For the most current information, always check www.mcc.edu
The abbreviations for courses are:

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<td>ACLT</td>
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<td>ANTH</td>
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<td>ART</td>
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<td>ASL</td>
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<td>AUTO</td>
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<td>BAKE</td>
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<td>CADD</td>
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<td>INSU</td>
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<td>Manufacturing Design</td>
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<td>Workforce Development</td>
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Academic Literacy

ACLT-075 Reading Reasoning, and Writing
5 Credits 5 Contact
Prerequisites: Placement into ENGL-098 or ENGL-099 AND placement into RDNG-016 (ACSR-016) is required.
ACLT-075 uses topic-based readings to support accelerated student learning of the critical reading and writing strategies that will be needed in college-level courses. Students who are willing to make the commitment to this intensive learning environment have the opportunity to advance to ENGL-101 in just 16 weeks.

ACLT-076 Reading, Writing, and College Success
4 Credits 4 Contact
Prerequisites: Placement into ENGL-099 and RDNG-030. This course blends ENGL-099 and RDNG-030 into an accelerated framework to equip students to successfully participate in college level courses more quickly. Students develop the skills for understanding and analyzing college-level reading materials combined with intensive instruction and practice in writing coherent paragraphs and essays for specific audiences. Weekly workshop sessions apply reading and writing strategies helping students develop their ability to make connections between college level reading and writing material.

Accounting

ACCT-101 Applied Accounting
4 Credits 5 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Applied Accounting concentrates on the application of financial accounting principles using general ledger software. Topics include accounting for cash and payroll, a service business, and a merchandising business.

ACCT-105 Computerized Accounting
2 Credits 2 Contact
Pre or Co-requisites: ACCT-101 or ACCT-201. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students will have hands-on experience in setting up an accounting system for a new or existing company using accounting software. Students also will learn how to perform numerous types of accounting procedures using commonly used accounting software.

ACCT-107 Payroll Accounting
2 Credits 2 Contact
Prerequisite: ACCT-101 or ACCT-201. Placement into RDNG-016 (ACSR-016) is required. This course emphasizes the specifics of accounting for payroll utilizing the principles of accounting. Students receive experience in calculating payroll, completing payroll taxes and preparing records and reports, in addition to learning to calculate, transmit and verify payroll electronically.

ACCT-201 Principles of Accounting I
5 Credits 5 Contact
Prerequisite: MATH-082 or Placement Test recommendation for MATH-120 or higher; Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Principles of Accounting I concentrates on financial accounting. Topics include accounting theory, financial reporting, basic accounting cycle, and accounting for cash, inventories, receivables, payables, plant assets and stockholders’ equity.

ACCT-202 Principles of Accounting II
5 Credits 5 Contact
Prerequisites: ACCT-201 and MATH-082 or placement into MATH-120 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Principles of Accounting II concentrates on managerial accounting. Topics include job and process cost systems, cost-volume-profit analysis, activity based accounting, just-in-time techniques and equilibrium mathematics. Computer skills are used.

ACCT-203 Intermediate Accounting
5 Credits 5 Contact
Prerequisite: ACCT-201 with a minimum 2.0 grade. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Intermediate Accounting I concentrates on financial accounting and reporting in accordance with generally accepted accounting principles. Topics include a review of principles of accounting and reporting, accounting for most assets, time value of money concepts, and revenue recognition.

ACCT-207 Advanced Lotus: Math of Finance
3 Credits 3 Contact
Prerequisite: ACCT-202, with a minimum 2.0 grade. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Cost Accounting concentrates on planning, control and analysis of the manufacturing process involving product costs using principles of the Cost Accounting Standards Board. Major topics include: Cost-volume-profit analysis, activity based accounting, just-in-time inventory and absorption vs. variable costing. Spreadsheet software is used extensively.

ACCT-213 Intermediate Accounting
4 Credits 4 Contact
Prerequisite: ACCT-201 with a minimum 2.0 grade. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Cost Accounting concentrates on planning, control and analysis of the manufacturing process involving product costs using principles of the Cost Accounting Standards Board. Major topics include: Cost-volume-profit analysis, activity based accounting, just-in-time inventory and absorption vs. variable costing. Spreadsheet software is used extensively.

ACCT-215 Individual Income Tax Accounting
4 Credits 4 Contact
Prerequisite: ACCT-201 with a minimum 2.0 grade. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Income Tax Accounting concentrates on the taxation of individuals from a historical and theoretical perspective, as well as preparation of individual income tax returns under current tax law. Recent tax software is used to prepare a comprehensive individual income tax return.

ACCT-216 Computer Augmented Accounting
4 Credits 4 Contact
Prerequisite: ACCT-202 with a minimum 2.0 grade and COMI-261. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Includes the study of accounting information data base administration and the system of recording summarizing, reporting, statement analysis, and forecasting using spreadsheets and database techniques in a computer environment. Emphasizes problem-solving using the tools of an accounting package.
ACCT-220 Governmental & Non-Profit Accounting  
4 Credits  
Prerequisite: ACCT-202. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Governmental and Non-Profit Accounting will review the accounting principles and procedures associated with governmental entities and not-for-profit organizations, and compare and contrast the major reporting objectives for fund accounting, and the characteristics of modified accrual and accrual based accounting systems.

ACCT-223 Intermediate Accounting II  
5 Credits  
Prerequisite: ACCT-202. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course concentrates on financial accounting and reporting in liabilities, stockholder's equity, income taxes, leases, pensions, postretirement benefits, accounting changes and error analysis as well as a full review of the statement of cash flows.

ACCT-230 Corporate Income Tax Accounting  
5 Credits  
Prerequisite: ACCT-202. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corporate Tax Accounting focuses on the taxation of corporations, LLC's, partnerships, estates and trusts from a historical and theoretical perspective. Students will also prepare tax and information returns based on current tax law.

ACCT-235 Accounting Information Systems  
4 Credits  
Prerequisite: ACCT-202. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Accounting Information Systems concentrates on the design and operation of AIS. Students will analyze systems, database design, flowcharts and problem solving with spreadsheets. Emphasis will be placed in CPA requirement material.

ACCT-240 Accounting Reports  
4 Credits  
Prerequisite: ACCT-202. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course focuses on preparing and delivering accounting information to managers and clients. The course will include report analysis to support a financial position as well as preparing financial reports using spreadsheets, databases and electronic presentation methods. Required reports include analyses of accounting topics, and client correspondence.

ACCT-250 Auditing  
4 Credits  
Prerequisite: ACCT-223 with a minimum grade of 2.0 or concurrent enrollment. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Auditing concentrates on audit procedures of historical financial statements in accordance with Generally Accepted Auditing Standards. Topics include engagement planning, risk assessment, internal control, audit reports and professional ethics. Course will include an introduction to audit software and sampling techniques. Material on the CPA exam will be emphasized.

ACCT-290 Accounting Co-Op/Internship  
2 Credits  
Prerequisite: ACCT-213 with a minimum 2.0 grade. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course provides the opportunity for work experience or community service under the supervision of MCC accounting faculty and a participating employer/community partner. Course concentrates on the connections to previously studied accounting theory through reflection assignments. Progress reports and specialized projects are required.

Air Cond. Heat & Refrigeration Technology

ACHR-140 Basic Mechanical Refrigeration  
4 Credits  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course concentrates on the design and installation of commercial refrigeration and air conditioning systems, sketching and control circuits for refrigeration and air conditioning systems, installation of commercial refrigeration systems, and basic refrigeration equipment. Emphasis will be placed on understanding the fundamentals of mechanical refrigeration, installation and operation of gas- and oil-fired warm-air heating systems. Electric and hydronic heating systems will be covered.

ACHR-141 Air Conditioning & Refrigeration Controls I  
6 Credits  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Topics include basic electrical jobs, control system components, electrical circuits, electrical safety, the use of special tools and equipment, service air conditioning and refrigeration units and systems. Emphasis will be placed on understanding the fundamentals of mechanical refrigeration, installation and operation of gas- and oil-fired warm-air heating systems. Electric and hydronic heating systems will be covered.

ACHR-142 Heating Systems I  
6 Credits  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course concentrates on the connections to previously studied accounting theory through reflection assignments. Progress reports and specialized projects are required.

ACHR-143 Sealed System Installation  
6 Credits  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The installation and start up of residential/light commercial cooling, heating and refrigeration systems. Emphasis on the safe use of tools of the trade for the installation and start up of refrigeration and air conditioning-cooling equipment.

ACHR-144 Air Conditioning Fundamentals  
3 Credits  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The function and operation of the controls used in domestic and light commercial air conditioning (cooling and heating) and refrigeration equipment; electrical fundamentals, basic electrical circuits, electrical safety, the use of special tools and equipment, basic electrical jobs, control system components, electrical schematic diagrams and control circuits for domestic and light commercial cooling, heating and refrigeration equipment.
ACHR-145 Duct System Fabrication
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. An introduction to the layout, fabrication and installation of air-handling duct systems. A study of basic system designs, system components and the duct fabrication process. Emphasis on sheet metal duct systems.

ACHR-147 Refrigerant Handling
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is specifically designed to prepare students for the EPA section 608 of the Clean Air Act certification exam. At the end of this course a third party certification exam will be conducted and student skills will be assessed.

ACHR-241 Air Conditioning and Refrigeration Controls II
6 Credits 8 Contact
Prerequisite: ACHR-141. Placement into RDNG-016 (ACSR-016) is required. The function and operation of the electrical and electronic system controls used on commercial air conditioning (cooling and heating) and refrigeration equipment; safe working practices using tools and test equipment and troubleshooting.

ACHR-242 Heating Systems II
6 Credits 8 Contact
Prerequisite: ACHR-141 and ACHR-142. Placement into RDNG-016 (ACSR-016) is required. Service procedures for gas, fuel oil and electrical heating systems and the installation of hydronic heating systems. Includes the use of specialized tools, instruments and charts to perform troubleshooting procedures. Major emphasis is on the maintenance and service of gas- and oil-fired equipment.

ACHR-243 Sealed System Service
6 Credits 8 Contact
Prerequisite: ACHR-141 and ACHR-143. Placement into RDNG-016 (ACSR-016) is required. Study of operations required to install and service commercial air conditioning and refrigeration equipment; safe performance of duties, recognition and use of tools and testing instruments, and troubleshooting sealed refrigeration systems.

ACHR-260 Heating, Ventilation and Air Conditioning Systems Design I
3 Credits 4 Contact
Prerequisite: ACHR-142 and ACHR-144. Placement into RDNG-016 (ACSR-016) is required. Planning, sizing and selection of HVAC systems for residential and commercial buildings. Includes HVAC systems overview, heating and cooling load calculation and equipment selection. Calculations use standard HVAC design forms and computer software.

