminal background check. Students must be eligible for graduation from the MT program the semester they enroll in Simulated Internship.)

531-301 Emergency Medical Technician - *5 Crs.* Students gain skills to assess a scene for hazards, assess both sick and injured patients, apply needed care, and transport patients to appropriate facilities. Includes training in WMD Hazardous Material, First Responder, Terrorism and Weapons of Mass Destruction. (Prerequisites: Students will need current CPR for Health Care Provider certification (531-450 BLS for Health Care Provider) or equivalent; caregiver background check; proof of immunizations for ride-alongs. Students must be 18 years of age at the conclusion of the course to be eligible for licensure.)

531-304 Advanced EMT - *4 Crs.* Students gain skills in IV access and fluid therapy as well as administration of aspirin, 50% dextrose, narcan, atrovent, epinephrine and nitroglycerine. Meets state EMT - Intermediate Technician licensure requirements. A State of Wisconsin EMT - Basic License is required to enroll in this course. (Prerequisite: 531-301 Emergency Medical Technician)

531-465 Heartsaver First Aid/CPR - .05 - *.20 Cr.* Provides training for adults, children and infants in CPR and FBAO skills and skills in splinting, wound care and bandaging. This course meets the requirements for apprenticeship.

531-911 EMS Fundamentals - *2 Crs.* Provides paramedic students with comprehensive knowledge of EMS systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. Students obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introduces students to comprehensive anatomical and medical terminology and abbreviations, fostering the development of effective written and oral communications with colleagues and other healthcare professionals. (Prerequisites: WI DHS EMS-licensed EMT; Paramedic Technician AAS program admission. Concurrent enrollment in 531-912 Paramedic Medical Principles; 531-913 Patient Assessment Principles; 531-914 Prehospital Pharmacology; 531-915 Paramedic Respiratory Management; 531-916 Paramedic Cardiology; 531-917 Paramedic Clinical Field 1. Completion of or concurrent enrollment in 890-125 Student Success)

531-912 Medical Principles – *4 Crs.* Addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing paramedic students to the topics of shock, immunology, and bleeding. (Prerequisites: Concurrent enrollment in 531-911 EMS Fundamentals; 531-913 Patient Assessment Principles; 531-914 Prehospital Pharmacology; 531-915 Paramedic Respiratory Management; 531-916 Paramedic Cardiology; 531-917 Paramedic Clinical Field 1)

531-913 Patient Assessment Principles – *3 Crs.* Teaches paramedic students to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, the students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients. (Prerequisites: Concurrent enrollment in 531-911 EMS Fundamentals; 531-912 Paramedic Medical Principles; 531-914 Prehospital Pharmacology; 531-915 Paramedic Respiratory Management; 531-916 Paramedic Cardiology; 531-917 Paramedic Clinical Field 1)

531-914 Prehospital Pharmacology – *3 Crs.* Provides paramedic students with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient. (Prerequisites: Concurrent enrollment in 531-911 EMS Fundamentals; 531-912 Paramedic Medical Principles; 531-913 Patient Assessment Principles; 531-915 Paramedic Respiratory Management; 531-916 Paramedic Cardiology; 531-917 Paramedic Clinical Field 1)

531-915 Paramedic Respiratory Management – *2 Crs.* Teaches paramedic students to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint. (Prerequisites: Concurrent enrollment in 531-911 EMS Fundamentals; 531-912 Paramedic Medical Principles; 531-913 Patient Assessment Principles; 531-914 Prehospital Pharmacology; 531-916 Paramedic Cardiology; 531-917 Paramedic Clinical Field 1)

531-916 Paramedic Cardiology – *4 Crs.* Teaches paramedic students to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint. (Prerequisites: Concurrent enrollment in 531-911 EMS Fundamentals; 531-912 Paramedic Medical Principles; 531-913 Patient Assessment Principles; 531-914 Prehospital Pharmacology; 531-915 Paramedic Respiratory Management; 531-917 Paramedic Clinical Field 1)

531-917 Paramedic Clinical Field 1 – *3 Crs.* Provides students with the opportunity to enhance learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. (Prerequisites: Concurrent enrollment in 531-911 EMS Fundamentals; 531-912 Paramedic Medical Principles; 531-913 Patient Assessment Principles; 531-914 Prehospital Pharmacology; 531-915 Paramedic Respiratory Management; 531-916 Paramedic Cardiology)

531-918 Advanced Resuscitation – *1 Cr.* By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares paramedic students in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible. (Prerequisites: 531-916 Paramedic Cardiology; 531-917 Paramedic Clinical Field 1. Concurrent enrollment in 531-919 Paramedic Medical Emergencies; 531-920 Paramedic Trauma; 531-921 Special Patient Populations; 531-922 EMS Operations; 531-923 Paramedic Capstone; 531-924 Paramedic Clinical Field 2. Completion of or concurrent enrollment in 103-159 Computer Literacy – Microsoft Office; 890-130 Career Development)

531-919 Paramedic Medical Emergencies – *4 Crs.* Teaches paramedic students to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint. (Prerequisites: Concurrent enrollment in 531-918 Paramedic Medical Emergencies; 531-920 Paramedic Trauma; 531-921 Special Patient Populations; 531-922 EMS Operations; 531-923 Paramedic Capstone; 531-924 Paramedic Clinical Field 2)

531-920 Paramedic Trauma – *3 Crs.* Teaches paramedic students to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient. (Prerequisites: Concurrent enrollment in 531-918 Paramedic Medical Emergencies; 531-919 Paramedic Medical Emergencies; 531-921 Special Patient Populations; 531-922 EMS Operations; 531-923 Paramedic Capstone; 531-924 Paramedic Clinical Field 2)

531-921 Special Patient Populations – *3 Crs.* Teaches paramedic students to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma are also included within this course. (Prerequisites: Concurrent enrollment in 531-918 Paramedic Medical Emergencies; 531-919 Paramedic Medical Emergencies; 531-920 Paramedic Trauma; 531-922 EMS Operations; 531-923 Paramedic Capstone; 531-924 Paramedic Clinical Field 2)

531-922 EMS Operations – *1 Cr.* Provides paramedic students with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety. (Prerequisites: Concurrent enrollment in 531-918 Paramedic Medical Emergencies; 531-919 Paramedic Medical Emergencies; 531-920 Paramedic Trauma; 531-921 Special Patient Populations; 531-923 Paramedic Capstone; 531-924 Paramedic Clinical Field 2)

531-923 Paramedic Capstone – *1 Cr.* Provides students with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario based practice and evaluations prior to taking the National Registry written and practical examinations. Technical skills attainment (TSA) for each student will be compiled and/or documented with in this course as required by DHS-approved paramedic curriculum. (Prerequisites: Concurrent enrollment in 531-918 Paramedic Medical Emergencies; 531-919 Paramedic Medical Emergencies; 531-920 Paramedic Trauma; 531-921 Special Patient Populations; 531-922 EMS Operations; 531-924 Paramedic Clinical Field 2)

531-924 Paramedic Clinical Field 2 – *4 Crs.* Provides students with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Students may have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by WI DHS EMS. (Prerequisites: Concurrent enrollment in 531-918 Paramedic Medical Emergencies; 531-919 Paramedic Medical Emergencies; 531-920 Paramedic Trauma; 531-921 Special Patient Populations; 531-922 EMS Operations; 531-923 Paramedic Capstone)

533-126 Beginning American Sign Language - *3 Crs.* Introduces the fundamentals of American Sign Language (ASL) used by the deaf community, including basic vocabulary, syntax, fingerspelling and grammatical nonmanual signals. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases appreciation of the deaf community.

533-127 Intermediate American Sign Language - *3 Crs.* Emphasizes fundamentals of American Sign Language (ASL) used by the deaf community. Vocabulary and sentence structures needed to communicate in common life situations are developed. Explores cultural knowledge and increases appreciation of the deaf community. (Prerequisite: 533-126 Beginning American Sign Language)

536-110 Pharmaceutical Calculations (Lakeshore Technical College Course) - *3 Crs.* Prepares the student to enlarge and reduce formulas and solve proportions, dilutions, allegations, and other calculations pertinent to the preparation of pharmaceuticals using metric, apothecary, avoirdupois, and household measuring systems. (Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-112 Pharmacy Business Applications (Lakeshore Technical College Course) - *3 Crs.* Prepares the student to utilize pharmaceutical business terminology, procedures, customer service, record keeping, purchasing procedures, inventory control systems, pricing, merchandising, reference materials, ethics, roles, responsibilities, and relationships with patients and coworkers. (Corequisite: 10536138 Pharmacy Community Clinical; CONDITION: 315361 Pharmacy Technician Admissions Requirements Met)

536-115 Pharmacy Law (Lakeshore Technical College Course) - *2 Crs.* Introduces the student to federal and state regulations that apply to pharmacy practice. (Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-120 Fundamentals of Reading Prescriptions (Lakeshore Technical College Course) - *1 Cr.* Prepares the student to work in a community or hospital pharmacy by exploring the role of a pharmacy technician within the healthcare team; examining each step in the prescription filling process; and identifying the top 200 drugs by brand and generic name and therapeutic class. (Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-122 Pharmacology (Lakeshore Technical College Course) - *3 Crs.* Enhances the student's ability to act and react appropriately in the pharmacy by learning how drugs work through examination of the anatomy, physiology, pathophysiology, and drug therapy for each of the major systems. (Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-124 Pharmacy Drug Distribution Systems (Lakeshore Technical College Course) - *1 Cr.* Is an introductory study of the basic drug distribution systems used in community and institutional pharmacy, including automation technology, pharmacist and pharmacy technician roles, and dispensing considerations. (Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-126 Pharmacy Parenteral Admixtures (Lakeshore Technical College Course) - *3 Cr.* Provides the student with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients. (Prerequisites: 10536110 Pharmaceutical Calculations. CONDITION: 315361 Pharmacy Technician Admission Requirements Met)

536-134 Pharmacy Benefits - Managing (Lakeshore Technical College Course) - *3 Cr.* Introduces the student to third party reimbursement terminology, costs, pricing schedules, formularies, cognitive services billing, and medical coverage provided by government agencies. (Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-138 Pharmacy Community Clinical (Lakeshore Technical College Course) - *2 Cr.* Provides hands-on experience in a community pharmacy for 108 hours during quarter two. Areas of instruction include interpretation of prescriptions, entering prescriptions on computer, patient profiles, correctly filling and labeling prescriptions, billing patient and third parties, customer service, over-the-counter medications, purchasing, checking in deliveries, and inventory control, compounding and patient confidentiality. (Corequisites: 10536120 Fund of Reading Prescriptions; 10536112 Pharmacy Business Applications; 10536110 Pharmaceutical Calculations; 10536134 Pharmacy Benefits-Managing. Condition: 315361 Pharmacy Technician)

536-140 Pharmacy Hospital Clinical (Lakeshore Technical College Course) - *3 Crs.* Provides the student with the skills to prepare parenteral admixtures, fill medication carts and unit-dose drawers, control inventory, package medications, and maintain patient records in the hospital setting. (Prerequisites: 10536138 Pharmacy Community Clinical; 10536110 Pharmacy Calculations. Corequisites: 10536141 Hospital Clinical Lab; 10536126 Pharmacy Parenteral Admixtures. Condition: 315361 Pharmacy Technician Admission Requirements Met)

536-141 Hospital Clinical Lab (Lakeshore Technical College Course) - *2 Crs.* Provides the student with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients and provides experience with institutional drug delivery systems including the unit-dose system. (Prerequisite: 10536138 Pharmacy Community Clinical. Corequisites: 10536140 Pharmacy Hospital Clinical; 10536126 Pharmacy Parenteral Admixtures. Condition: 315361 Pharmacy Technician Admissions Requirements Met)

536-142 Pharmacy Community Clinical-Advanced (Lakeshore Technical College Course) - *2 Crs.* Expands the students ability to support community pharmacy services in areas of diabetes services, immunization programs, durable medical equipment, automated dispensing systems, patient education, and over-the-counter products, in addition to traditional community services. This course involves a hands-on component in a community pharmacy and a research component. (Prerequisites: 10536138 Pharmacy Community Clinical. Condition: 315361 Pharmacy Technician Admission Requirements Met)

543-101 Nursing Fundamentals - *2 Crs.* Focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse client populations. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of clients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument and fluid/electrolyte balance. (Prerequisite: 806-179 Advanced Anatomy and Physiology)

543-102 Nursing Skills - *3 Crs.* Focuses on development of clinical skills and physical assessment across the lifespan. Includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enternal tubes, basic medication administration, glucose testing, enemas, ostomy care and catheterization. Also includes techniques related to obtaining a health history and basic physical assessment skills using a body-systems approach. (Prerequisite: 806-179 Advanced Anatomy and Physiology)

543-103 Nursing Pharmacology - *2 Crs.* Introduces the principles of pharmacology, including drug classifications and their effects on the body, and emphasizes the use of the nursing process when administering medications. (Prerequisite: 806-179 Advanced Anatomy and Physiology)

Course Descriptions

543-104 Nursing: Introduction to Clinical Practice - *2 Crs.* Emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Focuses on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation and medication administration. (Prerequisites: Completion of or concurrent enrollment in 543-101 Nursing Fundamentals; 543-102 Nursing Skills; 543-103 Nursing Pharmacology. Health requirements; criminal background check; CPR)

543-105 Nursing Health Alterations - *3 Crs.* Elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. Students apply theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. Students also study conditions affecting different body systems and apply therapeutic nursing interventions. Concepts of leadership, team building and scope of practice are also introduced. (Prerequisite: 543-104 Nursing: Introduction to Clinical Practice)

543-106 Nursing Health Promotion - *3 Crs.* Focuses on topics related to health promotion for individuals and families throughout the lifespan. Covers the developing family, which includes reproductive issues, pregnancy, labor and delivery, postpartum, the newborn, and the child. Explores the spectrum of healthy families to discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. Emphasizes teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles and stages of development. (Prerequisites: 543-104 Nursing: Introduction to Clinical Practice; 809-188 Developmental Psychology)