ACHR-261 Heating, Ventilation and Air Conditioning Systems Design II
3 Credits 4 Contact
Prerequisite: ACHR-260. Placement into RDNG-016 (ACSR-016) is required. Distribution systems required for building heating and cooling. Includes an overview of automatic system controls and the design and sizing of duct and piping systems. Calculations use standard HVAC design forms and computer software.

Allied Health
Health Sciences

AHLT-101 Exploring Health Professions
1 Credits 1 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course introduces the student to a variety of health professions offered at MCC. Students explore each profession through class discussion and journal assignments. Each student has the opportunity to interview a health professional and report back to the class what they learned. The student will also learn about current trends in health care. This course encourages students to assume responsibility for their ultimate success and heighten awareness of their personal and professional goals.

AHLT-102 Medical Terminology
1 Credits 1 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course is a study of medical terminology using combined Greek and Latin prefixes, suffixes, word roots and combining forms to build words.

AHLT-109 Basic Medical Billing
3 Credits 3 Contact
Prerequisite: AHLT-102 and OISY-101. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Provides education and training in the basic knowledge of medical billing and insurance form billing.

AHLT-112 Nutrition for Health
2 Credits 2 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Completion of BIOL-151 is recommended. This is a study of nutrition, a combination of processes by which the body receives and utilizes nutrients. Food and water constitute one of the body's physiological needs. This course will also help the student to understand how nutrition assists in maintaining the wellness state throughout the life cycle.

AHLT-113 Multicultural Health Care
1 Credits 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. The cultural traditions and perspectives of the client influence his/her health-seeking behaviors. This course will explore key cultural components identified as a framework for health care delivery in a culturally diverse society: communication, social organization, environmental control, biological variations and health care beliefs. This framework will be utilized as a template in the health care assessment of particular cultural groups, including those of African, Asian, Mid-Eastern and other ethnic heritages.

AHLT-114 Radiography
2 Credits 1 Contact
Prerequisite: Currently employed in a dental office. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Division signature required. Co-Requisite: AHLT-114L. This course is for office trained Dental Assistants only.
AHLT-114L Radiography Lab
0 Credits 1 Contact
Prerequisite: Currently employed in a dental office; division signature required. Co-requisite: AHLT-114.
This course is for office trained Dental Assistants only.

AHLT-120 Phlebotomy Foundations
2 Credits 2 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course is for beginning phlebotomy students. Includes theory and practical skills in venipuncture (drawing blood), collection and preparation of various specimens and related lab tests. Asepsis and professional ethics are reviewed.

AHLT-135 Dosage & Solution Calculations
1 Credits 1 Contact
Prerequisite: Division signature required; Math placement test recommendation of MATH-130 or higher, or completion of a 100 level (or higher) Math course with a minimum grade of 2.0; for pre-Nursing students: course must be completed before applying to the Nursing program, but no more than 2 years prior to application. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course reflects the importance that the real world places on critical thinking and problem solving. It will introduce the beginning health science student to the procedures and steps used to calculate drug dosages in basic clinical applications. The course will focus primarily on the calculation of dosages by the oral and parenteral routes. A step-by-step procedure for calculation of actual medication problems will be used.

AHLT-150 Allied Health Anatomy
4 Credits 3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An introduction to the concepts of human anatomy and physiology as it relates to the study of diseases and illness in the Health Sciences.

AHLT-150L Allied Health Anatomy Lab
0 Credits 1 Contact
An introduction to laboratory principles of human anatomy and physiology as it relates to the study of diseases and illness in the Health Sciences.

AHLT-235 Advanced Drug Dosage Calculations
1 Credits 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course introduces the health science student to the procedures and steps used to calculate drug dosages in advanced clinical applications. The course will focus primarily on the administration and titration of dosages by the intravenous route, via gravity and pump infusions. Additional emphasis will be given to specialized drug dosage applications.

AHLT-250 Clinical Histologic Techniques
15 Credits 15 Contact
Program Coordinator's signature required. Prerequisite: 39 prescribed credits from Histologic Technician Program and 8 elective credits with a minimum 2.5 GPA. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Theory and clinical experience for the Histologic Technician program. Includes instrumentation, microscopy processing, tissue preparation, microtomy, mounting media, decalcification, frozen sections, staining, histochemistry and cytology. Taught at Beaumont Hospital for six months on a 40 hour/week schedule.

American Sign Language
Humanities

ASL.-101 American Sign Language I
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
In this course, students will study the basic structure of American Sign Language through interaction and storytelling. Reading assignments will emphasize the life and culture of American Deaf people. Students will also retell ASL stories in front of the class.

ASL.-102 American Sign Language II
4 Credits 4 Contact
Prerequisite: ASL.-101. Placement into RDNG-016 (ACSR-016) is required.
In this course, students will continue the study of basic structure of American Sign Language through interaction and storytelling. Reading assignments will emphasize the life and culture of American Deaf people. Students will also retell ASL stories in front of the class.

ASL.-111 Deaf Community and Culture
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Learning a second language at MCC gives the student the opportunity to understand and use the language of the Deaf Community. Since students will continue their learning in the community, it is essential that they learn appropriate behaviors, showing awareness of and respect for the Deaf Community and its history and culture. Discussions, activities and readings reinforce what students learn from videotapes, guest speakers and the instructor.

Anthropology
Fine Arts & Social Sciences

ANTH-100 Survey of Forensic Science
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is a general introduction to the field of forensic science. This course examines the history of forensic science and explores various forensic sciences and their relation to presentation of evidence and problems of law. This course introduces the major concepts and areas of specialty within forensic science and the professional requirements for careers in these areas. This course reviews current guidelines for quality assurance/control and certification/accreditation within the field.

ANTH-200 Peoples and Cultures of Africa
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course addresses the continent of Africa, its peoples and its cultures. It deals with geography, prehistory and history of Africa, territorial groups by region and climate, demographic and racial aspects, linguistic and religious composition, and its cultural institutions. Emphasis on social and cultural change and the continuity of traditional ways of life of African people.
ANTH-210 Forensic Anthropology
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is designed to explore the application of physical anthropological techniques to medical and legal investigations. This class combines lecture and laboratory formats to aid students in exploring the relationship of the skeleton to biological features, the information that can be garnered from a skeleton to aid in the identification of unknown individuals, and the usefulness of forensic anthropology to crime investigations.

ANTH-211 Introduction to Cultural Anthropology
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course addresses human origins and culture, emphasizing pre-literate people and their societies. Facts, concepts, and methods of cultural anthropology and its role among behavioral sciences with attention to the biological factors of human evolution and racial classification.

ANTH-212 Human Origins - Intro Phys. Anthropology
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course explores humans and their biological diversity and evolution through an examination of evolutionary theory, human genetics, primatology, and fossil and archaeological evidence of the physical traits and cultural behaviors of human and our earliest ancestors in the Primate Order.

ANTH-213 Introduction to Archaeology
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. An introduction to the techniques, methods, and theories anthropologists use in interpreting the past and explores what anthropologists have learned about our human past. Students will also learn to apply this knowledge towards the interpretation of the material culture of prehistoric native cultures in the United States. Students will become familiar with archaeological research through readings, literature research, films, software simulations and hands-on laboratory exercise. This course combines lecture and laboratory components.

ANTH-214 Sustainability and Culture Change
3 Credits 3 Contact
Prerequisite: A 2.0 in either ANTH-211 or SOCY-191. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
What does it mean to be "sustainable”? This course is an exploration of sustainability from an anthropological perspective. Students examine the socio-cultural dimensions of environmental issues by drawing together research and forward thinking on the environment, socio-cultural systems, and culture change. By studying other cultures and alternative movements, students examine the process by which sustainable practices are incorporated into cultures with an anthropological understanding of why some things work and others don’t. Through a critical study of policies, best practices and initiatives at the global, national and local levels, students will develop a better understanding of what sustainable living will mean for humanity in all its diversity.

Arabic
Humanities

ARBC-111 Beginning Standard Arabic
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Study of standard Arabic concentrating on various dialects. Emphasis on life and culture in the Arab world with study of basic Arabic scripts. Includes oral and written practice.

ARBC-112 Beginning Standard Arabic II
4 Credits 4 Contact
Prerequisite: ARBC-111; Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Continuation of the study of standard Arabic concentrating on various dialects, using verbal practice and drills. Emphasis on life and culture of Arabs in the Arab world.

Art
Fine Arts & Social Sciences

ART.-101 Art Education
3 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course is designed for Art Education majors and includes topics addressing how to organize creative art activities in an elementary (K-6) curriculum. The course addresses the philosophy of art education; motivation, guidance and evaluation of child art; the normal growth pattern of child art and the functions of art in society. Design sensitivity and personal creativity are stimulated through laboratory experiences.

ART.-102 Secondary Methods of Art Education
3 Credits 4 Contact
Prerequisite: ART.-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course is designed for Art Education majors and includes topics addressing how to organize creative art activities in a junior or senior high school (Grades 7-12); art and the exceptional child; characteristics of the adolescent learner; social and ethical issues in adolescent art; studio procedures to introduce specialized art careers.

ART.-105A Design Studio Ctr I
1 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The Graphic Design Studio Center offers students the opportunity for more real-world experiences under controlled conditions while undertaking their regular coursework in Graphic Design. While similar to an internship, this course will be a college-based design studio where potential clients will be invited to submit design projects for development by participating students. Students will be expected to contribute to all aspects of development of real design projects, depending upon their level of skill. Because many of the clients will be from the non-profit community sector, students will also be undertaking a community service commitment to their college design experience. Use of the graphic design computer labs will be expected. Meeting times will be flexible but students will be required to commit to two hours a week per credit meeting with the instructor and other students and spend additional time outside of regular meetings working on design studio projects.

For the most current information, always check www.mcc.edu
ART.-105B Design Studio Ctr I
1 Credit  2 Contact
Prerequisite: Permission of instructor required. Placement into RDNG-016 (ACSR-016) is required.
The Graphic Design Studio Center offers students the opportunity for more real-world experiences under controlled conditions while undertaking their regular coursework in Graphic Design. While similar to an internship, this course will be a college-based design studio where potential clients will be invited to submit design projects for development by participating students. Students will be expected to contribute to all aspects of development of real design projects, depending upon their level of skill. Because many of the clients will be from the non-profit community sector, students will also be undertaking a community service commitment to their college design experience. Use of the graphic design computer labs will be expected. Meeting times will be flexible but students will be required to commit to two hours a week per credit meeting with the instructor and other students and spend additional time outside of regular meetings working on design studio projects.