543-107 Nursing: Clinical Care Across the Lifespan - *2 Crs.* Applies nursing concepts and therapeutic interventions to clients across the lifespan. Provides an introduction to concepts of teaching and learning. Emphasizes extending care to include the family. (Prerequisites: Completion of or concurrent enrollment in 543-105 Nursing Health Alterations. Health requirements; criminal background check; CPR)

543-108 Nursing: Introduction to Clinical Care Management - *2 Crs.* This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management and team building. (Prerequisites: Completion of or concurrent enrollment in 543-106 Nursing Health Promotion. Health requirements; criminal background check; CPR)

543-109 Nursing: Complex Health Alterations 1 - *3 Crs.* Prepares students to expand knowledge from previous courses in caring for clients across the lifespan with alterations in cardiovascular, respiratory, endocrine and hematologic systems, as well as clients with fluid/electrolyte and acid-base imbalance and alterations in comfort. (Prerequisites: 543-105 Nursing Health Alterations; 543-106 Nursing Health Promotion; 543-107 Nursing: Clinical Care Across the Lifespan; 543-108 Nursing: Introduction to Clinical Care Management. Completion of or concurrent enrollment in 806-197 Microbiology. LPN to ADN Progression students are required to have completed 543-117 Nursing Bridge to ADN)

543-110 Nursing: Mental Health and Community Concepts - *2 Crs.* Focuses on the delivery of community and mental healthcare. Specific health needs of individuals, families and groups are addressed across the lifespan. Attention is given to diverse and at-risk populations. Mental health concepts concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources are examined in relation to specific types of support offered to racial, ethnic and economically diverse individuals and groups. (Prerequisites: 543-105 Nursing Health Alterations; 543-106 Nursing Health Promotion; 543-107 Nursing: Clinical Care Across the Lifespan; 543-108 Nursing: Introduction to Clinical Care Management. Completion of or concurrent enrollment in 806-197 Microbiology. LPN to ADN Progression students are required to have completed 543-117 Nursing Bridge to ADN)

543-111 Nursing: Intermediate Clinical Practice - *3 Crs.* Develops the RN role when working with clients with complex healthcare needs. Focuses on developing skills needed for managing multiple clients across the lifespan and priorities. Using the nursing process, students gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. (Prerequisites: 543-112 Nursing Advanced Skills. Completion of or concurrent enrollment in 543-109 Nursing: Complex Health Alterations 1; 543-110 Nursing: Mental Health and Community Concepts. Health requirements; criminal background check; CPR)

543-112 Nursing Advanced Skills - *1 Cr.* Focuses on the development of advanced clinical skills. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation and nasogastric/feeding tube insertion. (Prerequisites: 543-105 Nursing Health Alterations; 543-106 Nursing Health Promotion; 543-107 Nursing: Clinical Care Across the Lifespan; 543-108 Nursing: Introduction to Clinical Care Management. LPN to ADN Progression students are required to have completed 543-117 Nursing Bridge to ADN)

543-113 Nursing: Complex Health Alterations 2 - *3 Crs.* Prepares students to expand knowledge and skills from previous courses in caring for clients across the lifespan with alterations in the immune, neurosensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary and reproductive systems. Focuses on management of care for clients with high-risk perinatal conditions, high-risk newborns and the ill child. Synthesis and application of previously learned concepts will be evident in the management of clients with critical/life-threatening situations. (Prerequisite: 543-111 Nursing: Intermediate Clinical Practice)

543-114 Nursing: Management and Professional Concepts - *2 Crs.* Covers nursing management and professional issues related to the role of the RN. Emphasis is placed on preparing for the RN practice. (Prerequisite: 543-111 Nursing: Intermediate Clinical Practice)

543-115 Nursing: Advanced Clinical Practice - *3 Crs.* Provides an opportunity for students to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations across the lifespan. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized. (Prerequisites: Completion of or concurrent enrollment in 543-113 Nursing: Complex Health Alterations 2. Health requirements; criminal background check; CPR)

543-116 Nursing Clinical Transition - *2 Crs.* Prepares students to assume the role of graduate nurse. Promotes clinical decision making, delegation and collaboration to achieve client and organizational outcomes. Continued professional development is fostered. (Prerequisites: 543-115 Nursing: Advanced Clinical Practice. Completion of or concurrent enrollment in 543-114 Nursing: Management and Professional Concepts. Health requirements; criminal background check; CPR)

543-117 Nursing Bridge to ADN - *2 Crs.* Emphasizes the transition from year one of the nursing program to year two of the ADN program. Focuses on competencies that enhance student success in year two of the ADN program. Students must have Wisconsin Licensure as a Practical Nurse and acceptance into the LPN to ADN Progression program OR current enrollment in second semester of the ADN program with intent to continue into the second year. (Prerequisites: Completion of or concurrent enrollment in 543-107 Nursing: Clinical Care Across the Lifespan; 543-108 Nursing: Introduction to Clinical Care Management. Dean consent; acceptance in LPN to ADN Progression program)

543-120 Pathophysiology for Nurses - *3 Crs.* Examines basic concepts of alterations in physiology of the human body. These alterations are the basis for disease states in humans. Serves as a foundation to increase knowledge of diseases that will be further studied in the core nursing courses. Covers the cell, injury and inflammation, immunity, fluid and electrolyte balance, acid-base balance, abnormal cell growth, and other body system alterations. (Prerequisite: 543-104 Nursing Introduction to Clinical Practice)

543-121 Jumpstart Critical Thinking - *1 Cr.* Promotes critical thinking skills to improve your nursing practice. Examines the nursing process, focused health assessments, simulation experiences and test-taking strategies. (Prerequisite: 543-102 Nursing Skills)

543-122 Integrated Nursing Concepts - *2 Crs.* Focuses on basic nursing concepts that prepare for professional nursing examinations including the Pre-Entrance RN Examination. Verbal skills, reading comprehension, mathematics and science will be of focus for review. Assists with developing test-taking strategies and a study plan for nursing examinations. The course also explores the nursing profession as a career.

543-125 Survival Skills for Nursing Students - *1 Cr.* Assists nursing students in meeting the challenges of being a nursing student. Students gain practical tips and information to help in coping with and succeeding in the nursing program.

543-160 Nursing Assistant Instructor Training - *1 Cr.* Examines effective teaching strategies to use for the adult student. Emphasizes state and college requirements for teaching the nursing assistant course. Discusses different types of lesson plans and learning activities that can be used to reach students with a variety of learning styles. Students must have a State of Wisconsin Registered Nurse License and a minimum of two years' work experience as an RN, with a minimum of one year experience in long-term care or home healthcare working with elderly clients.

543-191 Interpreting Diagnostic Studies 1 - *1 Cr.* Focuses on the interpretation of diagnostic studies used for disorders of the genitourinary, gastrointestinal, reproductive, cardiac, respiratory, endocrine, and musculoskeletal systems, and the immunology and hematology of the human body with emphasis on the application of the nursing process across the lifespan. (Prerequisite: 543-105 Nursing Health Alterations or RN, GN or LPN status)

543-192 Interpreting Diagnostic Studies 2 - *1 Cr.* Focuses on the interpretation of diagnostic studies of fluids and electrolytes, the hematologic, endocrine, cardiovascular, and respiratory systems of the human body with emphasis on the application of the nursing process across the lifespan. (Prerequisite: Completion of or concurrent enrollment in 543-109 Nursing: Complex Health Alterations 1 or RN, GN or LPN status)

543-193 Interpreting Diagnostic Studies 3 - *1 Cr.* Focuses on interpretation of diagnostic studies of the reproductive, neurological, gastrointestinal, genitourinary and musculoskeletal systems, and infectious disease and cancer with emphasis on the application of the nursing process across the lifespan. (Prerequisite: Completion of or concurrent enrollment in 543-113 Nursing: Complex Health Alterations 2 or RN, GN or LPN status)

543-194 Nurse Externship - *2 Crs.* Provides the student with on-the-job nursing experiences in various work settings. Works under the supervision of a preceptor in a chosen healthcare facility. Enhances insight into the nursing profession and reinforces nursing skills. Allows students to analyze different policies, procedures, nursing styles and facility standards. (Prerequisites: LPN externs must have completed 543-104 Nursing: Introduction to Clinical Practice. ADN students must have completed 543-107 Nursing: Clinical Care Across the Lifespan; 543-108 Nursing: Introduction to Clinical Care Management or dean consent)

543-300 Nursing Assistant - *3 Crs.* Prepares men and women for work in the healthcare field as nursing assistants. Student nursing assistants learn basic nursing and communication skills. Upon completion of the course, students are eligible to take the exam for registration on the Wisconsin Nurse Aide Registry. This course is a prerequisite for entrance into the Nursing - Associate Degree With a Practical Nursing Exit Point program. (Prerequisites: Students must be 16 years old; completed Health Information form; criminal background check)

543-302 Nursing Assistant Advanced - *2 Crs.* Intermediate-level nursing assistant skills prepare graduates for employment in acute care settings as a nursing assistant. Students should have one year of employment as a nursing assistant. (Prerequisites: 543-333 Basic Nursing Assistant or 543-300 Nursing Assistant. Active on the Wisconsin Nurse Aide Registry)

543-334 Acute Care - Nursing Assistant - *2 Crs.* Intermediate-level nursing assistant skills prepare graduates for employment in acute care settings as a nursing assistant. Students should have one year of employment as a nursing assistant. (Prerequisites: 543-333 Basic Nursing Assistant or 543-300 Nursing Assistant. Active on the Wisconsin Nurse Aide Registry)

550-106 Physiological Complications and Psychopharmacology - *3 Crs.* Examines the physiological, neurophysiological and biological effects of alcohol and other drugs. Examines the theories regarding the etiology of substance use disorders. Examines the context of drugs and abuse in American culture. You will list the classes of drugs, distinguish the classification of drugs, identify signs and symptoms of abuse, and examine the diagnostic criteria for substance use disorders. Highly recommend 801-195 Written Communication prior to this course.

550-112 Client Rights, Confidentiality and Ethics - *3 Crs.* Gives students the basis for formulating ethical decisions within the broad limits of professional codes and diverse theoretical positions in order to further the best interests of their clients. Introduces students to the current statutes, regulations and judicial decisions that govern the professional practice of substance use disorder counseling. Highly recommend 801-195 Written Communication prior to this course.

550-121 Introduction to Substance Abuse Treatment - *4 Crs.* Explores the core components of substance use disorder treatment including the history and development of treatment, treatment modalities, the continuum of care, treatment outcomes and elements of effective treatment. Students apply the theory, skills, knowledge and attitudes associated with the competencies in the practice dimensions and the 12 core functions of substance use disorder counseling. Highly recommend 801-195 Written Communication prior to this course. (Prerequisites: 550-112 Client Rights, Confidentiality and Ethics; 550-125 Counseling Skills and Practice)

550-125 Counseling Skills and Practice - *3 Crs.* Provides an introduction to basic counseling skills and allows students to practice basic counseling skills such as attending, accurate empathy, advanced accurate empathy, summarizing, probing, helping, self-disclosure, immediacy, confrontation, information sharing, goal setting and implementing individualized plans.

550-131 Crisis Management - *2 Crs.* Develops the students' skills of identifying stressors in crisis situations and in developing and applying intervention techniques. Hands-on activities are designed to develop skills for intervening with crisis situations and determining referral to community resources. (Prerequisites: 550-112 Client Rights, Confidentiality and Ethics; 550-125 Counseling Skills and Practice)

550-135 Diversity in Counseling - *3 Crs.* (title use to be Special Issues in Treatment) Exposes student to unique and genuine characteristics of America's special populations. Provides strategies for working with clients from these populations. Examines the uniqueness of each population and the resources and services available. Designed so students improve their effectiveness as AODA counselors in attitudes, information and self-understanding of special populations. (Prerequisite: 801-195 Written Communication)

550-140 Counseling Theory and Practice - *3 Crs.* Integrates the theory and techniques of various psychotherapies with basic counseling skills, professional and ethical standards, and personal counseling style. Case studies, classroom discussions and simulated counseling experiences provide opportunities for students to apply counseling theory to simulated counseling experiences. Highly recommend 801-195 Written Communication prior to this course. (Prerequisites: 550-112 Client Rights, Confidentiality and Ethics; 550-125 Counseling Skills and Practice)

550-141 Group Facilitation - *3 Crs.* Provides participants with the skills and knowledge base for effective facilitation of groups. Actual opportunities to facilitate groups are also provided. Participants critique the group's progress and assess their effectiveness as leaders. Recommendations for skill refinement are given. (Prerequisites: 550-112 Client Rights, Confidentiality and Ethics; 550-125 Counseling Skills and Practice)

550-142 Introduction to Community Mental Health - *3 Crs.* Introduces the major diagnostic categories of mental illness, with a focus on the psychiatric management of these mental illnesses. Examines the unique treatment needs of people who have a coexisting psychiatric disorder with a substance use disorder. Highly recommend 801-195 Written Communication and 809-198 Introduction to Psychology prior to this course. (Prerequisite: 550-106 Physiological Complications and Psychopharmacology)

550-150 Family Systems - *3 Crs.* Provides the skills needed to assess the nature of the family and how it functions as a system. Explores how systems are affected by internal and external influences such as abuse and family violence. Prevention, assessment and intervention techniques are applied in the course. (Prerequisite: 801-195 Written Communication)

550-155 AODA Internship Seminar - *3 Cr.* A seminar designed as a companion course to AODA Internship I (550-156). Relates theory and principles of practice to agency field-study experience. Students learn to develop effective professional relationships with staff; effective utilization of clinical supervision; understanding of the policies, procedures and culture of a treatment agency; develop therapeutic relationships with clients; develop strategies to optimize one's internship experience; and apply the values of confidentiality and client self-determination. Students learn how their values and personal experiences affect their work with clients and begin exploring their professional identity as an AODA counselor. (Prerequisites: 550-106 Physiological Complications and Psychopharmacology; 550-112 Client Rights, Confidentiality and Ethics; 550-121 Introduction to Substance Abuse Treatment; 550-125 Counseling Skills and Practice; 550-131 Crisis Management; 550-135 Diversity in Counseling; 550-140 Counseling Theory and Practice; 550-141 Group Facilitation; 550-142 Introduction to Community Mental Health; 550-150 Family Systems; 550-160 On-Campus Talk About Alcohol)

550-156 Alcohol and Other Drug Abuse Internship 1 - *5 Crs.* Demonstrates AODA counseling skills in a clinical setting. Integrates skills learned in theoretical and practical coursework to provide students with skills to work with clients in hospitals, outpatient clinical agencies and AODA group homes. (Prerequisites: 550-121 Introduction to Substance Abuse Treatment; 550-131 Crisis Management; 550-135 Diversity in Counseling; 550-140 Counseling Theory and Practice; 550-141 Group Facilitation; 550-142 Introduction to Community Mental Health; 550-150 Family Systems; 550-160 On-Campus Talk About Alcohol; criminal background check)

550-157 Alcohol and Other Drug Abuse Internship 2 - *5 Crs.* Focuses on demonstrating competency in the 12 core functions and the 8 practice dimensions of substance use disorder counseling. Integrates knowledge and skills learned in theoretical and practical coursework to provide students with knowledge, skills and attitudes to provide treatment services to AODA clients in inpatient and/or outpatient clinical agencies, residential treatment facilities, AODA group homes and other clinical settings that treat substance use disorders.