ART.-105C Design Studio Ctr I
1 Credit  2 Contact
Prerequisite: Permission of instructor required. Placement into RDNG-016 (ACSR-016) is required.
The Graphic Design Studio Center offers students the opportunity for more real-world experiences under controlled conditions while undertaking their regular coursework in Graphic Design. While similar to an internship, this course will be a college-based design studio where potential clients will be invited to submit design projects for development by participating students. Students will be expected to contribute to all aspects of development of real design projects, depending upon their level of skill. Because many of the clients will be from the non-profit community sector, students will also be undertaking a community service commitment to their college design experience. Use of the graphic design computer labs will be expected. Meeting times will be flexible but students will be required to commit to two hours a week per credit meeting with the instructor and other students and spend additional time outside of regular meetings working on design studio projects.

ART.-110 Art Appreciation
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course is intended to acquaint students with the formal elements of art and the principles of design in a variety of media. Students will develop an appreciation for works of art of any period or origin. Students will also gain an understanding of the making of art as a process of critical thinking and problem solving, and how it relates to their lives.

ART.-111 Art History Survey Prehistoric to 14 C
4 Credits  4 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The history of art from earliest times through the Middle Ages in Europe, the Mid-East, and Africa. Includes painting, sculpture, and architecture.

ART.-112 Art History Survey Renaissance to Modern
4 Credits  4 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The history of art from the Middle Ages through the Twentieth Century. Includes painting, architecture and sculpture.

ART.-116 Art History Survey Non Western Art
4 Credits  4 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will present a brief survey of the art of India, China, Japan, Africa, Meso-America and North America from the earliest times through the 21st Century. It will cover the painting, sculpture, architecture and minor arts of these areas as well as the cultural context in which the art was produced. Religion, history and customs will be explored to develop a better understanding of visual appearance as well as the significance of the art within its own culture.

ART.-121 Intro to Graphic Design Theory & Process
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will provide students with an introduction to a wide variety of career paths and disciplines under the umbrella field of Graphic Design. Students will learn what is involved in different jobs, what is typography, what does it mean to work with clients, and exposure to different processes related to graphic design including printing pre-press, paper and ink, and an introduction to the terminology used in graphic design.

ART.-122 Graphic Design Survey
3 Credits  3 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will provide students with a historical survey of Graphic Design and different aspects of the role of the graphic designer and use of design for visual communications in various industries. Internet access is necessary for some aspects of project research and development.

ART.-131 Drawing
3 Credits  6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
A freehand drawing course using basic drawing materials. The figure and still-life as well as other traditional and non-traditional sources for visual imagery are explored. Emphasis is placed on the visual concept and its relationship to techniques and materials.

ART.-132 Drawing II
3 Credits  6 Contact
Prerequisites: Minimum 2.0 in ART.-131 and ART.-141. ART.-111 and ART.-112 strongly recommended. Placement into RDNG-016 (ACSR-016) is required.
Continuation of ART.-131 with emphasis on more advanced training. Color is introduced as a means for creative expression. The development of personal imagery through a variety of approaches is emphasized.

ART.-133 Basic Illustration
3 Credits  6 Contact
Prerequisite: ART.-122, ART.-132, ART.-145 and PHOT-180. Placement into RDNG-016 (ACSR-016) is required.
This course explores basic editorial and advertising illustration techniques from line art to painting to collage. Students will examine how the various techniques are applied to art as a storytelling medium. Traditional and non-traditional methods will be explored and students will be invited to explore digital means of manipulating illustrations for some projects using the Art Area computer lab. The course will include a review of the historical and current trends, leaders, and uses of illustration in publishing and other fields of visual communication.
ART.-135 Figure Drawing
3 Credits 6 Contact
Prerequisite: Minimum 2.0 in ART.-132. Note: ART.-111 and ART.-112 are strongly recommended. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
A traditional life drawing course concentrating on the technical and artistic problems involved in the drawing of the human figure. The course explores a variety of media and compositional concerns with emphasis on the finished drawing as an esthetic statement.

ART.-141 Basic Two-Dimensional Design
3 Credits 6 Contact
Note: Recommend placement into MATH-072 or MATH-082 or higher. Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Introduction to underlying concepts for making and analyzing two-dimensional art. Application of the use of design elements and principles with basic color theory to achieve specific goals for visual communication is studied.

ART.-142 Basic Three-Dimensional Design
3 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Visual fundamentals of three-dimensional design. A basic experience in the expression of personal ideas in form, using a variety of techniques and methods for forming materials.

ART.-145 Intro to Digital Design
3 Credits 6 Contact
Prerequisite: ART.-141. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The focus of this course is on the introduction to the creation of computer-based art using the MAC OS environment. Students will be introduced to the Macintosh Operating System interface, together with graphic design, photo manipulation, and Illustration industry standard software dealing with Vector Graphics and Bitmapped Graphics. Students will be required to work in the Art Area Computer Lab for the development and completion of their projects. Students will be required to use the Internet and email for various class activities. This course is one of several first-year art courses that will be used to assess the Supplemental Application for continuing in the Graphic Design Degree program.

ART.-146 Typography and Type Design
3 Credits 6 Contact
Prerequisite: ART.-131 with a minimum grade of 2.5. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.Pre or Co-requisite: ART.-145.
The focus of this course is on the introduction to typography, design, classification, and the use of type as a design element. Students will be encouraged to use the computer for revision of final designs using various illustrations/type design software.

ART.-190 Foundation Portfolio
1 Credits 1 Contact
Prerequisite: Minimum 2.0 in ART.-135, ART.-142, and ART.-145. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This is a course for students who have completed most of the foundation studio courses and are prepared to create a digital portfolio of that work. Students participate in critiques and learn how to document their best work.

ART.-205A Design Studio Center II
1 Credits 2 Contact
Prerequisite: Permission of instructor. Placement into RDNG-016 (ACSR-016) is required.
The Graphic Design Studio Center offers students the opportunity for more real-world experiences under controlled conditions while undertaking their regular coursework in Graphic Design. While similar to an internship, this course will be a college-based design studio where potential clients will be invited to submit design projects for development by participating students. Students will be expected to contribute to all aspects of development of real design projects, depending upon their level of skill. Because many of the clients will be from the non-profit community sector, students will also be undertaking a community service commitment to their college design experience. Use of the graphic design computer labs will be expected. Meeting times will be flexible but students will be required to commit to two hours a week per credit meeting with the instructor and other students and spend additional time outside of regular meetings working on design studio projects.

ART.-205B Design Studio Center II
1 Credits 2 Contact
Prerequisite: Permission of instructor. Placement into RDNG-016 (ACSR-016) is required.
The Graphic Design Studio Center offers students the opportunity for more real-world experiences under controlled conditions while undertaking their regular coursework in Graphic Design. While similar to an internship, this course will be a college-based design studio where potential clients will be invited to submit design projects for development by participating students. Students will be expected to contribute to all aspects of development of real design projects, depending upon their level of skill. Because many of the clients will be from the non-profit community sector, students will also be undertaking a community service commitment to their college design experience. Use of the graphic design computer labs will be expected. Meeting times will be flexible but students will be required to commit to two hours a week per credit meeting with the instructor and other students and spend additional time outside of regular meetings working on design studio projects.

ART.-205C Design Studio Center II
1 Credits 2 Contact
Prerequisite: Permission of instructor. Placement into RDNG-016 (ACSR-016) is required.
The Graphic Design Studio Center offers students the opportunity for more real-world experiences under controlled conditions while undertaking their regular coursework in Graphic Design. While similar to an internship, this course will be a college-based design studio where potential clients will be invited to submit design projects for development by participating students. Students will be expected to contribute to all aspects of development of real design projects, depending upon their level of skill. Because many of the clients will be from the non-profit community sector, students will also be undertaking a community service commitment to their college design experience. Use of the graphic design computer labs will be expected. Meeting times will be flexible but students will be required to commit to two hours a week per credit meeting with the instructor and other students and spend additional time outside of regular meetings working on design studio projects.
ART.-214 Art History - 19 C. Art  
4 Credits 6 Contact  
Prerequisite: ENGL-101, Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Origins and development of various styles in painting, sculpture and architecture during the Nineteenth Century.

ART.-215 Art History - 20th C. Art  
4 Credits 6 Contact  
Prerequisite: ENGL-101, Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Origins and development of various styles in painting, sculpture, and architecture during the Twentieth Century.

ART.-221 Screen Printing I  
3 Credits 6 Contact  
Prerequisites: ART.-131, ART.-141. Placement into RDNG-016 (ACSR-016) is required.  
This course provides an introductory experience in the techniques, materials, history, and contemporary practice in the art of screen printing. Students will explore copy preparation, mesh and frame selection, and printing techniques. Students will build their technical skills through the actual production of screen-printed works.

ART.-222 Screen Printing II  
3 Credits 6 Contact  
Prerequisites: ART.-145, ART.-221. Placement into RDNG-016 (ACSR-016) is required.  
This course provides advanced experience in the techniques, materials and contemporary practices in the art of screen printing. Students will explore multi-color registration, textile and alternative printing techniques, as well as, production techniques. Students will build their technical skills through the actual production of screen-printed works.

ART.-231 Advanced Drawing  
3 Credits 6 Contact  
Prerequisite: Minimum grade of 2.0 in ART.-132. Placement into RDNG-016 (ACSR-016) is required.  
Development and refinement of individual ideas and images using a variety of drawing materials. Emphasis is placed on the art of drawing as a completed aesthetic statement.

ART.-232 Advanced Illustration  
3 Credits 6 Contact  
Prerequisite: ART.-133. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
This course explores advanced editorial and advertising illustration techniques as an extension of ART.-133, Basic Illustration Techniques, and is intended for students who envision making illustration a possible career. Students will further examine how the various techniques are applied to art as a storytelling medium and will be encouraged to develop their own areas of specialization. Traditional and non-traditional methods will be encouraged including digital means of creating and manipulating illustrations using the Art Area computer lab.

ART.-233 Sequential Art: Comics & Graphic Story  
3 Credits 6 Contact  
Prerequisite: ART.-133 and ART.-146. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Pre or Co-requisite: ENGL-102  
This course is an introduction to the language, principles, traditional tools, and creation of sequential art, a medium of pictorial storytelling. This course will examine a variety of approaches, including the creation of information sequences, comic books, caricature, cartooning anatomy, and storyboarding in addition to studying the history of the medium, political cartooning and social commentary, and examining other forms of graphic storytelling such as the graphic novel as a literary medium. Projects include study of current sequential works, as well as the development of an individual's style of illustration, editorial cartoons, comic strips, mini comics, ashcan comics, and a term paper.