(Prerequisites: Completion of or concurrent enrollment in 550-156 Alcohol and Other Drug Abuse Internship 1. Must be taken in the final semester; criminal background check)

550-159 Resiliency Training - *2 Crs.* Introduces the theory of resiliency as a developmental vocabulary of strengths. Focuses on strategies for students to utilize to avoid pitfalls of a risk/deficit perspective. Also examines inroads for students to find their inner strengths. Builds skills in how to handle life situations with resiliency. (Prerequisite: 801-195 Written Communication)

550-160 On-Campus Talk About Alcohol - *1 Cr.* Reduces the risk of experiencing alcohol-related health and impairment problems at any point in life. To achieve this, the course has four behavior goals: (1) increase the incidence of abstinence, (2) delay the onset of the first use of alcohol, (3) reduce high-risk drinking among those who use alcohol, and (4) motivate those who may have alcohol/drug problems to seek assistance. Highly recommend 801-195 Written Communication prior to this course. (Prerequisite: Completion of or concurrent enrollment in 890-125 Student Success)

601-107 Electricity and Electronics HVAC - *3 Crs.* Emphasizes fundamentals of electricity and electronics with application to heating, ventilating, air conditioning and refrigeration equipment. Provides hands-on instruction in electrical-mechanical applications. Thevenin theorem and Ohm's and Watt's laws are studied, along with magnetic principles, inductance and capacitance in circuits. Identification and construction of series, parallel and combination circuits are explored through lab experiments.

601-108 Heating, Ventilation and Air Conditioning (HVAC) Schematics - *2 Crs.* Develops skills in reading wiring diagrams, ladder diagrams, block diagrams, electrical and HVAC/R symbols. Focuses on interpreting electrical/electronics and HVAC/R components in a typical circuit. (Prerequisite: 601-107 Electricity and Electronics HVAC or dean consent)

601-109 HVAC/R Code - *1 Cr.* Focuses on preparing the student to sit for certification tests required by federal and state governments and the Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) industry. Students focus on EPA refrigerant-handling exams and Industry Competency Exams (ICE). Other certification exams are also examined. The student defines goals for this class based on exam needs. (Prerequisite: 601-120 Fundamentals of Refrigeration or dean consent)

601-116 Hydronic Environmental Systems - *3 Crs.* Focuses on the installation and troubleshooting of hydronic systems, water treatment, maintenance, control devices and service tools. Hydronic balancing techniques are emphasized using pump laws, distribution balance methods procedures and use of instrumentation. (Prerequisite: 601-123 Residential Heating Systems or dean consent)

601-118 Air Distribution - *2 Crs.* Focuses on commercial ventilation systems and air balance techniques. Develops skills relative to the importance of balancing, air quality, air measurement, fan laws, balance method and use of instrumentation.

601-120 Fundamentals of Refrigeration - *2 Crs.* Focuses on the fundamental principles of refrigeration, refrigerants, the refrigeration system and control devices. Develops skills and knowledge in the diagnosis and repair of air conditioning and refrigeration systems.

601-121 Refrigeration Service Techniques - *2 Crs.* Develops basic skills in the use of refrigeration test instruments, tools and the application of refrigeration theory and practices to refrigeration systems. Skills applied are brazing techniques, evacuation, dehydration and charging of refrigeration systems. The effect of various metering devices is analyzed. Covers wiring of a refrigeration trainer and ways to recover refrigerant from a system using recovery machines as outlined in EPA Section 608 of the Clean Air Act. (Prerequisite: Concurrent enrollment in 601-120 Fundamentals of Refrigeration or dean consent)

601-122 Residential Air Conditioning - *3 Crs.* Develops skills and knowledge in the diagnosis, repair and installation of air conditioning systems. Focuses on service and installation techniques for residential systems. Simulation software and actual equipment provide troubleshooting experience. (Prerequisites: 601-121 Refrigeration Service Techniques. Concurrent enrollment in 601-108 Heating, Ventilation and Air Conditioning (HVAC) Schematics; 601-127 Fundamentals of Building Controls)

601-123 Residential Heating Systems - *3 Crs.* Develops advanced skills and knowledge of installation, maintenance and servicing of residential heating systems. Covers control devices, service tools, human comfort and add-on purchases. Simulation software and actual equipment provides troubleshooting experience. (Prerequisites: 601-122 Residential Air Conditioning. Concurrent enrollment in 601-128 Building Control Systems Applications or dean consent)

601-126 Residential Energy - *3 Crs.* Develops skills to conduct an energy efficiency evaluation of a house by using the house-as-a-system approach. Examine comfort and safety issues for the inhabitants. Recommend heating and air conditioning equipment that matches the heating and cooling loads calculated. Students will provide a report that details corrective actions needed to prioritize energy retrofit work for the house that can be used for weatherization.

601-127 Fundamentals of Building Controls - *2 Crs.* Enhances skills in schematic wiring diagram interpretation and provides instruction in the fundamental concepts of building control systems. Hands-on simulations and actual systems are used to extensively enhance the concept of control systems. (Prerequisite: Concurrent enrollment in 601-108 Heating, Ventilation and Air Conditioning (HVAC) Schematics)

601-128 Building Control Systems Applications - *3 Crs.* Enhances skills in schematic wiring diagram interpretation. Provides hands-on instruction in electro-mechanical building control, pneumatic control and electronic control of building systems. Hands-on simulators and actual systems are used to extensively enhance concepts of control systems. (Prerequisites: 601-108 Heating, Ventilation and Air Conditioning (HVAC) Schematics; 601-127 Fundamentals of Building Controls. Concurrent enrollment in 601-123 Residential Heating Systems or dean consent)

601-129 Commercial Food Service Refrigeration - *3 Crs.* Focuses on advanced principles of refrigeration, refrigerants, the refrigeration system, control devices and service tools as they apply to food service equipment. Reviews basic refrigeration, the accessory devices that make up commercial refrigeration systems, design concepts, defrost system, system configurations and operating principles. (Prerequisite: 601-121 Refrigeration Service Techniques or dean consent)

601-130 Supermarket Refrigeration - *3 Crs.* Focuses on advanced principles of refrigeration, refrigerants, the refrigeration system, control devices and service tools. Develops skills in installation, start-up, preventative maintenance and the diagnosis of commercial refrigeration systems. Provides a practical problem-solving approach to everyday situations that confront the refrigeration technician. (Prerequisite: 601-129 Commercial Food Service Refrigeration or dean consent)

601-134 Commercial Heating and Air Conditioning - *4 Crs.* Develops advanced skills in the preventative maintenance and repair of commercial heating and air conditioning systems. Focuses on systems, start-up, preventative maintenance, service, troubleshooting and installation. Applications center on light commercial, packaged, split and central systems. (Prerequisites: 601-123 Residential Heating Systems; 601-128 Building Control Systems Applications. Concurrent enrollment in 601-116 Hydronic Environmental Systems or dean consent)

602-103 Engine Repair 1 - *2 Crs.* Focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on in-vehicle repairs including engine cooling and lubrication systems. (Prerequisite: 602-107 Auto Service Fundamentals)

602-104 Brake Systems - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair vehicle braking systems with an introduction to ABS. (ABS diagnosis, service and repair will be addressed in the Advanced Chassis course.) (Prerequisite: 602-107 Auto Service Fundamentals)

602-107 Auto Service Fundamentals - *2 Crs.* Focuses on developing skills in professionalism, safety and the use of basic hand and power tools in accordance with industry standards. Students are introduced to the automotive service industry and learn to use both comprehensive and manufacturer's service information to perform basic under-hood and under-car services. (Prerequisites: Automotive Technology program students: Completion of or concurrent enrollment in 804-107 College Mathematics; Automotive Technician program students: Completion of or concurrent enrollment in 804-360 Occupational Math 1 or 804-107 College Mathematics)

602-109 Auto Transmission/Transaxle - *4 Crs.* Focuses on developing the skills needed to diagnose, service and repair automatic transmission/transaxles including overhaul procedures. (Prerequisite: 602-127 Electrical and Electronic Systems 2)

602-123 Engine Repair 2 - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair including overhaul procedures. (Prerequisite: 602-103 Engine Repair 1)

602-124 Steering and Suspension Systems - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair steering and suspension systems including wheel alignment procedures. (Prerequisite: 602-107 Auto Service Fundamentals)

602-125 Electrical and Electronic Systems 1 - *2 Crs.* Focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems. Learners apply Ohm's Law to basic electrical circuit diagnosis. (Prerequisite: 602-107 Auto Service Fundamentals)

602-127 Electrical and Electronics Systems 2 - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems including batteries, starting, charging and lighting systems, and computer control systems. (Prerequisite: 602-125 Electrical and Electronic Systems 1)

602-128 Electrical and Electronic Systems 3 - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems including driver information, horn, wiper/washer, power accessories, cruise control, air bag, anti-theft and radio systems. (Prerequisite: 602-127 Electrical and Electronic Systems 2)

602-132 Light-Duty Diesel Engine Operation - *2 Crs.* Introduces design and operating characteristics of light-duty diesel fuel systems. Mechanical and electronic fuel systems of various makes are covered with the focus on electronic controlled fuel systems. Lab work includes identification of systems, testing and diagnosis of symptoms. (Prerequisite: 602-198 Engine Performance 2)

602-133 Shop Simulation/Internship 1 - *2 Crs.* Focuses on Automotive Technician technical diploma students to further their ASE technical skills acquired from prerequisite courses. The ASE skills can be practiced in the lab on campus or at a work site. (Prerequisites: 602-104 Brake Systems; 602-124 Steering and Suspension Systems)

602-134 Shop Simulation/Internship 2 - *2 Crs.* Focuses on Automotive Technician technical diploma students to further their ASE technical skills acquired from prerequisites courses. The ASE skills can be practiced in the lab on campus or at a work site. (Prerequisites: 602-128 Electrical and Electronic Systems 3; 602-197 Engine Performance 1)

602-135 Shop Simulation/Internship 3 - *2 Crs.* Focuses on Automotive Technician technical diploma students to further their ASE technical skills acquired from prerequisites courses. The ASE skills can be practiced in the lab on campus or at a work site. (Prerequisites: 602-123 Engine Repair 2; 602-196 Climate Control Systems; 602-198 Engine Performance 2)

602-149 Manual Drive Train and Axles - *4 Crs.* Focuses on developing the skills needed to diagnose, service and repair clutches, manual transmissions/transaxle, differentials, four-wheel drive/all-wheel drive, and drive axles. (Prerequisite: 602-127 Electrical and Electronic Systems 2)

602-195 Advanced Chassis Systems - *2 Crs.* Focuses on developing the skills needed to diagnose, service and repair antilock brake, vehicle stability enhancement, and electronic steering and suspension systems. (Prerequisites: 602-104 Brake Systems; 602-124 Steering and Suspension Systems; 602-127 Electrical and Electronic Systems 2)

602-196 Climate Control Systems - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair climate control systems including heating, cooling and air distribution. Upon successful completion of the Mobile Refrigerant Handling unit (ATCP-136), a state certificate will be issued. (Prerequisite: 602-127 Electrical and Electronic Systems 2)

602-197 Engine Performance 1 - *3 Crs.* Focuses on developing the skills needed to diagnose, service and repair powertrain control and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. (Prerequisites: 602-103 Engine Repair 1; 602-127 Electrical and Electronic Systems 2)

602-198 Engine Performance 2 - *4 Crs.* Focuses on developing the skills needed to diagnose, service and repair fuel and emission control systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and driveability. (Prerequisite: 602-197 Engine Performance 1)

606-103 Design Specifications - *3 Crs.* Emphasizes further development of dimensioning techniques and applying tolerances for functionality and manufacturability. Students create solid models and produce detail and assembly drawings suitable for manufacturing production with the aid of CAD (Computer-Aided Drafting) software. Students continue to develop their CAD skills utilizing NX (Unigraphics) software. (Prerequisites: 606-101 Design Drafting 1 or 617-134 Principles of Design. Completion of or concurrent enrollment in 606-170 CAD 3-D, NX (Unigraphics) or 617-114 CAD 3-D, SolidWorks)

606-104 Engineering Materials – *2 Crs.* Examines the varying usages of common and unique materials used in the design and engineering fields. Emphasizes the selection of appropriate materials for specific applications, both from a technical aspect and a cost perspective. Significant exposure is devoted to areas of nonmetallic materials and their increasing uses in product design.

606-107 Component Design - *4 Crs.* Students apply and develop their knowledge and skills in creating engineering drawings and learn the skills to design mechanical products and parts utilized in various machines. Students use CAD software and work on individual projects to develop their understanding and skills in drawing preparation, decision making, information retrieval, organization and creativity. (Prerequisite: 606-132 Materials of Industry)

606-111 Integrated Manufacturing Production - Mechanical Design - *2 Crs.* Students simulate a manufacturing environment by building a workcell, producing a product in production and performing quality assurance checks. Emphasizes implementation of a project plan, teamwork, problem solving and decision making. It is suggested that the student take this course in the semester after they take 606-112 Integrated Manufacturing Planning - Mechanical Design. (Prerequisite: 606-112 Integrated Manufacturing Planning - Mechanical Design)

606-112 Integrated Manufacturing Planning - Mechanical Design - *2 Crs.* Students complete a project from concept to the point where a product is designed and its manufacturing process is planned. Emphasizes the project management process, teamwork, problem solving and decision making. It is suggested that the student take 606-111 Integrated Manufacturing Production - Mechanical Design in the semester after this course. (Prerequisite: 606-107 Component Design or completion of or concurrent enrollment in 606-114 Design of Components)

606-114 Design of Components – *3 Crs.* Students apply and develop their knowledge and skills in creating engineering drawings and learn the skills to design mechanical products and parts utilized in various machines. Students use CAD software and work on individual projects to develop their understanding and skills in drawing preparation, decision making, information retrieval, organization and creativity. (Prerequisites: 606-104 Engineering Materials or 606-132 Materials of Industry; 617-115 Jig and Fixture Design; 617-146 Die Design 1)

606-116 Machine Elements - *3 Crs.* Presents a comprehensive study of the fundamental principles and analytical methods required for the correct design of the separate components that comprise a machine or product. Emphasizes understanding how the mechanical systems operate, construction details, practical design considerations and current design practices in the field of mechanical design. (Prerequisite: Completion or concurrent enrollment in 804-116 College Technical Mathematics 2)

606-125 Product Design - *4 Crs.* Trains the student to use a systematic process along with technical procedures to plan, coordinate and implement the mechanical design of a machine or product. Students learn to apply fundamental design concepts and develop creativity in determining the functional features and engineering details of a product on a team-oriented project. (Prerequisites: 606-114 Design of Components or 606-107 Component Design; 606-116 Machine Elements. Completion of or concurrent enrollment in 606-130 Strength of Materials)

606-128 Design Statics - *3 Crs.* Presents an elementary, analytical and practical approach to the principles and physical concepts of the study of forces and their effects on machines. Emphasizes mastery of basic problem-solving methods used in force analysis for the purpose of machine design. (Prerequisite: Completion of or concurrent enrollment in 804-116 College Technical Mathematics 2)

606-130 Strength of Materials - *3 Crs.* Develops the relationships between the external forces applied to a part and the internal stresses and strains generated by these forces. In application, it provides a first step in the design analysis to ensure that a component is safe with respect to strength, rigidity and stability. (Prerequisite: 606-128 Design Statics)

606-132 Materials of Industry - *2 Crs.* Examines the varying usages of common and unique materials used in the design and engineering fields. Emphasis is placed upon the selection of appropriate materials for specific applications, both from a technical aspect and a cost perspective. Significant exposure is devoted to areas of nonmetallic materials and their increasing uses in product design.

606-150 Electronics and Instrumentation - *3 Crs.* Introduces basic electronic theory, components, and circuits and how to use electronic instruments for testing engine electrical components and systems. Students develop working knowledge of basic electronic circuits used in electronic ignition systems, as well as the ability to use electronic test instruments.

606-155 Ignition Fuels and Combustion - *4 Crs.* Introduces engine operating cycles and processes and examines variables that affect the cycles. These factors are ignition, exhaust, valve timing, combustion, detonation and air-to-fuel ratio. Students also examine ignition, induction and fuel systems. (Prerequisites: 606-150 Electronics and Instrumentation; 606-167 Engine Development and Design)

606-164 Engine Fundamentals - *3 Crs.* Provides an understanding of the operating principles of gasoline engines. Introduces the proper and safe use of lab tools and equipment. Studies the operation of engine systems and components. Students disassemble, measure, recondition and reassemble a two- and four-stroke cycle engine.

606-165 Small Engine Service - *4 Crs.* Introduces students to the diagnosis and repair of small engines used on recreational and power equipment. Provides laboratory time to set up and repair engine-driven equipment found in the small engine service industry. (Prerequisite: 606-164 Engine Fundamentals)

606-167 Engine Development and Design - *2 Crs.* Studies the history and development of internal and external combustion engines. Reviews the advantages and disadvantages of various engine designs. Explores the design and operation of various mechanical components and the systems for fuel, electrical, cooling and lubrication.

606-168 Engine Testing and Testing Equipment - *5 Crs.* Introduces internal combustion design and development procedures in a laboratory situation. Provides students with a background in testing procedure, testing codes, test reporting and instruments used in engine testing. (Prerequisite: 606-155 Ignition Fuels and Combustion)

606-169 Engine Emission Testing and Controls - *3 Crs.* Develops a working knowledge of the interrelationship of the internal combustion engine and its effects on the environment. Students identify and operate the instrumentation to measure engine emissions and compare values to government-mandated levels. Students also explore emission controls. (Prerequisite: 606-168 Engine Testing and Testing Equipment)

606-170 CAD 3-D, NX (Unigraphics) - *3 Crs.* Introduces basic (Unigraphics Solutions) NX parametric-based solid modeling techniques. Exercises include creating and editing solid models using primitive features, form features and sketches. Introduces master modeling technique of drawing creation and editing; file management is also introduced. Recommended: Previous drafting experience or course; previous work on computers (Microsoft products such as Word and Excel).

606-171 Advanced CAD, NX (Unigraphics) - *3 Crs.* Explores areas of three-dimensional constructions and related features of the EDS Unigraphics II CAD system. Participants will construct 3-D models and perform model editing, use a 3-D coordinate system, create and apply surface techniques, and create 2-D drawings based on 3-D models. (Prerequisite: 606-170 CAD 3-D,NX (Unigraphics))

606-172 Unigraphics - *4 Crs.* Introduces basic (Unigraphics Solutions) NX parametric-based solid modeling techniques. Exercises include creating and editing solid models using primitive features, form features and sketches. Introduces master modeling technique of drawing creation and editing and file management. Students should have previous drafting experience or course and previous experience on computers (Microsoft products such as Word and Excel).

606-173 Engine Problems - *3 Crs.* Students develop laboratory problem-solving experience. The engine and its accessories and/or components are studied and tested for their effects on the engine's operation. A complete report is written on the information gathered from the laboratory experience. Sound and vibration, failure analysis, and application of transducers and strain gages are also explored. (Prerequisite: 606-168 Engine Testing and Testing Equipment)

606-174 Transmission of Power - *3 Crs.* Introduces student to applications of power transfer commonly used by power equipment and engine manufacturers. Students examine design considerations and repair procedures of commonly used power transmission systems, such as gearcases, manual and automatic transmissions, belts, chains, clutches and hydrostatic drives. Additional focus is placed on marine power transfer systems.

606-176 CAD 2-D, AutoCAD - *3 Crs.* Introduces computer-aided drafting (CAD) using the latest AutoCAD 2-D software. Students develop skills in drawing setup and organization, drawing and editing objects, creating complex shapes, dimensioning, using text, display and layer control, using symbols, drawing techniques, and plotting. No previous computer experience is required, but a background in fundamental blueprint reading and/or drafting skills is recommended.

606-182 Engine Research and Development Technician Internship - 1-*3 Crs.* Apply course studies to practical experience and training in the workplace. Students document their learning experiences in a report. A log of duties performed is also required.

607-110 Civil Drafting Fundamentals - *4 Crs.* Students develop computer drafting skills and technical knowledge for producing plans. Studies include map types, uses and interpretation; plotting traverses, land profiles, earthwork cut and fill; constructing contours from field data; calculating areas, volumes and ground slopes; creating legal descriptions of land; developing drainage and construction plans for utilities. Basic blueprint reading and/or high school drafting are helpful but not required. (Prerequisites: Completion of or concurrent enrollment in 607-176 AutoCAD I; 804-114 College Technical Mathematics 1B)

607-112 Architectural Drafting - *5 Crs.* Emphasizes sketching and computer-aided drafting. Students develop an architectural set of construction drawings including electrical plans, floor plans, foundations, sections, elevations, details, and schedules for a commercial structure. Use of resources such as building codes, Sweets Material Catalogs, manufacturer's literature and architectural prints are utilized. High school drafting advisable. (Prerequisite: Completion of or concurrent enrollment in 607-176 AutoCAD I)

607-114 Structural Drafting - *4 Crs.* Students analyze poured-in-place concrete, steel and precast concrete as building materials. Computer drafting of plans for commercial and industrial buildings with details for construction, fabrication and Bill of Materials are prepared. Students define terms and methods common to each of the three major types of building materials. Provides the necessary knowledge and develops the basic structural drafting skills necessary for entry-level positions in the construction industry. (Prerequisite: 607-112 Architectural Drafting)

607-122 Mechanical Construction - *3 Crs.* Addresses the fundamental concepts of the mechanical systems for building and applies basic design principles in the following areas: heating, air conditioning, ventilation, plumbing, electrical and lighting. (Prerequisite: 804-114 College Technical Mathematics 1B)

607-123 Construction Estimating - *3 Crs.* Introduces the basic methods of estimating and systems commonly used to complete quantity surveys. Emphasizes developing the skills required to prepare the types of estimates used in the design and construction of buildings and site improvements. Basic principles of construction time requirements and project scheduling, plus bid and contract documents, are discussed and practiced. (Prerequisite: 607-114 Structural Drafting or consent of dean)

607-131 Structural Analysis 1 - *3 Crs.* Provides an understanding of the relationship between the external forces applied to a structure and the resulting action on the components of the structure. Topics of study include vector analysis, resultant of forces, moments, force couples, truss analysis, and deflection in beams. (Prerequisite: 804-114 College Technical Mathematics 1B)

607-132 Structural Analysis 2 - *3 Crs.* Provides an understanding of the relationship between the external forces applied to a structure and the resulting action on the components of the structure. Topics of study include moment of inertia, stress in a structural member due to force or thermal changes, bending stress, and deflection in beams. (Prerequisites: 607-131 Structural Analysis 1; 804-116 College Technical Mathematics 2)

607-135 Construction Surveying - *3 Crs.* Students apply fundamental principles of surveying to the use of surveying instruments. Includes measurement, differential leveling, traversing, stadia, introduction to a total station, computations with computer software and introduction to GIS. To supplement classroom instruction, students solve field problems working as a surveying crew and using surveying equipment. (Prerequisite: Completion of or concurrent enrollment in 804-114 College Technical Mathematics 1B)

607-137 Site Investigation - *3 Crs.* Students prepare a site plan for a typical residential and industrial lot including structure, location, paving, parking, drainage considerations, erosion control measures and landscaping. Includes the drafting of plans for a subdivision including survey maps, plot maps, drainage plans, utility drawings, road layout, and presentation drawings. (Prerequisite: 607-110 Civil Drafting Fundamentals)

607-138 Soils - *2 Crs.* Explores the fundamental concepts of soil composition and structure, properties of fine-grained soil, compaction, soil classification, soil investigation, test and analysis, nuclear moisture-density relationship, bearing ratio, and percolation. Includes the testing of materials used in the various fields of construction. (Prerequisite: 804-114 College Technical Mathematics 1B)

607-150 Technical Problems - *3 Crs.* Students prepare a commercial design project under a prescribed set of criteria utilizing knowledge of previous courses in design with various construction materials and methods, including concrete, steel, wood, etc. Emphasizes practical projects and solutions. (Prerequisites: 607-110 Civil Drafting Fundamentals; 607-114 Structural Drafting; 607-122 Mechanical Construction; 607-131 Structural Analysis 1; 607-138 Soils)

607-170 AutoCAD, Basic - *3 Crs.* Introduces student to computer-aided drafting (CAD) using AutoCAD software. Explores basic constructions, dimensioning, editing and drawing manipulation functions. Additional topics, including zoom, array, inquiry, regen, etc., will allow students to complete drawings. No CAD experience is required, but a familiarity with drafting, blueprint, PC operation and windows would be helpful.

607-176 AutoCAD I - *3 Crs.* Introduces students to computer-aided drafting (CAD) using AutoCAD software. Explores basic constructions, dimensioning, editing and drawing manipulation functions. Additional topics, including zoom, array, inquiry, regen, etc., will allow students to complete drawings appropriate to their individual curriculums. No previous computer experience is required, but it would be helpful if students have computer knowledge regarding files, folders, and various types of software. Drafting experience or completion of a mechanical drafting/technical print reading course would also be helpful.

607-177 AutoCAD II - *3 Crs.* Expands on the AutoCAD Architecture program and introduces 3-D modeling and visualization. Covers solid modeling concepts. Presentation drawings will be created to convey a look of the plans and perspective views. Explores customization of the AutoCAD interface by creating a custom profile. Exercises include creating a 3-D building with the features of AutoCAD Architecture (walls, doors, windows, structural members, roofs and styles). (Prerequisite: 607-176 AutoCAD I or 607-170 Basic AutoCAD)

607-178 Revit - *2 Crs.* Introduces students to the commercial use of Revit Architecture, an Autodesk product. Students develop an understanding of Building Information Models by creating a 3-D model from which a set of documents will be produced to include floor plans, elevations, sections, schedules, reflected ceiling plans and sheet sets. Students develop an understanding of the floor and roof systems, phases and options, and sharing of models. Students will be exposed to the detailing and annotation features of Revit. Knowledge of computer-aided drafting, construction methods and basic computer skills will be beneficial.

617-108 Orthographic Projection Concepts - *3 Crs.* Students apply principles of the projection and creation of orthographic and auxiliary views. Includes the application of line types, dimensioning, tolerancing, fasteners, descriptive geometry, revisions, and section views to specific design situations. Students utilize CADD to reinforce and demonstrate mastery of orthographic projection techniques. This course should be taken after or with 617-114 CAD 3-D, SolidWorks.

617-112 CAD 3-D, Pro-Engineer - *3 Crs.* Introduces parametric-based solid modeling using Pro-Engineer solids modeling software. Emphasis is placed on solids modeling concepts, including development, modifying and editing models. Additional concepts include documenting of modules using drawing mode and combining models into assemblies using assembly mode. Concepts will be applied to exercises related to part design and tooling and fixture development. Recommended: Previous drafting experience or course; previous work on computers (Microsoft products such as Word and Excel).