ART.-235 Printmaking I  
3 Credits 6 Contact  
Prerequisite: Minimum 2.0 in ART.-132. Placement into RDNG-016 (ACSR-016) is required. Note: ART.-111 and ART.-112 strongly recommended.  
Intaglio printing and methods and techniques; hard and soft-ground etching, aquatint, lift-ground and dry-point used monochromatically in the first semester to achieve small editions of prints. Color printing and non-traditional techniques are introduced in the second semester. Increasing emphasis in the ensuing semesters on the further enhancement of both traditional and non-traditional technical skills and on developing individual directions through the use of the several intaglio media.

ART.-236 Printmaking II  
3 Credits 6 Contact  
Prerequisite: Minimum grade of 2.0 in ART.-132. Placement into RDNG-016 (ACSR-016) is required.  
Intaglio printing methods and techniques; hard and soft-ground etching, aquatint, lift-ground and dry-point used monochromatically in the first semester to achieve small editions of prints. Color printing and non-traditional techniques are introduced in the second semester. Increasing emphasis in the ensuing semesters on the further enhancement of both traditional and non-traditional technical skills and on developing individual directions through the use of the several intaglio media.

ART.-237 Printmaking III  
3 Credits 6 Contact  
Prerequisite: ART.-235. Placement into RDNG-016 (ACSR-016) is required.  
Intaglio printing methods and techniques: hard and soft-ground etching, aquatint, lift-ground and dry-point used monochromatically in the first semester to achieve small editions of prints. Color printing and non-traditional techniques are introduced in the second semester. Increasing emphasis in the ensuing semesters on the further enhancement of both traditional and non-traditional technical skills and on developing individual directions through the use of the several intaglio media.

ART.-238 Printmaking IV  
3 Credits 6 Contact  
Prerequisite: ART.-237. Placement into RDNG-016 (ACSR-016) is required. ART.-111 and ART.-112 strongly recommended.  
Intaglio printing methods and techniques: hard and soft-ground etching, aquatint, lift-ground and dry-point used monochromatically in the first semester to achieve small editions of prints. Color printing and non-traditional techniques are introduced in the second semester. Increasing emphasis in the ensuing semesters on the further enhancement of both traditional and non-traditional technical skills and on developing individual directions through the use of the several intaglio media.
ART.-242 Corporate ID & Promo Design
3 Credits 6 Contact
Prerequisites: ART.-122, ART.-145, ART.-146, ENGL-102, and PHOT-180 with a minimum grade of 2.5. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.

The focus of this course is on the examination of the logotype and symbol as identity and corporate character. Students will develop a corporate identity campaign extending into a public relation promotional project utilizing a basic strategy brief that they’ve researched and written. Students will learn to work in teams and on an individual basis. Use of the computer lab will be required. Internet access will be necessary for some aspects of project research and development.

ART.-243 Communication Design Across Cultures
3 Credits 6 Contact
Prerequisite: ART.-242. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.

The focus of this course is on the examination of promotional and communication design across cultures. Students will develop two major projects that build upon research about cultures outside the student’s own. The student will develop an understanding of a target audience within this different cultural environment. The first project will be more international in scope. Both projects require research, writing a creative strategy brief, development of design concepts, copywriting, and completion of tightly produced comprehensives. Use of the computer lab will be required. Internet access will be necessary for some aspects of project research and development.

ART.-244 Publication Design for Print
3 Credits 6 Contact
Prerequisites: ART.-145, ART.-146 and ENGL-102 with minimum grades of 2.5. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.

The focus of this course is on the development, planning, design and production of several different types of print publications, and the combining of text and graphics into visual communications pieces. Students will be taught to use current graphics industry standards software and learn methods of preparation for creation of camera-ready artwork and output to film at pre-press service bureaus. Use of the computer lab will be required. Internet access will be necessary for some aspects of project research and development.

ART.-245 Publication Design for Web I
3 Credits 6 Contact
Prerequisites: ART.-146 with a minimum grade of 2.5. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.

The focus of this course is on the development, planning, design and production of several different types of electronic publications including Web-based and CD/DVD production. Students will learn how to modify their design approaches for the electronic environment. Students will be taught to use current graphics industry standards software, and the proper preparation of media in national and international society. Use of the computer lab will be required. Internet access will be necessary for project research and development.

ART.-246 Self-Promotion & Portfolio Design
3 Credits 3 Contact
Prerequisite: ART.-244. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. ART.-245 Strongly recommended.

The focus of this course is on the examination of the artist and graphic designer as entrepreneur and the preparation for a career in related fields. The student will develop a creative strategy for self-promotion, including (but not limited to) logo design, stationery, and a self-promotional ad campaign. Legal, copyright and business practices will be discussed. In addition, students will develop both a traditional and an alternate digital portfolio as well as designing and writing a resume in preparation for entering the job market. Students will have access to the Art Area computer lab. Internet access is necessary for some aspects of project research and development.

ART.-248 Graphic Design Internship
3 Credits 3 Contact
Prerequisite: ART.-243 and ART.-244. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Prerequisite: ART.-246

This internship allows students who have completed, or have nearly completed, the requirements for an AAS degree in Graphic Design to gain real work experience with companies in the community, practice what they’ve learned and have the opportunity to learn from experienced designers and art directors already in the field. The opportunity provides students with insight into working conditions, business practices, and applications of work performed in design studios, printing houses, and ad agencies. Students will be placed according to their area of interest and available businesses interested in hosting an intern. Students are expected to work a minimum of 150 hours in the semester for which the course is offered.

ART.-249 Publication Design for Print Production
3 Credits 3 Contact
Prerequisite: ART.-244. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.

The focus of this course is on advanced techniques in the development, planning, design and production of several different types of print publications, with emphasis on the preparation for printing. As an extension of ART-244, students will further develop their skill in software layout and learn production and planning techniques necessary for success in print design. In addition, students will gain skills related to print design including project planning, file preparation, proofing, paper and ink specifications, project supervision, font and image management for final output to film for offset reproduction and other methods of printing. Students will learn to work with outside vendors such as printers, paper and ink suppliers, bindery and service bureaus in providing final delivery of a completed project. Use of the computer lab will be required and some field trips may be arranged. Internet access will be necessary for some aspects of project research and development.

ART.-255 Digital Art Studio
3 Credits 6 Contact
Prerequisite: ART.-132 and ART.-145. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.

This course is an exploration of the computer as an artistic medium. Advanced studio art and graphic design students will create computer aided art and expand the development of their art portfolios. Students are encouraged to combine the computer with traditional studio techniques of painting, drawing, sculpture, ceramics, printmaking and other studio disciplines. Research of contemporary digital art is a major component of this course.
Students will incorporate the use of a variety of imaging and special effects software.

**ART.-256 Publication Design for Web II**

3 Credits  6 Contact
Prerequisite: ART.-245. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. The focus of this course is to introduce students to the potential of new media animation and multimedia in the context of website development. Students will learn a series of skills related to the development of web animation and user interactivity, as well as an introduction to the use of video and audio in website production design. Students will be building upon skills learned in Art 245, Publication Design for Web I and utilize current industry standard software in the development of their web animation and multi-media content. Use of the computer lab will be required. Internet access will be necessary for some aspects of project research and development.

**ART.-257 Intro to 3D Digital Art**

3 Credits  6 Contact
Prerequisites: ART.-131 and ART.-145 with a minimum grade of 2.5. ART.-142. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course provides an opportunity for both fine art and graphic design students to begin developing specialized skills in the creation of digital 3D artwork and discover its various applications to the worlds of both fine and commercial art, the use of current industry standard software applications will be taught in-depth the beginning level to intermediate level. This is the first major opportunity students would be given to explore in-depth the use of 3D digital art and modeling. It is being offered as an elective for students enrolled in the art and design programs.

**ART.-259 Conceptual Book Design**

3 Credits  6 Contact
Prerequisites: ART.-146 with a minimum grade of 2.5. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. The focus of this course is on the development of multi-faceted projects in which the book is explored as an art form; a means of self-expression that encompasses principles of both 2-dimensional and 3-dimensional design and color. Of interest to both fine arts and graphic design students, participants will plan, design, and create a conceptual book that demonstrates the subject matter. Students will be encouraged to use both traditional and nontraditional materials in the creation of the project. Students will use the Art Area computer lab as well as other studios necessary for the final completion of this project. Internet access will be necessary for some aspects of project research and development.

**ART.-261 Painting I**

3 Credits  6 Contact
Prerequisites: Minimum 2.0 in ART.-132. Placement into RDNG-016 (ACSR-016) is required. ART.-111 and ART.-112 strongly recommended. Introductory course and additional courses for more advanced study. Investigation of the painting media and the various techniques and processes. Emphasis is placed on the development of a significant body of personal imagery derived from a variety of sources.

**ART.-262 Painting II**

3 Credits  6 Contact
Prerequisite: ART.-261. Placement into RDNG-016 (ACSR-016) is required. Introductory course and additional courses for more advanced study. Investigation of the painting media and the various techniques and processes. Emphasis is placed on the development of a significant body of personal imagery derived from a variety of sources.

**ART.-263 Painting III**

3 Credits  6 Contact
Prerequisite: ART.-262. Placement into RDNG-016 (ACSR-016) is required. Introductory course and additional courses for more advanced study. Investigation of the painting media and the various techniques and processes. Emphasis is placed on the development of a significant body of personal imagery derived from a variety of sources.

**ART.-264 Painting IV**

3 Credits  6 Contact
Prerequisite: ART.-263. Placement into RDNG-016 (ACSR-016) is required. Introductory course and additional courses for more advanced study. Investigation of the painting media and the various techniques and processes. Emphasis is placed on the development of a significant body of personal imagery derived from a variety of sources.

**ART.-271 Sculpture I**

3 Credits  6 Contact
Prerequisite: ART.-131 and ART.-142. Placement into RDNG-016 (ACSR-016) is required. This course introduces students to a variety of fundamental sculptural tools, processes and materials, while also engaging students in an investigation of the possibilities inherent in basic physical forms for artistic communication. Students are introduced to additive, subtractive, and constructive processes, as well as, mold making and casting techniques. Project will be supplemented by demonstrations, lectures and group critiques.