617-114 CAD 3-D, SolidWorks - *3 Crs.* Introduces SolidWorks parametric-based solid modeling techniques. Exercises will include creating and editing solid parts, assemblies and drawings. Top-down and bottom-up designing techniques will be applied to product design, sheet metal and mold tooling exercises. Exploded views, Bill of Materials, animations, finite element analysis and configurations will be created. File conversions will be explored to and from Pro-Engineer, NX/Unigraphics and AutoCAD software. Recommended: Previous drafting experience or course; previous work on computers (Microsoft products such as Word and Excel).

617-115 Jig and Fixture Design - *3 Crs.* Students continue to develop their CAD skills utilizing SolidWorks design software by creating solid models and producing detail and assembly drawings of jigs and fixtures suitable for manufacturing production of parts and assemblies. Students develop the skills necessary to process information and design the tools, methods and techniques in order to improve manufacturing efficiency and productivity. Emphasizes further development of dimensioning techniques and applying tolerances for functionality and manufacturability. (Prerequisite: Completion of or concurrent enrollment in 617-114 CAD 3-D, SolidWorks OR dean approval)

617-116 AutoCAD, Beginning Level - *2 Crs.* Introduces computer-aided drafting (CAD) fundamental drafting techniques. Develops skills in basic construction, dimensioning, editing and drawing manipulation functions. File management, symbol libraries, screen layout and plotting are explored.

617-120 Die Making Processes - *3 Crs.* Incorporates fundamental stamping die principles into die design applications. Emphasizes piercing, blanking, bending and forming operations. Focuses on die components, types of dies and basic die construction. Students utilize computer software and a variety of machine tools to apply metalworking concepts. Hands-on application for assembly and disassembly of metal stamping dies. (Prerequisites: 606-176 CAD 2-D, AutoCAD; 623-162 Manufacturing Processes)

617-123 Advanced SolidWorks Assembly Modeling - *3 Crs.* Applies previously developed SolidWorks skills to model assemblies and drawings using bottom-up, in context, and top-down modeling techniques. Configurations, custom properties and design tables will be used to solve specific design scenarios. (Prerequisite: 617-114 CAD 3-D, SolidWorks)

617-125 Blanking and Compound Die Design - *3 Crs.* Utilizes die design software to transform part drawings into completed metal stamping die designs. Students calculate blanking and stripping forces, select a punch press and incorporate standard die components and materials to meet the design requirements. Students apply die clearance to the die cutting components to satisfy part size dimensions. (Prerequisites: 617-114 CAD 3-D, SolidWorks; 617-120 Die Making Processes)

617-126 Progressive Bending and Draw Die Design - *3 Crs.* Applies progressive strip layout methods to the manufacture of complex metal stamping die designs. Students calculate flat blank lengths of the part drawing to determine the unfolded size. Students apply bending and draw components into the designs to shape the sheet metal parts into the part drawing requirements. (Prerequisite: 617-125 Blanking and Compound Die Design)

617-130 Mold Making Processes - *3 Crs.* Incorporates the fundamentals of mold construction as they apply to plastics, diecasting and rubber moldings using theoretical and hands-on approaches. Answers the why questions associated with molding processes, designing and construction of mold dies. (Prerequisites: 617-114 CAD 3-D, SolidWorks; 617-134 Principles of Design; 623-162 Manufacturing Processes)

617-134 Principles of Design - *3 Crs.* Students develop the ability to read, visualize, interpret and create detailed engineering drawings. The course includes the application of line types, dimensioning, tolerancing, fasteners, revisions, section views, and auxiliary views to specific design situations. Students utilize CAD to reinforce and demonstrate mastery of orthographic projection techniques. (Prerequisite: Completion of or concurrent enrollment in 606-170 CAD 3-D, NX (Unigraphics) or 606-176 CAD 2-D, AutoCAD or 617-112 CAD 3-D, Pro-Engineer or 617-114 CAD 3-D, SolidWorks)

617-135 Two- and Three-Plate Mold Design - *3 Crs.* Applies strategies and techniques to develop plastic and die cast mold design concepts, fully detailed mold components and stock lists to prepare two- and three-plate mold designs for manufacture. Students apply shrinkage and draft, select mold materials, cooling methods, gating style, ejection techniques, parting line locations, standard and custom mold components to meet customer requirements. (Prerequisite: 617-130 Mold Making Processes)

617-136 Side Action and Hot-Runner Mold Design - *3 Crs.* Applies side-pull actions to the manufacture of molded undercuts and hot-runner systems for runnerless high-volume molds. Students apply mold design skills mastered in the prerequisite Two- and Three-Plate Mold Design course in combination with new techniques introduced in this course to design molds to meet customer requirements. (Prerequisite: 617-135 Two- and Three-Plate Mold Design)

617-138 Integrated Manufacturing Planning - Tool Design Engineering - *2 Crs.* Students complete a project from concept to the point where a product is designed and its manufacturing process is planned. Emphasizes the project management process, teamwork, problem solving and decision making. It is suggested that the student take 617-139 Integrated Manufacturing Production - Tool Design Engineering in the semester after this course. (Prerequisite: 617-115 Jig and Fixture Design)

617-139 Integrated Manufacturing Production - Tool Design Engineering - *2 Crs.* Students will simulate a manufacturing environment by building a workcell, producing a product in production and performing quality assurance checks. Emphasizes implementation of a project plan, teamwork, problem solving and decision making. It is suggested that the student take this course in the semester after they take 617-138 Integrated Manufacturing Planning - Tool Design Engineering. (Prerequisite: 617-138 Integrated Manufacturing Planning - Tool Design Engineering)

617-141 Computer-Aided Manufacturing - *2 Crs.* Introduces students to two-dimensional (2-D) Computer-Aided Machining (CAM) utilizing Mastercam software. Students run CAM software on a computer to generate 2-D CNC programs. Students develop skills in the generation of 2-D geometry; generation of 2-D toolpaths; CNC machine code generation; post processing to machine language; tool selection; programming, editing and manipulation; speed and feed calculation; and optimization of programs for maximum efficiency. The course is delivered in a synchronous online

delivery format where the student is at work, home or school observing live, instructor-led demonstrations. Students will complete exercises on their own and will either submit the completed exercise for evaluation or demonstrate live to the instructor through an Internet connection.

617-142 Computer-Aided Manufacturing - Part A - *1 Cr.* Create two-dimensional and three-dimensional geometry using CAM software. Generate 2-D toolpaths for CNC milling machines and lathes, and 3-D tool paths for milling machines. (Corequisite: 617-143 Computer-Aided Manufacturing - Part B)

617-143 Computer-Aided Manufacturing - Part B - *1 Cr.* Focuses on verification of part programs by linking computer-created 2-D and 3-D geometry and 2-D and 3-D toolpaths to machining practices on milling machines and lathes. (Corequisite: This course must be taken at the same time as 617-142 Computer-Aided Manufacturing - Part A)

617-145 Basic Machining Techniques - *3 Crs.* Examines the basic machining practices used by tool and die makers in the production of molds and dies. Some advanced machining techniques are covered. Hands-on activities include working with hand tools, vertical milling machines, lathes, surface grinders, electrical discharge machines and computer numerical controlled (CNC) equipment.

617-146 Die Design 1 - *3 Crs.* Students learn fundamental stamping die principles in order to transform part drawings into completed metal stamping die designs using SolidWorks design software. Students calculate blanking and stripping forces, select a punch press, and incorporate standard die components and materials to meet the design requirements. (Prerequisites: 617-114 CAD 3-D, SolidWorks; 617-115 Jig and Fixture Design)

617-147 Die Design 2 - *3 Crs.* Students create strip layouts for both bent and formed sheet metal parts using LogoPress design software. Students calculate the flat blank lengths of the part drawing to determine the unfolded part size. Students design complex progressive metal stamping dies for both bent and formed parts incorporating components necessary to satisfy part size dimensions. (Prerequisite: 617-146 Die Design 1)

617-148 Die Design 3 - *3 Crs.* Students create strip layouts for drawn sheet metal parts using LogoPress design software. Students calculate the flat blank size of the part drawing to determine the undrawn part size. Students design complex progressive metal stamping dies for drawn parts incorporating components necessary to satisfy part size dimensions. (Prerequisite: 617-147 Die Design 2)

617-150 Material Selection - *2 Crs.* Provides skills in determining the physical, mechanical and chemical properties of materials needed for specific applications in the tool and die industry. Explains the process for manufacturing of tool steels and their alloys. Covers the heat treat processing of steel while examining the basic principles of metallurgy.

617-151 Mold Design 1 - *3 Crs.* Molded parts will be designed with properly applied draft, even wall thickness, and ribs. Parting lines will be determined with core and cavities extracted for a variety of molded parts. A complete two plate mold will be designed with applied shrinkage, appropriate mold materials, cooling methods, gating style, ejection techniques, standard and custom mold components to meet customer requirements. (Prerequisites: 617-114 CAD 3-D, SolidWorks; 617-115 Jig and Fixture Design)

617-152 Mold Design 2 - *3 Crs.* Students apply techniques from the prerequisite Mold Design 1 to determine more complex core and cavity extractions utilizing surfacing techniques. Virtual shots will be created to validate mold design. Complete two and three plate molds will be created for more complex part geometries. (Prerequisite: 617-151 Mold Design 1)

617-153 Mold Design 3 - *3 Crs.* Applies side-pull actions to the manufacture of molded undercuts and hot-runner systems for runner-less high-volume molds. Students apply mold design skills mastered in the prerequisite Mold Design 2 course in combination with new techniques introduced in this course to design molds to meet customer requirements. (Prerequisite: 617-152 Mold Design 2)

617-199 Engineering Technologies Internship - *3 Crs.* Provides students in the Tool Design Engineering Technology, Mechanical Design, and Process Engineering Technology programs, who have completed at least three semesters of study, the opportunity to apply the concepts, principles and skills in an actual workplace. Emphasis is placed on applying design skills to real job tasks, adapting to company culture and modeling the core abilities. Students use on-site experiences to develop professional insight. (Prerequisite: 606-170 CAD 3-D, NX (Unigraphics) or 617-112 CAD 3-D, Pro-Engineer or 617-114 CAD 3-D, SolidWorks)

620-101 DC Circuits - *3 Crs.* Introduces the theory of basic DC electrical circuits. Emphasis is placed on testing of basic electrical circuits and verification of the theory involved in electronic technology. Troubleshooting practices are emphasized. Hands-on laboratory exercises and instrumentation reinforce theoretical concepts. This course supports the DC state standard for electronics. (Prerequisite: Concurrent enrollment in 804-113 College Technical Mathematics 1A)

620-102 AC Circuits - *3 Crs.* Presents the scientific foundation used throughout electronics technology. This course supports the AC state standard for electronics. Troubleshooting practices are emphasized, and computer technologies are used to enhance perception of the abstract. Hands-on laboratory exercises and instrumentation will reinforce theoretical concepts. (Prerequisites: Completion of or concurrent enrollment in 620-101 DC Circuits; 804-114 College Technical Mathematics 1B)

620-103 Semiconductor Devices - *3 Crs.* Focuses on the testing and application of semiconductors used in electronic circuits such as power supplies and motor drives. Analyzes various types of diodes, transistors and optoelectronic devices. Hands-on evaluation and testing of electronic circuits and use of laboratory test equipment, such as oscilloscopes and digital multimeters, is emphasized in the lab. (Prerequisite: 620-102 AC Circuits)

620-104 Digital Electronics - *2 Crs.* Presents Boolean algebra, combinational logic circuit analysis and design, flip-flop arithmetic circuits, counters, digital IC logic families, data-handling logic circuits, I/O techniques, and memory devices. (Prerequisites: 620-103 Semiconductor Devices; 804-116 College Technical Mathematics 2)

620-105 Industrial Hydraulics and Pneumatics 1 - *2 Crs.* Emphasizes forms of power transmission used in industry. Force and time capabilities for fluid power systems are determined. Develops skills needed to determine directional control valves to use with hydraulic pumps and to select directional control valve components for use in pneumatic systems. Students diagram and build air relay logic circuits.

620-110 Integrated Manufacturing, Planning - Mechatronics - *2 Crs.* Students complete a project from concept to the point where a product is designed and its manufacturing process is planned. Emphasizes the project management process, teamwork, problem solving and decision making. It is suggested that the student take 620-111 Integrated Manufacturing, Production - Mechatronics, in the semester after this course. (Prerequisite: 620-103 Semiconductor Devices. Completion of or concurrent enrollment in 620-104 Digital Electronics)

620-111 Integrated Manufacturing, Production - Mechatronics - *2 Crs.* Students will simulate a manufacturing environment by building a workcell, developing a product through manufacture, and performing quality assurance checks. Emphasizes implementation of a project plan, teamwork, problem solving and decision making. (Prerequisite: 620-110 Integrated Manufacturing, Planning - Mechatronics)

620-115 AC-DC Machinery - *4 Crs.* Tests the characteristics of AC and DC electric motors, generators, and alternators. Determines the effects of direction of rotation, field flux, speed, load characteristics, and voltage and polarity of AC and DC machines. Measures CEMF, torque, speed, field saturation and power factors loads. Analyzes the characteristics of different motor types. Applies conclusions to industry applications. (Prerequisite: 620-102 AC Circuits)

620-133 Mechatronic Controls - *3 Crs.* Explores and implements electrical machine controls. Evaluates electrical ladder diagrams and associated control systems. Conducts installation, testing and troubleshooting of machine control systems. Presents automation of processes using industrial hardware and software. (Prerequisites: 620-115 AC-DC Machinery. Completion of or concurrent enrollment in 620-104 Digital Electronics)

620-135 Programmable Controllers - *3 Crs.* Learn to install programmable controllers, develop basic control programs and modify instructions to design programs. Troubleshoot machines controlled by programmable logic controllers. Wire input and output field devices. Document modifications to control panels. Monitor and troubleshoot machine processes. Develop HMI applications. (Prerequisite: Completion of or concurrent enrollment in 620-104 Digital Electronics)

620-136 Advanced Programmable Controllers - *3 Crs.* Learn to plan, program, identify and troubleshoot PLC motor control systems through a systematic approach. Discuss more advanced programming terminology, languages, and concepts. Identify communication techniques and protocols. (Prerequisite: 620-135 Programmable Controllers)

620-146 Control Logics - *4 Crs.* Introduces students to the application of useful control and work functions. Basic process control theory, control loop characteristics, and sensor feedback devices are explored. Actual industrial controls, instrumentation and transducers are used in lab applications. Students apply integration techniques using digital, analog, electrical, mechanical, and hydraulic systems through laboratory experimentation. (Prerequisites: Completion of or concurrent enrollment in 620-151 Servomechanisms; 620-136 Advanced Programmable Controllers)

620-150 PC Interfacing and Communications - *3 Crs.* Focuses on industrial PC hardware and applications. Introduces PC bases I/O, communications and software. Explores supervisory control, data acquisition, networking, hardware installation and system troubleshooting. (Prerequisite: Completion of or concurrent enrollment in 620-104 Digital Electronics)

620-151 Servomechanisms - *3 Crs.* Provides technical skills for students to perform qualitative and quantitative analysis of Industrial Servo Systems. The control of velocity and position is explored utilizing various machines. Machine control is implemented using open-loop and closed-loop control techniques with industrial equipment. Provides a foundation for students to enhance their skills in working with electromechanical control systems. (Prerequisites: 620-133 Mechatronic Controls; 806-137 Comprehensive Technical Physics)

623-105 Metals for Technicians - *1 Cr.* Introduces the student to the use of basic measuring tools, to threaded fasteners and their characteristics, and to mechanical properties of various metals. Students will calculate cutting speeds and perform drilling and threading operations.

623-106 Quality Tools - *3 Crs.* Provides students with training in the effective use of over fifty quality improvement tools, many of them little known to even seasoned quality practitioners. Includes a thorough study of Production Part Approval Process (PPAP). All topics are presented with a hands-on, relative-to-industry approach.

623-110 Technical Print Reading - *2 Crs.* Develops the ability to read, visualize and interpret industrial blueprints. Discusses and applies fundamental and standard practices to the reading of numerous actual prints from manufacturing industries. (Prerequisites: Completion of or concurrent enrollment in 103-159 Computer Literacy - Microsoft Office; 804-113 College Technical Mathematics 1A)

623-118 Gage Calibration, Repeatability and Reproducibility - *3 Crs.* Provides students with training to effectively set up and perform duties in a gage calibration program. In addition, this course provides students with training to effectively conduct repeatability, reproducibility bias, stability and linearity studies. All topics are presented with a hands-on, relative-to-industry approach. (Prerequisites: 623-190 Basic Metrology; 628-136 Statistical Process Control)

623-122 Print Reading Principles - *2 Crs.* Students develop the ability to read, visualize, interpret and create detailed engineering drawings. Includes the application of line types, dimensioning, tolerancing, fasteners, revisions, section views and auxiliary views to specific design situations. Students utilize CAD to reinforce and demonstrate mastery of orthographic projection techniques. (Prerequisite: 606-176 CAD 2-D, AutoCAD)

623-134 Basic CMM Programming and Operation - *3 Crs.* Provides hands-on training in Coordinate Measuring Machine (CMM) operation and programming for the purpose of verifying dimensional and geometric requirements in both manual and DCC modes. It is recommended that students have a background in print reading.

623-151 Lean Manufacturing - *3 Crs.* Incorporates the techniques utilized in a lean environment. Through projects, students learn the concepts of 5S, identifying waste, team building, problem-solving tools, setup reduction, cellular manufacturing, error proofing, kaizen, kanban, and value stream mapping. Most projects and examples are manufacturing-related. (Prerequisite: 623-162 Manufacturing Processes or dean consent)

623-152 ISO 14001/2004 - *3 Crs.* Provides a clear explanation of each requirement imposed by ISO 14001/2004 for those who are designing and implementing an environmental system for the first time as well as those faced with maintaining a mature environmental management system. Identifies the ways in which ISO 14001/2004 can be implemented within the constraints of business strategies, environmental imperatives, and regulatory requirements.

623-157 Applied Statistics/Six Sigma Concepts - *3 Crs.* Provides the student with an opportunity to learn and apply statistical tools to improve quality in manufacturing, service, education and health care organizations. Students are taught with actual examples of how statistical process control, ANOVA, t-tests, regression and statistical sampling can be used to improve quality. Course content will also help students prepare for ASQ Certified Six Sigma Green Belt exam if they choose to take it. Students should have a basic knowledge of Microsoft Excel. (Prerequisites: 628-136 Statistical Process Control; 804-114 College Technical Mathematics 1B)

623-158 Certified Quality Technician Primer Course - *2 Crs.* Provides the student with an opportunity to review the ASQ Certified Quality Technician body of knowledge and prepare for the test. Students practice test-taking skills, review basic math and calculator operation skills and learn to apply statistical quality tools. (Prerequisite: 623-190 Basic Metrology or dean consent)

623-162 Manufacturing Processes - *3 Crs.* Provides training to safely operate commonly used machine tools such as lathes, milling machines and surface grinders while making various hands-on projects. Students learn to use basic measuring equipment such as scales, micrometers, dial calipers and gage blocks. Students also learn basic machining procedures such as calculating speeds and feeds, determining tap drill sizes, and selecting tooling. Several nontraditional machining processes, sheet metal processes, joining processes and plastics processes are also explored.

623-167 ISO 9000/2000 and Auditing - *3 Crs.* Focuses on the interpretation of ISO 9000/2000 standards and develops the ability to audit these standards. Students utilize Quality Assurance manuals in a project-based approach.

623-170 Process Planning - *2 Crs.* Provides the technician with skills and knowledge in developing process planning procedures used in modern manufacturing. Discusses ECNs, SOPs and route sheets. Concepts of job costing and breakeven are introduced. Students produce a process plan while manufacturing a real part. (Prerequisite: 623-162 Manufacturing Processes)

623-190 Basic Metrology - *3 Crs.* Introduces dimensional metrology with extensive hands-on exposure to various measurement techniques. Includes laboratory experiments with micrometers, vernier instruments, indicators, optical comparators, gage blocks, instruments for surface analysis and tool maker's microscope.

623-196 Geometric Dimensioning and Tolerancing - *3 Crs.* Provides design, manufacturing and quality assurance personnel with the fundamentals and concepts used on engineering drawings to describe from, location and orientation of features for precision parts. The ANSI/ASME Y14.5M-2009 national standard for Geometric Dimensioning and Tolerancing (GD&T) is an international language that consists of symbols, rules, definitions and conventions adopted by the American Society of Mechanical Engineers (ASME) for engineering drawings. A background in print reading is recommended. (Prerequisite: 804-113 College Technical Mathematics 1A)

628-110 Integrated Manufacturing Planning - Process Engineering Technology - *2 Crs.* Students complete a project from concept to the point where a product is designed and its manufacturing process is planned. Emphasizes the project management process, teamwork, problem solving and decision making. It is suggested that the student take 628-111 Integrated Manufacturing Production - Process Engineering Technology, in the semester after this course. (Prerequisite: 623-162 Manufacturing Processes)

628-111 Integrated Manufacturing Production - Process Engineering Technology - *2 Crs.* Students will simulate a manufacturing environment by building a workcell, producing a product in production and performing quality assurance checks. Emphasizes implementation of a project plan, teamwork, problem solving and decision making. (Prerequisite: 628-110 Integrated Manufacturing Planning - Process Engineering Technology)

628-122 Basic CNC Programming and Operation - *3 Crs.* Applies skills in the programming, setup and operation of a machining center using G-code. Explores feeds and speeds, tool selection and workholding devices. Includes units on Rapid and Linear Interpolation, Circular Interpolation, Drilling, Bolt Circles, Absolute and Incremental Positioning, Subroutines and Subprograms, Cutter Compensation, and Pocket Milling. (Prerequisites: 103-159 Computer Literacy - Microsoft Office. Completion of or concurrent enrollment in 623-162 Manufacturing Processes or dean consent)

628-132 Advanced CNC Programming and Operation - *3 Crs.* Applies skills in the programming, setup and operation of a turning center using G-code. Explores feeds and speeds, tool selection and workholding devices. Applies skills in programming and setup of a rotary indexer on a Vertical Machining Center, as well as the programming and setup of a Horizontal Machining Center. Introduces macro programming on a Haas Machining Center. It is recommended students have taken 628-122 Basic CNC Programming and Operation or have industry experience in programming and setup of CNC machines using G-code programming or dean consent.

628-133 Robotics and Automated Material Handling - *3 Crs.* Emphasizes the application and management of industrial robots and automated material-handling systems. Applies the concepts of classification of robots, design of end-of-arm tooling, maintenance and safety. Computerized systems for materials inventory and retrieval are addressed through individual and group projects. Recommended completion of 628-122 Basic CNC Programming and Operation or background in working with automated equipment.

628-135 Principles of Machining - *2 Crs.* Provides skills necessary for the student to perform basic operations on CNC lathes and milling machines with conversational controls. Students also learn to use and calibrate precision measuring equipment. (Prerequisite: 623-162 Manufacturing Processes)

628-136 Statistical Process Control - *3 Crs.* Develops an understanding of the fundamentals of statistics and its application to statistical process control (SPC). Develops data interpretations skill using traditional and short run statistical tools. Introduces plotting of control charts and its interpretation for variable and attribute type of data. Involves the student in process capability studies, quality management techniques and computer application in quality control. Recommended completion of 804-113 College Technical Mathematics 1A or proficiency in performing mathematical computations prior to taking this course.

628-142 Computer-Aided Manufacturing - *3 Crs.* Emphasizes the use of CAD/CAM and graphic N/C systems to create piece-part geometry, develop cutter location files and plot tool paths. Students postprocess data to machine language and verify programs on a variety of CNC machines. (Prerequisites: 628-122 Basic CNC Programming and Operation; 606-176 CAD 2-D, AutoCAD or dean consent)

801-195 Written Communication - *3 Crs.* Develops writing skills that include prewriting, drafting, revising and editing. A variety of writing assignments is designed to help the student analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents. (Prerequisite: Test score required to register)

801-196 Oral and Interpersonal Communication - *3 Crs.* Focuses upon developing speaking, verbal and nonverbal communication and listening skills through individual presentations, group activities and other projects. Course assignments will include presentations and various individual and group projects as well as written work. (Prerequisite: Test score required to register)

801-197 Technical Reporting - *3 Crs.* Provides students with the concepts, principles and skills for preparing and presenting oral and written technical reports. Types of reports may include lab and field reports, proposals, technical letters and memos, technical research reports and case studies. (Prerequisite: 801-195 Written Communication)

801-198 Speech - *3 Crs.* Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques and other essential elements of speaking successfully, including the listening process, form the basis of the course. (Prerequisite: Test score required to register)

801-310 Occupational Communication - *2 Crs.* Focuses on writing, reading, listening and speaking skills through occupational applications. Students produce written documents, synthesize information, give and follow instructions and apply listening skills. Job-seeking skills are also addressed in this course.

801-322 Occupational Writing - *1 Cr.* Builds confidence in writing ability; planning, organizing and preparing drafts; revising writing; and polishing final written products. Develops skill in using writers' resources, such as handbooks and style manuals, to write clearly, concisely and correctly.

802-101 German 1 - *2 Crs.* Establishes a cultural and conversational foundation for professionals who work with German-speaking individuals. Focuses on vocabulary familiarization and building work recognition and usage, understanding German culture and social structure, and application of concepts in international business and educational environments.

802-102 German 2 - *2 Crs.* Builds on the elements of communication (addressed in German 1), expanding grammar and providing the necessary vocabulary for meaningful situations in reading and conversational role-playing, using topics of general and current interest found in the German-speaking countries. (Prerequisite: 802-101 German 1)

802-105 French 1 - *2 Crs.* Focuses on basic grammar, word building, and communication at an elementary level as well as an understanding of French culture and traditions for professionals who relate to French-speaking people in an international business environment. Emphasizes application of language skills in the workplace.

802-106 French 2 - *2 Crs.* Builds on the elements of communication (addressed in French 1), expanding grammar and providing the necessary vocabulary for meaningful situations in reading and conversational role-playing, using topics of general and current interest found in the Francophone world. (Prerequisite: Completion of or concurrent enrollment in 802-105 French 1)

802-109 Spanish 1 - *2 Crs.* Explores basic Spanish communication skills through practice in listening, speaking, reading and writing. Students acquire vocabulary and grammar in order to develop the ability to speak, write, read and understand spoken Spanish. Emphasizes novice-level conversation, grammar usage, vocabulary development and acquisition of cultural information. Hands-on activities are presented in Spanish so that students become confident in their use of the Spanish language.

802-110 Spanish 2 - *2 Crs.* Explores Spanish communication skills through practice in listening, speaking, reading and writing. Students acquire and build on previously learned Spanish vocabulary and grammar usage in order to further develop their knowledge of the Spanish language. Emphasizes novice to mid-novice level of conversation, listening exercises, grammar usage, vocabulary development, and reading for acquisition of cultural information. Hands-on activities are presented in Spanish so that students become confident in their use of Spanish. (Prerequisite: Completion of or concurrent enrollment in 802-109 Spanish 1)

802-111 Spanish 3 - *2 Crs.* Develops further speaking, listening, writing, and reading skills in Spanish. Focuses on Hispanic culture at the highest beginning Spanish level. Expresses the past and compares the preterit and imperfect past tenses. Applies Spanish grammar rules to issue commands at the formal and informal levels. Explores the subjunctive mood. Develops listening and pronunciation skills using the Internet. (Prerequisite: 802-110 Spanish 2 or dean consent)

804-107 College Mathematics - *3 Crs.* Designed to review and develop fundamental concepts of mathematics pertinent to the areas of: (1) arithmetic and algebra, (2) geometry and trigonometry, and (3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions; solving linear equations and inequalities in one variable; solving proportions and incorporating percent applications; manipulating formulas; solving and graphing systems of linear equations and inequalities in two variables; finding areas and volumes of geometric figures; applying similar and congruent triangles; converting measurements within and between U.S. and metric systems; applying Pythagorean Theorem; solving right and oblique triangles; calculating probabilities; organizing data and interpreting charts; calculating central and spread measures; and summarizing and analyzing data. (Prerequisite: Test score required to register)

804-113 College Technical Mathematics 1A - *3 Crs.* Examines linear, quadratic and rational equations; graphs functions; rearranges formulas; solves systems of equations; and solves percent and proportion problems. Applies skills and operations to technical problems. College Technical Mathematics 1A plus College Technical Mathematics 1B are equivalent to College Technical Mathematics 1. (Prerequisite: Test score required to register)

804-114 College Technical Mathematics 1B - *2 Crs.* Continuation of College Technical Mathematics 1A. Includes measurement systems; computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasizes the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is equivalent to College Technical Mathematics 1. (Prerequisite: Completion of or concurrent enrollment in 804-113 College Technical Mathematics 1A)

804-116 College Technical Mathematics 2 - *4 Crs.* Includes vectors; trigonometric functions and their graphs; identities; exponential and logarithmic functions and equations; radical equations; equations with rational exponents; dimension of a circle; velocity; sine and cosine graphs; complex numbers in polar and rectangular form; trigonometric equations; conic sections; and analysis of statistical data. Emphasizes the application of skills to technical problems. (Prerequisite: 804-114 College Technical Mathematics 1B)

804-118 Intermediate Algebra With Applications - *4 Crs.* Offers algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions. (Prerequisite: 804-107 College Mathematics)

804-123 Math With Business Applications (Lakeshore Technical College Course) - *3 Crs.* Covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. (Prerequisite: ACCUPLACER Math minimum score of 79 or Equivalent or 10804100 Math Proficiency)

804-360 Occupational Mathematics 1 - *2 Crs.* Presents principles of arithmetic, calculator use, measuring systems, and introductory algebra and geometry with applications to various occupational areas. Applies general arithmetic and introductory algebra to order of operations, ratios and proportions, measurement in different measurement systems, and basic algebraic problems.