**ART.-272 Sculpture II**

3 Credits  6 Contact
Prerequisite: ART.-271. Placement into RDNG-016 (ACSR-016) is required. This course furthers the student's exploration of more complex sculptural tools, processes and materials. The student's abilities to manipulate materials and processes while also considering context, concept and craft will be encouraged. Students refine their understanding of additive, subtractive, and constructive processes, as well as, more complex mold making and casting techniques. Projects will be supplemented by demonstrations, lectures and group critiques.

**ART.-273 Sculpture III**

3 Credits  6 Contact
Prerequisites: ART.-272 with a minimum grade of 2.0. Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course is designed to allow students the opportunity to continue a more advanced investigation of the tools, processes and materials of object making in a contemporary context. This course emphasizes the experiential practice of constructing objects while also focusing on the conceptual possibilities inherent in material, process and physical form. Student driven aesthetic progression and historical/contemporary evaluation will be
encouraged. Students will be required to meet individually with the instructor to discuss what materials, processes and concepts they will utilize for the course.

**ART.-274 Sculpture IV**
3 Credits  6 Contact
Prerequisites: Minimum 2.0 in ART.-273. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is designed to allow students the opportunity to continue a more advanced investigation of the tools, processes and materials of object making in a contemporary context. This course emphasizes the experiential practice of constructing objects while also focusing on the conceptual possibilities inherent in material, process and physical form. Student driven aesthetic progression and historical/contemporary evaluation will be encouraged. Students will be required to meet individually with the instructor to discuss what materials, processes and concepts they will utilize for the course.

**ART.-275 Intro to Creative Digital Video**
3 Credits  6 Contact
Prerequisites: ART.-145 OR PHOT-190 AND ART.-141. Placement into RDNG-016 (ACSR-016) is required.
The course is an introduction to the language, principles, and digital tools used in the creation of digital video within the context of art and design. This course will examine a variety of approaches, including the utilization of digital video for personal expression, artistic narrative, promotional video utilizing storyboarding and creative techniques in computer based digital video editing. In addition, students will examine the history and contemporary growth of video as an art form and graphic narrative. Projects may include study of current video art works, as well as the development of individual projects and a research paper. For students considering a career in this area, it is recommended that they also enroll in ART.-276.

**ART.-276 Motion Graphics for TV and Video**
3 Credits  6 Contact
Prerequisite: Minimum 2.5 in ART.-146. Placement into RDNG-016 (ACSR-016) is required.
This course is an introduction to the language, principles, traditional and digital tools, and the creation of motion graphics utilized in film, television, and video. This course will examine a variety of approaches, including the creation of moving title graphics, moving logo graphics, promotional video and storyboarding. In addition, students will examine the utilization of 3D and special effects software in the creation of motion graphics. Projects may include study of current motion graphics works, as well as the development of individual projects and a research paper.

**ART.-277 Clay Figure Sculpture II**
3 Credits  6 Contact
Prerequisite: ART.-273. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This is an intermediate class in clay figure sculpture for students who have had at least one full semester working from a model in clay. Students will have a choice of various projects to work on which might include 1/2 lifesize torso and head, lifesize hands or feet or a 1/2 or 1/3 lifesize full figure. Students will continue to develop a personal style as well as improve their ability to translate form into clay.

**ART.-278 Metal Sculpture II**
3 Credits  6 Contact
Prerequisite: ART.-274. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Students will continue to explore either welded steel sculpture or jewelry in this intermediate level course. Emphasis will be on the exploration of new techniques and problem solving for designs.

**ART.-281 Ceramics I**
3 Credits  6 Contact
Prerequisite: ART.-131 and ART.-142. Placement into RDNG-016 (ACSR-016) is required. ART.-111 and ART.-112 strongly recommended.
Introductory course and additional courses for advanced study. Hand-building and wheel-forming methods, glaze mixing and application techniques are developed for directing personal imagery in ceramics.

**ART.-282 Ceramics II**
3 Credits  6 Contact
Prerequisite: ART.-281. Placement into RDNG-016 (ACSR-016) is required.
Introductory course and additional courses for advanced study. Hand-building and wheel-forming methods, glaze mixing and application techniques are developed for directing personal imagery in ceramics.

**ART.-283 Ceramics III**
3 Credits  6 Contact
Prerequisite: ART.-282. Placement into RDNG-016 (ACSR-016) is required.
Introductory course and additional courses for advanced study. Hand-building and wheel-forming methods, glaze mixing and application techniques are developed for directing personal imagery in ceramics.

**ART.-284 Ceramics IV**
3 Credits  6 Contact
Prerequisite: ART.-283. Placement into RDNG-016 (ACSR-016) is required.
Introductory course and additional courses for advanced study. Hand-building and wheel-forming methods, glaze mixing and application techniques are developed for directing personal imagery in ceramics.

**ART.-295 Supervised Art Projects**
3 Credits  6 Contact
Prerequisite: Consent of the instructor and approval of Dean. Placement into RDNG-016 (ACSR-016) is required. ART.-111 and ART.-112 strongly recommended.
An individualized course providing the opportunity for in-depth study or work in an approved project on the studio art areas. Content will vary based on the project pursued by the individual students.

**Astronomy**
Science & Math

**ASTR-117 The Solar System**
4 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: ASTR-117L
The sun, moon, earth, planets, and other objects in the solar system are studied from a historical perspective. Begins with the observations and understanding of early cultures and leads to current concepts of the nature and origin of the solar system. Evening classes will conduct telescopic observations.
Michigan Automobile Mechanics Certification test. This course will prepare the student for the ASE and State of Michigan Automobile Mechanics Certification Test.

**AUTO-141 Suspension and Alignment**
4 Credits 5 Contact
Prerequisite: AUTO-191. Placement into RDNG-016 (ACSR-016) is required. Student must provide own hand tools.
A lecture-laboratory class covering the operation of the suspension and steering system, diagnosis of steering and suspension problems, replacement of components, and the alignment and adjustment of the steering and suspension systems. Completion of this course will prepare the student for the ASE and State of Michigan Automobile Mechanics Certification test.

**AUTO-151 Brakes and Braking Systems**
4 Credits 5 Contact
Prerequisite: AUTO-191. Placement into RDNG-016 (ACSR-016) is required. Student must provide own hand tools.
A lecture-laboratory class covering braking system design and brake service procedures, wheel bearings, anti-lock braking, tire theory and balancing. Safety practices will also be emphasized. The completion of this course will prepare the student for the ASE and State of Michigan Automobile Mechanics Certification Test.

**AUTO-161 Electrical Fundamentals**
4 Credits 6 Contact
Prerequisites: Testing into MATH-110 or higher or completing MATH-021 with a "S". Placement into RDNG-016 (ACSR-016) is required. Students must provide own tools.
A lecture-laboratory course covering the fundamentals of electricity, automotive electrical circuits, wiring diagrams, electrical test equipment used by the modern automotive technician, batteries and performing electrical tests. The completion of this course and AUTO-262 will prepare the student for the ASE and State of Michigan Automobile Mechanics Certification Test.

**AUTO-167 Automotive Co-Op**
2 Credits 2 Contact
Prerequisite: Permission of program coordinator. Placement into RDNG-016 (ACSR-016) is required.
Provides students the opportunity to obtain co-op employment in a commercial automotive service operation. Work experience is monitored by the program coordinator. Discussion includes employment conditions, skills and ethics, and issues in the automotive service profession.

**AUTO-182 Ignition and Fuel Systems**
4 Credits 6 Contact
Prerequisite: AUTO-161. Placement into RDNG-016 (ACSR-016) is required. Students must provide own hand tools.
A lecture-laboratory course covering the operation and testing of ignition and fuel systems. Computerized engine controls and emission systems as related to the ignition and fuel system are also taught. Safety practices will also be emphasized. The completion of this course and AUTO-283 will prepare the student for the ASE and State of Michigan Automobile Mechanics Certification Test.

**AUTO-191 Automotive Fundamentals**
4 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
A lecture-demonstration survey course designed to acquaint the student with the automotive industry and the various systems of the automobile. Related skills necessary to be successful in additional Automotive Technology classes and to work in the auto service industry are emphasized.

**AUTO-221 Automatic Transmission Theory and Repair**
4 Credits 6 Contact
Prerequisites: AUTO-161 and AUTO-191. Placement into RDNG-016 (ACSR-016) is required. Students must provide own hand tools.
A lecture-laboratory course covering the theory, operation, testing and repair of automatic transmissions and transaxles. Rebuilding and service procedures will also be demonstrated and performed by students. Safety practices will also be emphasized. The content of this course provides complete preparation for the State of Michigan and ASE Certification Test in Automatic Transmissions.
AUTO-262 Electrical Systems  
4 Credits  6 Contact  
Prerequisite: AUTO-161. Placement into RDNG-016 (ACSR-016) is required. Students must provide own hand tools. A lecture-laboratory course covering the troubleshooting and repair of automotive starting and charging systems. The content of this course combined with the content of AUTO-161 is sufficient to prepare a student for the State of Michigan Automotive Mechanics Certification Test in Electrical Systems.

AUTO-264 Hybrid Vehicle Fundamentals and Repair  
3 Credits  5 Contact  
Prerequisites: AUTO-161 and AUTO-191. Placement into RDNG-016 (ACSR-016) is required. Students must provide own hand tools. 
A lecture/laboratory course covering the theory of a hybrid vehicle, all aspects of safety and specialty tools used on hybrid vehicles. 
Also covered will be diagnostic procedures of DC to DC converters, inverters, high voltage batteries, high voltage wires, traction motors, and hybrid braking systems. The proper removal/replacement procedures of hybrid components and hybrid scan tool data interpretation will also be covered.

AUTO-271 Heating, Venting and Air Conditioning  
4 Credits  5 Contact  
Prerequisite: AUTO-161 and AUTO-191. Placement into RDNG-016 (ACSR-016) is required. Students must provide own hand tools. 
A lecture/laboratory course covering the theory of operation and service of automotive heating and air conditioning systems. The content of this course prepares a student for the State of Michigan Automotive Mechanics Certification Test in Heating & Air Conditioning.

AUTO-283 Advanced Engine Performance  
4 Credits  6 Contact  
Prerequisite: AUTO-182. Placement into RDNG-016 (ACSR-016) is required. Students must provide own hand tools. 
A lecture-demonstration course covering advanced ignition, fuel and emission systems. Diagnosis using multiple factory and generic scan tools, lab scopes and other On-Board Diagnostic II (OBD II) will be stressed. Mode 6 diagnostics, no-starts, engine performance issues and computer re-programming will also be covered. The content of this course along with AUTO-182 will prepare the student for the ASE and State of Michigan Mechanics Certification test.