804-361 Occupational Mathematics 2 - *2 Crs.* Develops skills in algebra, geometry and trigonometry. Students will use trigonometry and the Pythagorean Theorem as well as circle and arc relationships to determine print dimensions. Students will calculate tolerances, interference, clearance and cutting speeds using appropriate formulas. (Prerequisite: 804-360 Occupational Mathematics 1)

804-362 Occupational Mathematics 3 - *2 Crs.* Develops skills in calculating missing values for complex machining applications using trigonometry, the Law of Sines and the Law of Cosines. Students will calculate angles of rotation and tilt for three-dimensional situations. This course is for Tool and Die Making and CNC program students. (Prerequisite: 804-361 Occupational Mathematics 2)

804-363 Algebraic Applications for Electrical Trades - *2 Crs.* Develops skills to apply scientific and engineering notations and inverse proportions to electrical formulas. Students will calculate dimensions using basic trigonometry and the Pythagorean Theorem. Students will analyze sine waves and apply the results to AC circuits as well as solve systems of equations. This course is for Electricity and Electrical Power Distribution program students. Recommend completion of 804-360 Occupational Mathematics 1 for students in the Electricity program before enrolling in this course.

804-582 Mathematics 1 - *1 Cr.* Applies principles of arithmetic and algebra to metalworking and drafting occupations. Must be a state-contracted apprentice to enroll in this course.

804-583 Mathematics 2 - *1 Cr.* Applies algebraic terms, expressions, equations and formulas. Includes geometric principles, polygons and oblique triangles to solving problems related to metalworking and drafting trades. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 804-582 Mathematics 1)

804-584 Mathematics 3 - *1 Cr.* Applies principles of algebra, geometry and trigonometry using right triangles and oblique triangles to solve shop-related drawings. Toolmakers, die makers and machine tool operators solve problems related to shop situations. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 804-583 Mathematics 2)

804-585 Mathematics 4 - *1 Cr.* Applies trigonometric solutions to shop-related drawings and solutions of oblique triangles. Toolmakers, die makers and machine tool operators solve problems related to shop situations. Must be a state-contracted apprentice to enroll in this course. (Prerequisite: 804-584 Mathematics 3)

806-105 Principles of Animal Biology - *4 Crs.* Introduces general biological principles, cell structure and function, genetics, comparative anatomy and physiology, evolution, and ecosystems. Includes dissection of various fresh and preserved materials. (Prerequisite: 806-134 General Chemistry or dean consent; Test score required to register)

806-122 Natural Sciences in Society - *3 Crs.* Focuses on the history, philosophy, common concepts and current issues of natural science that have impacted the United States and global society. Explores processes required to analyze natural science issues. Students correlate science issues to personal and professional experiences.

806-134 General Chemistry - *4 Crs.* Covers the fundamentals of chemistry. Topics include the metric system, problem solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water, acids, bases and salts, and gas laws. Students should complete math placement or Intermediate Algebra before taking this course. (Prerequisite: Test score required to register)

806-137 Comprehensive Technical Physics - *4 Crs.* Covers the areas of mechanics, heat, electricity, magnetism and optics through lecture, demonstration and laboratory work. Emphasizes empirical relationships, incorporating mathematical prerequisites. (Prerequisite: 804-107 College Mathematics or 804-114 College Technical Mathematics 1B)

806-177 General Anatomy and Physiology - *4 Crs.* Examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision making and professional communication with colleagues and patients. Prep for Anatomy and Physiology (836-113) or high school biology with C or better STRONGLY RECOMMENDED. (Prerequisites: High school or college chemistry with a C or better; test score required to register)

806-179 Advanced Anatomy and Physiology - *4 Crs.* Advanced Anatomy and Physiology is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. (Prerequisite: 806-177 General Anatomy and Physiology)

806-186 Introduction to Biochemistry - *4 Crs.* Provides students with skills and knowledge of organic and biological chemistry necessary for application within Nursing and other Allied Health careers. Emphasis is placed on recognizing the structure, physical properties and chemical reactions of organic molecules, body fluids and acids. Additional emphasis is placed on biological functions and their relationships to enzymes, proteins, lipids, carbohydrates and DNA. (Prerequisite: 806-134 General Chemistry or high school or college chemistry with a C or better)

806-189 Basic Anatomy - *3 Crs.* Examines concepts of anatomy and physiology as they relate to health careers. Students correlate anatomical and physiological terminology to all body systems. This course is intended for programs that involve indirect patient care, i.e., Health Information Technology, Clinical Coding, Medical Transcription, etc. This is not an acceptable course in health-related programs that involve direct patient care, i.e., Nursing, Radiologic Technology, Surgical Technology, etc. This course is not acceptable as a course substitution for 806-177 General Anatomy and Physiology. (Prerequisite: Test score required to register)

806-197 Microbiology - *4 Crs.* Examines microbial structure, metabolism, genetics, growth and the relationship between humans and microorganisms. Addresses disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Presents the role of microbes in the environment, industry and biotechnology. (Prerequisite: 806-177 General Anatomy and Physiology)

806-375 Applied Science - *2 Crs.* Analyzes basic mechanical and electrical science concepts. Theoretical applications that relate to occupational situations are developed. Mathematical calculations and conceptual models are used throughout the course. (Prerequisite: 804-363 Algebraic Applications for Electrical Trades)

806-376 Applied Physics - *2 Crs.* Analyzes basic mechanical, fluid and electrical science concepts. Theoretical applications that relate to occupational situations are developed. Mathematical calculations and conceptual models are used throughout the course.

809-122 Introduction to American Government - *3 Crs.* Introduces American political processes and institutions. Focuses on rights and responsibilities of citizens and the process of participatory democracy. Students examine the complexity of the separation of powers and checks and balances. Explores the role of the media, interest groups, political parties and public opinion in the political process. Explores the role of state and national government in our federal system. (Prerequisite: Test score required to register)

809-128 Marriage and Family - *3 Crs.* Introduces the sociological aspects of all intimate relationships including marriage and diverse family forms in contemporary United States. Examines love, courtship, mate selection, sexuality, single-hood, marital patterns and parenting practices. Explores the changes and challenges facing the family during its life cycle including relationship violence, alcohol and drug abuse, and divorce. Stresses cognitive, emotional and behavioral factors contributing to marital satisfaction, resilience and success. (Prerequisite: Test score required to register)

809-130 Stress Management - *1 Cr.* Develops effective stress management strategies. Explains the nature of stress and its impact on the individual. Emphasizes the practical application of a variety of coping skills.

809-158 Adolescent Psychology - *3 Crs.* Focuses on biological, intellectual and social development of adolescents. Emphasizes development as a lifelong pattern of change based on maturation and experience. Special topics include moral development, adolescent disorders and juvenile delinquency. (Prerequisite: 809-198 Introduction to Psychology or 809-199 Psychology of Human Relations)

809-159 Abnormal Psychology - *3 Crs.* Surveys the essential features, possible causes, assessment and treatment of the various types of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students explore the diagnosis system of the DSM-IV, trace the history of the psychology of abnormality, examine cultural and social differences as well as current perspectives and diagnosis criteria and treatments. (Prerequisite: 809-198 Introduction to Psychology or 809-199 Psychology of Human Relations)

Course Descriptions

809-161 Critical and Creative Thinking - *3 Crs.* Provides instruction in thinking, decision making, problem solving, idea formation, reasoning and creativity. Students apply critical and creative thinking strategies and enhance their knowledge and application of thinking processes as they examine their own thinking. (Prerequisite: Test score required to register)

809-166 Introduction to Ethics: Theory and Application - *3 Crs.* Provides a basic understanding of the theoretical foundations of ethical thought. Students analyze diverse ethical perspectives and compare relevant issues. Students critically evaluate individual, social and/or professional standards of behavior and apply a systematic decision-making process to ethical dilemmas. (Prerequisite: 801-195 Written Communication)

809-172 Race, Ethnic and Diversity Studies - *3 Crs.* Explores ethnic relations within global and comparative perspectives. Students analyze majority/minority relations, ageism, sexism, sexual orientation, the disabled, and the Americans With Disabilities Act (ADA) within a multicultural context. Students also explore the history of immigration and conquest, principles of transcultural communication, legal liability, and appreciation for diverse aesthetic values to increase respectful encounters among people. (Prerequisite: Test score required to register)

809-174 Social Problems - *3 Crs.* Explores the causes of and possible solutions to selected social problems, such as inequality, crime and deviance, and poverty. Students will examine the interrelationship of social problems and their roots in fundamental societal institutions. (Prerequisite: Test score required to register)

809-188 Developmental Psychology - *3 Crs.* Explores human development throughout the lifespan including developmental theory and research with an emphasis on the interactive nature of the biological, cognitive and psychosocial changes that affect the individual from conception to death. Students engage in application and critical thinking activities to gain an increased knowledge and understanding of themselves and others. (Prerequisite: Test score required to register)

809-195 Economics - *3 Crs.* Provides an overview of how a market-oriented economic system operates, and surveys factors that influence national economic policy. Students explore economic concepts illustrated through a variety of contemporary problems and public policy issues. Students also examine scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. (Prerequisite: 801-195 Written Communication)

809-196 Introduction to Sociology - *3 Crs.* Introduces students to the basic concepts of sociology: culture, socialization, social stratification, multiculturalism, and the five institutions including family, government, economics, religion and education. Students examine sociological topics including demography, deviance, technology, environment, social issues, social change, social organization and workplace issues. (Prerequisite: 801-195 Written Communication)

809-197 Contemporary American Society - *3 Crs.* Examines the network of interdependent social systems which affects students as employees, family members and citizens. In this interdisciplinary course, students study public policy issues which illustrate how our traditional institutions such as family, education, government, work and media are being changed by global, political, demographic, multicultural and technological trends. By exploring contemporary issues, students expand their use of creative and critical thinking skills in evaluating information, making decisions, advocating positions, and participating in the democratic process. (Prerequisite: Test score required to register)

809-198 Introduction to Psychology - *3 Crs.* Surveys the multiple aspects of human behavior. Students survey the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. Students gain an insightful understanding of the complexities of human relationships in personal, social and vocational settings. (Prerequisite: Test score required to register)

809-199 Psychology of Human Relations - *3 Crs.* Explores the relationship between the general principles of psychology and our everyday lives. Students are given the opportunity to achieve a deepened sense of awareness of themselves and others. This understanding enables students to improve their relationships with others at work, in the family and in society. (Prerequisite: Test score required to register)

809-300 Occupational Success Strategies - *2 Crs.* Addresses employment skills that lead to productive working relationships. Emphasizes teamwork, customer service, interaction with diverse populations, problem solving, conflict resolution and handling feedback. Students practice stress management skills, strategies for maintaining mental and physical self-worth, and problem-solving approach to workplace transitions. (Prerequisite: Test score required to register)

831-103 Introduction to College Writing - *3 Crs.* Introduces basic principles of composition, including organization, development, unity and coherence in paragraphs and multi-paragraph documents. (Prerequisite: Test score required to register)

834-109 Pre-Algebra - *3 Crs.* Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra-related courses. (Prerequisite: Test score required to register)

836-113 Prep for Anatomy and Physiology - *2 Crs.* Introduces students to basic principles of biology. Students will become familiar with the nature of science, basic biochemistry concepts, and the structure and function of a cell. (Prerequisite: Test score required to register)

838-104 Introduction to College Reading - *2 Crs.* Provides students with opportunities to develop and expand reading skills including comprehension and vocabulary. Students apply reading skills to academic tasks and read to acquire information from a variety of sources. (Prerequisite: Test score required to register)

890-125 Student Success - *1 Cr.* Develops tools and strategies that support success in college. Focuses on study skills, college resources, goal setting, time management and learning styles. Introduces basic concepts for self-assessing learning and completing an Exit Assessment that provides evidence that learning took place. Students should take this course prior to or during the first semester of their program.

890-130 Career Development - *1 Cr.* Provides opportunity for students to document career skills and attitudes and articulate career plans. Students analyze trends and opportunities in their targeted career, reflect on learning experiences, submit an exit assessment (required for graduation), start a career portfolio, and write a cover letter and résumé.

890-135 Student Leadership Development - *3 Crs.* Provides an in-depth focus on self-motivation, time and financial management, study skills, learning styles, personal strengths and goal setting to support success in college. Enhances reading skills, writing skills and self-esteem. Explores Moraine Park's online learning management system (eCollege) and college services/resources. Exclusively for SSS students. Meets the college requirements for Student Success.

851-xxx Communications: Develops and applies skills in grammar, sentence mechanics and construction, capitalization, punctuation and spelling. Develops skills of the writing process for paragraphs and essays. Students enroll in the course that best serves their learning goal and current skill level based on assessment and instructor recommendation.

854-xxx Mathematics: Develops math skills with whole numbers, percents, fractions, decimals and basic geometric figures. Emphasizes number concepts, work problems, basic formulas, measurements and interpreting graphs, tables and charts. Introduces algebraic principles and basic geometric figures and formulas. Students enroll in the course that best serves their learning goal and current skill level based on assessment and instructor recommendation.

856-xxx Science: Examines broad concepts of science including unifying themes, scientific inquiry, problem solving, interaction of matter and energy, forces and characteristics and structure of living things. Unique courses present basic facts from disciplines of biology, general science and environmental science. Students enroll in the course that best serves their learning goal and current skill level based on assessment and instructor recommendation.

857-xxx Health: Explores general topics of environmental, mental and emotional health, including physical fitness, nutrition, contagious diseases, first aid and reproduction. Students enroll based on instructor recommendation.

858-xxx Reading: Develops and applies basic reading skills of vocabulary, identifying stated and implied main ideas, comprehension, applying information from content, using critical reading skills and thinking strategies. Students enroll in the course that best serves their learning goal and current skill level based on assessment and instructor recommendation.

859-xxx Social Studies: Focuses on applying social studies information in the content areas of U.S. History, World History, Civics and Government, Economics, Environmental Science and Geography. Interprets cartoons, maps, charts and photographs. Examines almanacs, atlases and historical documents. Course numbers 859-712 and 859-766. Students enroll in the course that best serves their learning goal and current skill level based on assessment and instructor recommendation.

860-xxx Basic Computer Skills: Introduces students to the personal computer. Skills developed include turning the computer on and off, basic keyboarding and using Microsoft Windows XP, Windows Explorer, Internet, e-mail and Microsoft Word. Prepares students for personal computer applications, for Moraine Park's introductory computer credit classes and/or for using computer software as part of the Basic Education instructional program.

861-xxx English Language Learning: Develops English language skills of listening, speaking, reading and writing for those whose native language is not English. Contexts of learning include social, occupational and educational settings. Instruction is offered at levels including Beginning Literacy ELL, Low Beginning ELL, High Beginning ELL, Intermediate ELL, High Intermediate ELL and Advanced ELL. Students are assigned to the appropriate level as determined by assessment.

861-xxx English for the Workplace: Provides multilevel ESL instruction for developing competency in work related communicative skills. Learning activities simulate language and expressions that require occupational knowledge. Language skills about work ethics, interpersonal relations, safety on the job and specialized terms will be demonstrated. Students enroll based on instructor recommendation.

861-xxx Community Connections: Introduces students to local/state sites through field experiences, with pre- and post-classroom activities. Provides students with direct access to and practice with various agencies and services, such as health, banking, education, government and business and industry. Students enroll based on instructor recommendation.

861-xxx Preparation for Citizenship: Provides a comprehensive guide for ESL students preparing to become naturalized U.S. citizens. Students practice listening, speaking, reading and writing skills necessary to pass the naturalization requirement tests. (Prerequisites: A minimum ESL proficiency at the high-beginning/low-intermediate level. Student must be eligible for U.S. citizenship.) Students enroll based on instructor recommendation.

890-xxx Living Successfully Today: Focuses on successful financial living by analyzing present and future finances. Students enrolling in this course should have a 7th grade reading level. Students enroll based on instructor recommendation.

890-xxx Parenting Successfully Today: Focuses on techniques to improve parent and child relationships by developing positive guidance, encouraging positive behavior, improving communication skills, living healthier lifestyles, learning about child development and selecting family activities. Students participate in small group, parent-child activities, individualized instruction and online activities. Students enroll based on instructor recommendation.

College Entrance Exam Preparation: Prepares students for exams such as the ACCUPLACER, ACT, SAT, COMPASS, etc. Readiness is assessed and instructors customize a plan, enrolling students in courses to review basic concepts in reading, grammar, arithmetic and algebra as needed.

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Bookstore
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- Fond du Lac 920-929-2105
- West Bend 262-335-5774

Career Planning
- Beaver Dam 920-887-4437
- Fond du Lac 920-924-3244
- West Bend 262-335-5773

Cosmetology Appointments 920-929-2106

Counseling Services
- Beaver Dam 920-887-4441
- Fond du Lac ..920-924-3199 or 920-924-6535
- West Bend 262-335-5874

Disability Services
- Beaver Dam 920-887-4495
- Fond du Lac 920-924-3196
- West Bend 262-335-5741

District Equal Opportunity Officer
- Staff 920-924-3232
- Student 920-924-6459

Diversity Relations 920-924-6355

Economic and Workforce Development 920-924-3449

Employment Services 920-924-3205

Financial Aid/Scholarships.....920-924-3207

Hearing Impaired ... TTY/VP: Use Relay/VRS

Help Desk.....877-740-2213

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- Apprenticeship 920-924-3217
- Basic Education.....920-924-6393
- Business and Culinary Arts 920-929-2115
- Child Care and Health Sciences.....262-335-5314
- General Education.....920-929-2113
- Health Sciences 262-335-5710
- Information Technology 920-887-1428
- Manufacturing Technology 262-306-5321
- Public Services and Health Sciences.....920-924-3270
- Trades and Manufacturing 920-924-6436

Library
- Beaver Dam 920-887-4406
- Fond du Lac 920-929-2470
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- West Bend 262-335-5853

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- Fond du Lac 920-924-3101
- West Bend 262-335-5743

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- Beaver Dam 920-887-4436
- Fond du Lac 920-929-2108
- Fond du Lac Job Center 920-926-1241
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MORAINE PARK
TECHNICAL COLLEGE

APPLICATION FOR ADMISSION

PLEASE TYPE OR PRINT IN INK

1. Legal name: Last First Middle

2. Former last name(s) (if applicable)

3. Permanent address Street or R.F.D. Box number

4. City State Zip code

5. Mailing address (if different) Street or R.F.D. Box number

6. City State Zip code

7. Phone number ( ) Other/Mobile phone number ( )

8. E-mail address 9. Gender: ☐ Male ☐ Female

10. Social Security Number

11. Date of birth (MM/DD/YY)

12. Are you a U.S. veteran? ☐ Yes ☐ No

13. Are you a U.S. citizen? ☐ Yes ☐ No

If no, then are you in the U.S. on a Visa? ☐ Yes ☐ No

Are you a permanent resident? ☐ Yes ☐ No

If you are not a U.S. citizen or permanent resident, please provide:

Visa type Visa number

14. I am a legal resident of: City/Village/Township (circle one)

City/Village/Township County State

15. Name of high school district in which you now reside

16-17. The following questions are confidential. Your responses will help the technical college evaluate recruitment and retention practices and will not affect admission to the college. Question 16(a) and 16(b) relate to racial and ethnic identity. Please respond to both questions.

16(a). Are you Hispanic or Latino (a person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin, regardless of race)? ☐ Yes ☐ No

16(b). Select any other group or groups that apply to you.

- ☐ American Indian or Alaska Native. A person whose ancestors include native peoples of North and South America (including Central America), and who maintains a tribal affiliation or community attachment.
- ☐ Asian. A person whose ancestors include native peoples of the Far East, Southeast Asia or the Indian subcontinent (including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand and Vietnam).
- ☐ Black or African American. A person whose ancestors include any of the black racial groups of Africa.
- ☐ Native Hawaiian or other Pacific Islander. A person whose ancestors include the native peoples of Hawaii, Guam, Samoa or other Pacific Islands.
- ☐ White. A person whose ancestors include native peoples of Europe, the Middle East or North Africa.

17. Have either of your parents completed a four-year college degree or beyond? ☐ Yes ☐ No Or two-year degree ☐ Yes ☐ No

18. Which campus will you be attending? ☐ Beaver Dam ☐ Fond du Lac ☐ West Bend

19. Have you attended this college before? ☐ Yes ☐ No If yes, last year and semester attended

20. Semester you wish to begin: ☐ Fall ☐ Winter/Spring Year

21. Program/major choice Program code # (if known)

22. Name of last high school City State

Are you a high school graduate? ☐ Yes ☐ No If yes, please enter your graduation date (month/year)

23. If you did not receive a high school diploma, have you completed either the GED® Tests ☐ Yes ☐ No or HSED? ☐ Yes ☐ No

If yes, date completed Administrator

24. Have you taken a high school course for technical college credit? (such as Tech Prep, Youth Options, Youth Apprenticeship, Certified Nursing Assistant, Certified Co-ops) ☐ Yes ☐ No (You must provide a transcript or certificate to verify credit earned)

25. Did you complete the Wisconsin Covenant program, or if you are a current high school student, are you a Covenant Scholar? ☐ Yes ☐ No

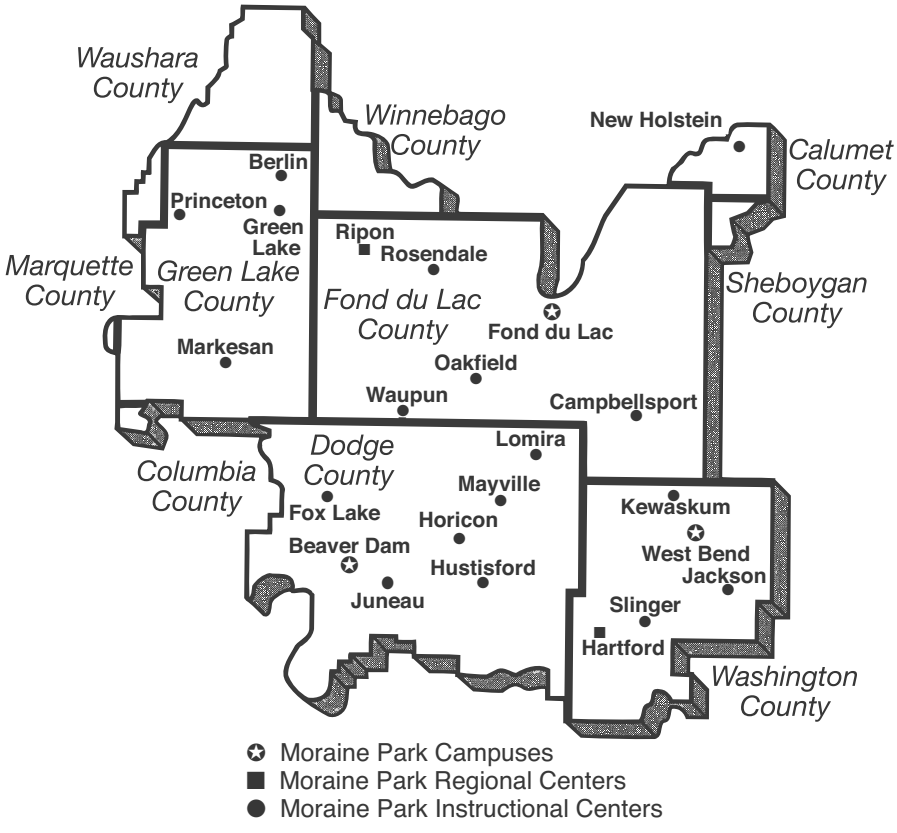
26. Circle highest grade completed: 8 9 10 11 12 13 14 15 16 17 over

27. List previous colleges and universities attended (You must provide an official transcript to request credit transfer)

Name	City	State/Province	Date attended	Date graduated

28. I certify that the information on this application is true and complete to the best of my knowledge.

Date Signature



DON'T FORGET TO:

- ✓ Enclose the $30 application fee.
- ✓ Request copies of official transcripts—send to Student Services at Moraine Park.
- ✓ Send the application form directly to Moraine Park.
- ✓ Send test scores or schedule a test date.

Beaver Dam Campus
700 Gould Street
Beaver Dam, WI 53916-1994

Fond du Lac Campus
235 North National Avenue
Fond du Lac, WI 54935-2884

West Bend Campus
2151 North Main Street
West Bend, WI 53090-1598

1-800-472-4554
morainepark.edu

MORAINE PARK TECHNICAL COLLEGE

Moraine Park Technical College does not discriminate on the basis of race, color, national origin, sex, disability or age in employment, admissions or its programs or activities. The following person has been designated to handle inquiries regarding the College's nondiscrimination policies: Equal Opportunity Officer, Moraine Park Technical College, 235 North National Avenue, PO Box 1940, Fond du Lac, WI 54936-1940, 920-924-6459 or 920-924-3232.

INSTRUCTIONS

FOR COMPLETING THE APPLICATION

This application form is the first step toward admission to any program (major) at Moraine Park Technical College (MPTC). When the form and appropriate fee are received, further information on requirements and/or procedures will be mailed to you.

General Instructions

- Complete all sections of the form.
- Please print clearly—type is preferred.
- Check morainepark.edu to ensure that applications for your program selection at this time are being accepted.
- Apply early!

Application Fee

- Attach the $30 nonrefundable application fee. Send a check or money order made out to MPTC; do not send cash.
- Applications will not be processed without an application fee.
- The $30 fee is a one-time-only fee.

Transcripts

- Request official copies of all academic transcripts, including high school, Tests of General Educational Development (GED® Test), HSED, college or university. Contact each institution and ask to have your official transcripts mailed directly to the Admissions Office at Moraine Park.
- If you are still enrolled in high school, send a transcript of the courses you have completed, along with a list of the courses to be taken prior to graduation.

Testing/Assessment

- Moraine Park Technical College requires testing for acceptance into programs. Test results are generally used to place you in courses and/or programs where you can succeed academically.
- If you have taken the ACT, ACCUPLACER or COMPASS, please send your score report to Moraine Park.
- Contact Moraine Park for testing requirements.
- Accommodations are available for students with special needs.

Disclosing Your Social Security Number:

Moraine Park Technical College may request and use your social security number for record keeping and statistical purposes related to auditing, enforcing and evaluating Federally-supported education programs (Federal law 20 U.S.C. § 1232g (1998)). You are required to provide your social security number if you are, or will be, applying for financial aid. If you will not be applying for financial aid, then providing your social security number is optional. However, there may be a delay associated with processing your application while an alternate number is assigned.

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MORAINE PARK

TECHNICAL COLLEGE