AUTO-281 Automotive Service Management  
4 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Provides students an opportunity to find out what is behind an automotive business operation beyond the technical repair skills. Students will explore what is involved in creating a business plan and how a business is marketed. Students will explore how finances are managed and how labor, insurance and overhead costs help determine pricing. This course will enhance the technician’s business skills whether they are interested in starting their own businesses, or interested in furthering their understanding of a successful automotive business.

AUTO-292 Service Floor I  
3 Credits  6 Contact  
Prerequisites: AUTO-111, AUTO-131, AUTO-141, AUTO-151, AUTO-161, AUTO-182 and AUTO-191. Placement into RDNG-016 (ACSR-016) is required. Service Floor I provides the student with the opportunity to make repairs to customer vehicles in the areas of Brakes, Steering and Suspension, Alignments, Starting and Charging systems and other general engine repairs. As an intern, the student will also learn the business side of running an auto repair facility. This class is designed as a Co-Capstone class that puts to work all the theory students have learned in previous classes. Service Floor I is designed to mimic the work environment a student will experience as a dealer or independent technician.

AUTO-293 Service Floor II  
3 Credits  6 Contact  
Prerequisites: AUTO-221, AUTO-262, AUTO-271, AUTO-283 and AUTO-292. Placement into RDNG-016 (ACSR-016) is required. Service Floor II provides the student with the opportunity to make repairs to customer vehicles in the areas of Engine performance, electrical, air conditioning and other general engine repairs. This class is designed as a Co-Capstone class that puts to work all the theory students have learned in previous classes. Service Floor II is designed to mimic the work environment a student will experience as a dealer or independent technician.

Baking and Pastry Arts  

BAKE-101 Introduction to Baking  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students are introduced to the fundamental concepts, skills and techniques of baking. Special significance is placed on formulas and measurements, ingredient functions, the baking process, baking utensils, equipment and product identification as applied to baking. Lecture and demonstrations teach yeast-raised dough mixing methods, rolled-in dough, pie dough, basic cake mixing methods, and preparation of pudding as well as pastry creation and finishing techniques.

BAKE-102 Bake Shop I  
6 Credits  6 Contact  
Prerequisite: BAKE-101 and FMG-102. Approved uniform and baking kit required. Placement into RDNG-016 (ACSR-016) is required. 
This course teaches baking as an exact science with mathematical applications. Topics will include recipe breakdown, knowledge of ingredients and an understanding of the fermentation process of yeast. All types of doughs will be constructed and applied. Baking of breads, pastries, syrups, creams, icings and sauces will be demonstrated and produced.

BAKE-103 Basic Cake Decorating  
4 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The study and production of advanced pastry decorating and design. Students will learn the intricacies of detailing cakes and the different decorating techniques for events including specialty cakes, wedding cakes and marzipan molding.
BAKE-104 Intermediate Cake Decorating  
4 Credits  4 Contact  
Prerequisite: BAKE-103. Approved uniform required. Placement into RDNG-016 (ACSR-016) is required.  
This course is designed to give the student an understanding of and the opportunity to use tools for the purpose of filling, icing, decorating and putting the finishing touches on decorated cakes. The student will learn to effectively decorate cakes using thin sheets of marzipan, developing lattice, royal icing, pastillage, poured sugar, rock sugar, spun sugar, pulled and blown sugar, tinting and using chocolate to decorate cakes.

BAKE-105 Wedding Cakes & Sugar Work  
4 Credits  4 Contact  
Prerequisite: BAKE-104. Approved uniform required. Placement into RDNG-016 (ACSR-016) is required.  
This course is designed to give the student an overall understanding and appreciation of developing wedding cakes and sugar centerpieces. The student will be learning to bake and decorate traditional and contemporary wedding cakes, cakes for special occasions and create gum paste and cast sugar centerpieces.

BAKE-113 Artisan Breads  
4 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Approved uniform required.  
This course will provide the student with theory and practical hands-on experience in developing and maintaining cultures used in sourdough bread making, as well as selecting flours and other ingredients for specific flavor development.

BAKE-114 Modern Desserts  
4 Credits  4 Contact  
Prerequisite: BAKE-206. Placement into RDNG-016 (ACSR-016) is required. Co-Requisite: BAKE-115 or BAKE-103. Note: Approved uniform required for this class.  
This course provides a hands-on approach to the technique and production of modern and specialty desserts. Topics include: petit fours, chocolate and confections, decorative sugar pieces, dessert platter set-up, ice sorbets.

BAKE-115 Pastry Techniques  
4 Credits  4 Contact  
Prerequisite: FMG.-102 and BAKE-102. Placement into RDNG-016 (ACSR-016) is required. Approved uniform required for this class.  
Through hands-on experience the beginning student is introduced to basic equipment and recipes, professional skills and techniques, preparation, procedure and use of pastry products. Culinary recipes including: tart and pie dough, puff pastry dough, leaven dough and Viennese pastry dough. Emphasis on expanding knowledge of techniques, assembling finished pastry, basic techniques and preparation, including creams, confections, and finished desserts.

BAKE-116 Plated Desserts  
4 Credits  4 Contact  
Prerequisite: BAKE-102. Approved uniform required for this class. Placement into RDNG-016 (ACSR-016) is required.  
This course will give the student the opportunity to explore the possibility of contrasting and complementing flavors and textures, as well as the color and style, considering the customer base, specific event or menu needs.

BAKE-117 Chocolates and Confections  
4 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Approved uniform required.  
This course will introduce principles and techniques involved in working with chocolate and sugar. The student will gain experience in molding chocolate and deposited candies and other confections.

BAKE-206 Bake Shop II  
6 Credits  6 Contact  
Prerequisite: BAKE-102. Approved uniform required. Placement into RDNG-016 (ACSR-016) is required.  
This course is a continuing course from Bake Shop I with advanced preparation of baked goods, concentrating on advanced European-style cakes, cheesecake varieties, and other yeast doughs. The student will rotate through the bakeshop preparing dessert items for sale in the Applewood Cafe.

Biology  
Science & Math

BIOL-100 Biological Science Concepts  
2 Credits  2 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
An introduction to biological science concepts and scientific methods. Topics include basic biological chemistry, metabolism, energy, cell anatomy and physiology, and basic genetics. This course will not fulfill the graduation requirement for a laboratory science class.

BIOL-101 Microbiology for Health Sciences  
2 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
An introduction to microbiology especially as it relates to the types and modes of transmission, control and prevention of disease-producing micro-organisms. Lab work includes the study of staining techniques and an introduction to microbial identification.

BIOL-107 General Biology  
4 Credits  3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: BIOL-107L  
A course for non-science majors. An introduction to biological science including a study of principal groups of the plant and animal kingdoms and broad consideration of the anatomy, physiology, development, ecology and evolution of organisms.

BIOL-107L General Biology Lab  
0 Credits  3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: BIOL-107  
The laboratory section of a course for non-science majors. An introduction to biological science including a study of principal groups of the plant and animal kingdoms and broad consideration of the anatomy, physiology, development, ecology and evolution of organisms.

BIOL-110 Evolution and Humans  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course is designed for non-science majors. It consists of two components. In the first half of the semester general concepts in evolutionary biology will be covered; the second half focuses on human evolution in particular. The student will gain an
understanding of the origin of the diversity of life on the planet and humans' historical and biological place within it.

BIOL-111 Fundamentals of Biology
4 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-111L. The study of major biological concepts common to most organisms including cell biology, genetics, ecology and evolution. This is an introductory course which fulfills the laboratory science graduation requirement. Lab enrollment is not required for the e-Learning sections.

BIOL-111L Fundamentals of Biology Lab
0 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-111. The laboratory section of the study of major biological concepts common to most organisms including cell biology, genetics, ecology and evolution. This is an introductory course which fulfills the laboratory science graduation requirement.

BIOL-115 Applied Botany
2 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-126L. The study of plant culture and propagation with emphasis on indoor species. Firsthand experience in starting plants from seeds and cuttings in and growing them. Other topics include herb gardening, bonsai, terrariums, edible wild plants, poisonous plants and vegetable dyeing. Field trips will be scheduled.

BIOL-120 Introduction to Environmental Science
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-120. The study of the use and conservation of our soils, wetlands, grasslands, water resources, minerals and wildlife; the abuses of these resources including air and water pollution, solid waste management, and the efforts made to correct these problems. Future requirements for natural resources and energy sources are also considered.

BIOL-121 Environmental Science Laboratory
2 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-121. Laboratory course to explore topics in environmental science including energy, soil, water, air, food, biodiversity, and habitat conservation. Application of biological, physical, and chemical principles to analysis of natural resources and the impact of humans on the environment.

BIOL-125 Zoology
5 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: BIOL-125L. This course addresses the principles of animal morphology, physiology, behavior, environmental relationships, development and evolutionary history.

BIOL-125L Zoology Lab
0 Credits 4 Contact
Prerequisite: BIOL-111, Corequisite: BIOL-125. The laboratory section of the course addressing the principles of animal morphology, physiology, behavior, environmental relationships, development and evolutionary history.

BIOL-126 Botany
4 Credits 2 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Prerequisite: BIOL-111 Corequisite: BIOL-126L. The principles of plant science with a detailed study of structure, physiology, development, heredity and evolution of representative members of algae, fungi, bacteria and higher order plants.

BIOL-126L Botany Lab
0 Credits 4 Contact
Prerequisite: BIOL-111 Corequisite: BIOL-126. The laboratory section of the course addressing the principles of plant science with a detailed study of structure, physiology, development, heredity and evolution of representative members of algae, fungi, bacteria and higher order plants.

BIOL-150 The Human Body
4 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-150L. An introduction to the structure and function of the human body. Students will learn about human organs and the interactions responsible for normal health. Applications to illness and disease will be introduced.

BIOL-150L The Human Body Lab
0 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-150L. The laboratory section of the course studying an introduction to the structure and function of the human body. Students will learn about human organs and the interactions responsible for normal health. Applications to illness and disease will be introduced.

BIOL-151 Human Anatomy and Physiology I
4 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: BIOL-151L. Note: A background in High School Biology and/or Chemistry or BIOL-100 strongly recommended. This course addresses the structure and function of the human body, emphasizing systems including nervous, endocrine, integumentary, skeletal and muscular. The concept of homeostasis and tissue structure will also be discussed. Lab work includes microscopic study, anatomy of both fresh and preserved organs, examination of organ systems, models and student participation in physiologic experiments.

BIOL-151L Human Anatomy and Physiology I Lab
0 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: BIOL-151L. The laboratory section of the course addressing the structure and function of the human body, emphasizing systems including nervous, endocrine, integumentary, skeletal and muscular. The concept of homeostasis and tissue structure will also be discussed. Lab work includes microscopic study, anatomy of both fresh and preserved organs, examination of organ systems, models and student participation in physiologic experiments.

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BIOL-152 Human Anatomy and Physiology II
4 Credits  3 Contact
Prerequisite: BIOL-151 with a grade of 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: BIOL-152L
The second-level course continuing the study of the structure and function of human systems including circulatory, respiratory, urinary, digestive, lymphatic and reproductive. The autonomic and endocrine control of these systems and the immunity system will also be discussed. Lab work includes microscopic study, anatomy of both fresh and preserved organs, the examination of organ system models and student participation in physiologic experiments.

BIOL-152L Human Anatomy and Physiology II Lab
0 Credits  3 Contact
Prerequisite: BIOL-151 Corequisite: BIOL-152L
The laboratory section of the second-level course continuing the study of the structure and function of human systems including circulatory, respiratory, urinary, digestive, lymphatic and reproductive. The autonomic and endocrine control of these systems and the immunity system will also be discussed. Lab work includes microscopic study, anatomy of both fresh and preserved organs, the examination of organ system models and student participation in physiologic experiments.

BIOL-156 Microbiology
4 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: BIOL-156L Note: A strong background in High School Biology/Chemistry is recommended.
The study of bacteria, fungi, parasites and viruses, with special emphasis on their role in the causation of disease, and their ecological importance. Modes of infection, methods of prevention, and means of laboratory diagnosis; methods of disinfection and sterilization; and general principles of immunity will be discussed.

BIOL-156L Microbiology Lab
0 Credits  4 Contact
Corequisite: BIOL-156
The laboratory section of the study of bacteria, fungi, parasites and viruses, with special emphasis on their role in the causation of disease, and their ecological importance. Modes of infection, methods of prevention, and means of laboratory diagnosis; methods of disinfection and sterilization; and general principles of immunity will be discussed. Lab work includes staining techniques, identification of microorganisms, bacterial growth patterns, and a brief survey of human parasites.

BIOL-190 Human Anatomy/Physiology Review
2 Credits  2 Contact
Prerequisite: BIOL-151 and BIOL-152L. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Review of Human Anatomy and Physiology to match the emphasis of particular Allied Health fields. Students will focus on selected concepts required for their particular clinical specialty.

BIOL-205 Michigan Wildflowers
2 Credits  3 Contact
Prerequisite: One college-level course in Biology or permission of instructor. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Note: Student participation in field trips is required.
This class is predominantly a field and laboratory course involving the collection and identification of wildflowers. The class will focus on the affinities among flowering plants as well as focus on the recognition characteristics of major plant families.

BIOL-206 Local Trees and Shrubs
2 Credits  3 Contact
Prerequisite: One college-level course in Biology or permission of instructor. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Note: Student participation in field trips is required.
A field identification course concerning the trees and shrubs both native and cultivated to be found in the local area. Frequent field trips are involved.

BIOL-207 Aquatic Ecosystems
4 Credits  5 Contact
Prerequisite: One college-level course in Biology or permission of instructor. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Characteristics of aquatic habitats including wetlands, rivers, lakes and coral reefs will be examined. Students will use a combination of lecture and laboratory activities to learn about the organisms found in the aquatic environment. Use of aquatic systems to meet human interest such as power generation, recreation, and fishing will be explored. Human impact on aquatic systems and issues relevant to managing these systems to maximize both environmental benefit and human benefit will be discussed.

BIOL-211 Molecular Biotechnology
4 Credits  6 Contact
Prerequisite: BIOL-111. Prerequisite: Placement into RDNG-030 (ACSR-030) or completion of RDNG-016, is required. A lecture and lab combination course utilizing state of the art techniques in molecular biology and recombinant DNA technology in the investigation of general concepts in genetics and the structure and function of DNA as a hereditary molecule. The students will be oriented to the use of laboratory equipment and procedures that are currently used in biotechnology.

BIOL-220 Ecology
4 Credits  6 Contact
Prerequisite: BIOL-111 or BIOL-107. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016, is required. In this course, the student will be introduced to the principles of scientific inquiry in the discipline of Ecology. Students will gradually acquire skills in the application of scientific inquiry. The students will develop an understanding of the variety of ways that organisms interact with both the physical and biological environment. The students will also develop an understanding of the dissimilarities in the structure and function of different types of ecosystems. Additionally, the students will acquire a basic knowledge in data analysis and presentation of that data.

BIOL-222 Field Biology
3 Credits  4 Contact
Prerequisite: BIOL-107, BIOL-125 or BIOL-126. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016, is required. The observation, identification and appreciation of materials in the field and the study of inter-relations of plants and animal life. This class includes weekend field trips to observe different habitats.

BIOL-226 Systematic Botany (or Plant Taxonomy)
3 Credits  4 Contact
Prerequisite: BIOL-126. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016, is required. A field and laboratory class involving the collection and identification of vascular plants with an emphasis on affinities among flowering plants as well as a focus on recognition characteristics of major plant families.
BIOL-227 Genetics
4 Credits 4 Contact
Prerequisite: BIOL-111 or BIOL-125 or BIOL-126 or BIOL-151 or BIOL-156. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016, is required.
Mechanisms by which plant and animal characteristics are transmitted from parents to their offspring, and application of this knowledge to an understanding of the biological sciences and its potential for advances in medicine and human welfare.

BIOL-228 Pharmacology of Drugs of Abuse
3 Credits 3 Contact
Prerequisite: BIOL-111 or BIOL-150 or BIOL-151 or BIOL-152 or PSYC-281. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016, is required.
This course is designed to provide the student with an appropriate vocabulary of pharmacological terms and concepts, knowledge of physiological affects of drug action, and the ability to understand information presented in pharmacological media. Material covered will include several drugs of abuse, as well as antidepressants and antipsychotics.

Broadcasting

BCST-161 Radio Broadcasting
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Instruction and hands-on experience in announcing and radio production techniques. Includes study of radio station operation, the broadcasting business, careers in radio, and the evolution and philosophy of American radio broadcasting.

BCST-162 Radio Broadcasting II
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Advanced instruction and hands-on experience in announcing and radio production techniques. Includes study of radio station operation, the broadcasting business, careers in radio, and the evolution and philosophy of American radio broadcasting.

BCST-171 Television Broadcasting
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A survey of the history and development of television broadcasting. This course includes realistic studio production, including switching, lighting, control board technique, floor managing and lighting.

BCST-172 Television Broadcasting II
3 Credits 3 Contact
Prerequisite: BCST-171. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is designed for advanced experience in television production. The student will write, produce and perform in various class projects.

BCST-173 Television Internship
3 Credits 3 Contact
Prerequisite: ENGL-102. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Co-requisite: COMM-131 and BCST-171 and/or BCST-172.
This course is designed to give students more practical work experience outside of the classroom situation. Students will work under the direct supervision of professionals at a local network television station. The learning experience will include the following: operating cameras, editing computer graphics, learning newswriting style, and marketing various promotional projects.

Building Construction

Technology

BCON-164 Elementary Surveying II
3 Credits 4 Contact
Prerequisite: MATT-094A and MATT-094B and MATT-094C and MATT-094D or equivalent. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A lecture/laboratory course which explores the techniques and skills needed in basic surveying. The course will employ the scientific method in the completion of field experiments. Students will demonstrate the ability to propose and test hypotheses through experimentation in the technical sciences. The course will address both areas of surveying (field work and office work). Areas covered will include Construction Surveying, Topographic Surveys, and Boundary Surveys. The course will address practical job-related situations using both manual and computer based equipment which would be found in a standard office or construction environment.

BCON-180 Construction Fundamentals
4 Credits 6 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A course designed to introduce the student to building construction. Topics will include an overview of the building construction industry, construction agreements, technical specifications, site preparation, construction scheduling and basic framing, plumbing and electrical wiring. The course will include classroom and hands on laboratory activities.

BCON-181 Construction Materials
3 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course teaches an understanding of the materials used in building construction and the advantages and disadvantages of their use in various applications. Topics include construction materials used for building foundations, framing, coverings and technical specification.

BCON-182 Bldg Construction Codes
3 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Codes that govern the building construction industry in Michigan. Provides an overview of the use and interpretation of zoning ordinances and building, energy, electrical, plumbing and mechanical codes. Emphasis on the affect of critical components of ordinances and codes on building design and construction.
BCON-183 Bldg Maintenance & Weatherization
3 Credits  4 Contact
Prerequisite: BCON-180. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A course designed to introduce students to basic home repair and maintenance activities such as the upgrades required to make a building more energy efficient. Topics will include a review of interior and exterior modifications and upgrades. The focus of the renovations will be modifications that will make the built environment more energy efficient. The focus of the lab exercises will be hands on project applications. The course will include classroom and laboratory activities.

BCON-201 Green Construction
3 Credits  4 Contact
Prerequisites: BCON-180 and BCON-181. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A course designed to introduce the student to Green construction. Topics will include an overview of the many terms used to describe Green construction, elements and components typically found in Green projects, sustainable site development, building energy and water efficiency, construction resource management and indoor environmental quality. Additionally, course topics will include an overview of current model energy codes, nationally recognized Green building standards, guidelines and certifications. This course will include classroom lectures and lab activities, group activities, guest speakers and site visits to Green certified buildings completed or under construction when appropriate.

BCON-202 Construction Business Management
3 Credits  4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This is a lecture course that focuses on sound business management, sales, and marketing as it relates specifically to building and construction. In addition, project estimating and scheduling techniques critical to long term success in the building/contracting industry are explored.

BCON-210 Residential Energy Auditing
3 Credits  4 Contact
Prerequisites: BCON-180 and BCON-181. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course teaches the theory and practical skills involved with residential energy auditing work. Course topics include principles of energy, building science, air sealing, insulation, heating and cooling basics, water heating, indoor air quality and building rating procedures. The course requires prior completion of a Basic Construction course, including construction methods, hand and power tool operation, construction math, and the OSHA 10-hour Construction Safety course, or equivalent. The course will include classroom lectures and hands-on lab activities.

BCON-211 Demolition and Deconstruction
3 Credits  4 Contact
Prerequisites: BCON-180 and BCON-181. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A course that will introduce the student to a green construction and demolition process with a focus on reducing the amount of construction related debris sent to landfills. This course will present the learner with methods for economically deconstructing structures where appropriate. In addition, the course will provide an overview of the demolition process. This course will include classroom lectures and activities, power point presentation, and group activities.

BCON-268 Construction Estimating
3 Credits  4 Contact
Prerequisite: CADD-110. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
A lecture-lab course offering the student a practical insight into the construction bidding process. In studying the basics of estimating materials, time and labor, the emphasis will be placed on light commercial and residential construction. The course will cover types of agreements, the contract system, quantity take offs, manpower and labor rates, cost adjustments and general contract and sub contract work.

BCON-282 Bldg and Construction Internship
2 Credits  2 Contact
Prerequisite: Instructor signature required. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The building and construction internship is designed as a special work assignment for all students in the building and construction program. The purpose of the internship is to assist the student in developing a specialized skill in a chosen specialty and at the same time allow them to gain valuable work experience that will lead to full time employment.

Business

BUSN-104 Introduction to Business
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
The study of business problems, business practices and procedures, including organization, management, labor, production, marketing, financing, and insurance.

BUSN-105 Parliamentary Procedures
1 Credits  1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
The study of rules of order governing an assembly; policy, custom and law of parliamentary procedures in business meetings, social and professional societies.

BUSN-106 Business Math
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
The study of applications of basic mathematics skills to solving frequently occurring business situations in such fields as accounting, marketing, retailing, consumer mathematics, banking, credit transactions and payroll.

BUSN-108 Business Sales
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The study of the fundamentals of sales, supported by actual problems in sales presentations and based on sales training material used by leading corporations in their educational programs for salespersons. Analysis of the field of personal selling as a visual element of the promotional efforts of a firm.

BUSN-110 Business Visual Presentations
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
The study of the preparation and use of visuals in organizing and delivering a business presentation. The student will use a variety of equipment to prepare transparencies, video/audio tape, graphs, charts, statistical data, photographs, and printed material which will assist the student in preparation of a presentation.
BUSN-112 The Business Portfolio
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The development of a business portfolio, which is a documentary collection, print or media, illustrating professional competence. The compilation presents evidence of work experience, education, research, projects, public and community service. This comprehensive testimonial captures the quality and breadth of person's career achievement.

BUSN-121 Windows Desktop
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course addresses a basic computer user interface; the Graphic User Interface (GUI) and operating system design, desktop navigation, file management, the Internet and on-line resources; email, file and data transmission.

BUSN-130 Microsoft Access
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course focuses on database concepts, basic design functions, task and date manipulation in the Microsoft Access software application.

BUSN-180 Microsoft Excel
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course focuses on electronic spreadsheet design and operations for balance sheets and expense reports; graphic enhancement, data management and integrated software applications.

BUSN-190 Microsoft Word
3 Credits 3 Contact
Prerequisite: OISY-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course provides hands-on practice in the Microsoft Word program. Includes basic and advanced document formatting and editing. Projects will be completed to apply skills that are learned in class.

BUSN-206 Business Communications
3 Credits 3 Contact
Prerequisite: Eligibility for ENGL-101 based on the MCC English Placement Test, or by having completed ENGL-099 with a Satisfactory grade, or by having completed the ACT with a score of 20 for English. Placement into RDNG-016 (ACSR-016) is required. The advanced level study and application of major principles of business communication by writing business letters and reports and presenting the information through oral communication after the reports have been prepared and formatted.

BUSN-245 Purchasing Applications
1 Credit 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course provides the basics of purchasing which include: identifying products to purchase, researching products, requisition process, receiving and invoicing, writing specifications, identifying vendors, establishing rapport with vendors, documenting purchasing procedures within the organization, identifying organizational cultures, and deciding whether to lease or buy.

BUSN-251 Business Law I
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Introduction to basic legal principles in business: the law of contracts, agency, negotiable instruments, banks and banking. Includes a review of key cases under these topics.

BUSN-252 Business Law II
3 Credits 3 Contact
Prerequisite: BUSN-251. Placement into RDNG-016 (ACSR-016) is required. The study of the law in relation to partnerships, corporations, real and personal property sales, bailments, mortgages, insurance, and trade regulations.

BUSN-253 Advertising
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The study of evaluation of media in relationship to marketing objectives. Includes scope and purpose of advertising, copy writing, and methods of visualization.

BUSN-255 Principles of Marketing
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed as an introduction to the marketing environment and the role marketing plays in that environment. The course is intended to cover the marketing mix, entrepreneurship, consumer behavior and ethics in the business world of today and tomorrow.

BUSN-257 Consumer Behavior
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course covers factors of consumer behavior and examines why they are important to the marketing of a product or service.

BUSN-280 Business Co-Op/Internship/Externship
2 Credits 2 Contact
Prerequisite: Completed minimum 12 credits of MCC courses with a minimum 2.5 overall GPA. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course allows the student the opportunity to practice classroom theories and employment skills at a business. On-the-job work experience and performance appraisal evaluations measure the application of individual and group projects. The business co-op coordinator will help the student secure employment. The student may be provided a stipend. The student should spend a minimum of 150 hours at the organization.

BUSN-294 Business Capstone
3 Credits 3 Contact
Prerequisite: Student must have a minimum of 45 accumulated credits, 12 of which must be from Business related courses. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course centers on the integration and application of acquired knowledge to real world business problems. Students will work in cross-functional groups (accounting, management, marketing, etc.) and utilize problem solving principles and techniques to evaluate business case studies. Students will explore employment and academic opportunities; development of communication, teamwork, leadership and analytical skills vital to career success. This course is intended for students who have taken several business courses and will soon complete their degree.

For the most current information, always check www.mcc.edu
Business Health Services

BHSR-100 Health Care Systems
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is an overview and survey of contemporary health care issues in the U.S., and the impact on society.

BHSR-110 Medical Reporting
4 Credits 3 Contact
Prerequisites: AHLT-102 and BUSN-190. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course teaches medical language processing for the novice transcriptionist or medical secretary. Instruction includes the mechanics of formatting medical reports and correspondence, the narrative outline, transcription techniques; review of grammar, punctuation and style in medical writing.

BHSR-115 Medical Practice Terminology
3 Credits 3 Contact
Prerequisite: AHLT-102. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course teaches medical writing for accuracy in interpreting patient care documentation, and writing for medical-legal disposition and litigation. A study of medical, scientific, diagnostic, procedural and technical language, by specialty and sub-speciality.

BHSR-116 Clinical Terminology
3 Credits 3 Contact
Prerequisite: AHLT-102. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
A reference system of clinical and disease terminology which facilitates interoperable exchange of electronic health records, data and treatment-related information. Physicians, dentists, nurses, and allied health professionals document procedures and diagnosis, pathology and etiology in this standardized medical vocabulary.

BHSR-118 Clinical & Administrative Systems
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
An introduction to information systems, technology and support services in healthcare. Advanced in clinical practice, electronic and digital records, regulatory compliance, cost benefits, and data analysis that impact patterns of workflow for decision making by managers and practitioners within health systems. Topics promote integrated approaches to solutions and institutional operations.

BHSR-119 Value Chain in Healthcare
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Course introduces processes integral to interdependent operations in healthcare. Topics translate the mission and services of healthcare to a business model. Illustrations and case studies define the delivery network, the roles and parameters of providers, third party payers and suppliers.

BHSR-120 Health Care Records
3 Credits 3 Contact
Prerequisite: BHSR-110. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Data management and organization of patient records for acute, extended care, hospice, psychiatric and ambulatory care with topics covering the record content, realtime reporting, the electronic medical record, filing and retrieval systems.

BHSR-121 eHealth Records
3 Credits 3 Contact
Prerequisites: AHLT-102 and BHSR-110. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
An introduction to the transition from paper documentation to an electronic or digitally stored record of medical history and treatment. A study of this process examines emerging technology, effectiveness, regulatory statutes, and the conceptual framework of distinctions between the medical record in digital or electronic form, a patient chart and the e-health record. Exercises measure proficiency and adherence to standards in maintaining documentation. Simulations survey clinical tools, charting instruments; create the patient chart and subsequent health record.

BHSR-200 Health Care Finance
4 Credits 4 Contact
Prerequisite: BHSR-200 or MGMT-220. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Fiscal management in health care organizations and the system of financing health service through both public and private sources; issues related to accreditation, regulations and licensure; and an explanation of revenue generating agencies, reimbursement and third party payments.

BHSR-203 Health Record Abstracting
2 Credits 2 Contact
Prerequisite: MGMT-210. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
An examination of source documents critical to tracking incidents of cancer for the tumor registry. Case studies practice selective extraction of oncology data and pertinent clinical information, and maintenance of related databases for designated diseases.

BHSR-205 Medical Office Routines
3 Credits 3 Contact
Prerequisite: BHSR-200 or MGMT-220. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Course content integrates business procedures and daily tasks associated with a clinical setting or private practice. Topics introduce HIPPA policy, ethics, confidentiality and discretion and systems security. Simulations evaluate affect; organize records, file, transcribe and chart; route phone calls and greet patients; schedule and follow referrals; handle cash, bill and post charges.

BHSR-207 Oncology Informatics
2 Credits 2 Contact
Prerequisite: BHSR-205 or MGMT-210. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
An analysis of cancer diagnosis and therapy by comprehensive review of medical records. Examination of source documents identifies cancer by type, site and extent; and tracks surgery, chemo-radio-immunotherapies, conventional and nonconventional modalities. Case studies reference coding standards, transfer data to epidemiological databases, and monitor for consistency and quality of biostatistical information.
Career Development

CDEV-110 Career Exploration and Decision-Making
1 Credits 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Designed to enhance student's preparation for entrance into the working world through skills in resume writing, interviewing techniques, job-search strategies, relocation information, and job-related interpersonal skills.

CDEV-111 Job Seeking Skills
1 Credits 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to aid undecided students in making career choices. Includes skill development in self-awareness, career awareness, decision making and career planning/placement, choosing a college and a college major and understanding the labor market and employment opportunities.

CDEV-112 Job Seeking Using Social Media
1 Credits 1 Contact
Prerequisite(s): Placement into RDNG-016 (ACSR-016) is required. This course will develop and enhance knowledge of social media technology and how to incorporate these tools into a job search plan. This is a course that will heavily use technology to explore and utilize interactive and social media, (e.g. LinkedIn, Twitter, etc.) to prepare for current hiring trends. The course teaches skills to establish professional contacts for employment opportunities. Workplace professionalism including behaviors and etiquette will also be reviewed.

Chemistry
Science & Math

CHEM-111 Fundamentals of Inorganic Chemistry
4 Credits 3 Contact
Prerequisite: A 2.0 or better in MATH-110 or MATH-082 or placement into MATH-120 on the MCC Placement Exam. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-111L and CHEM-111Q. Note: This course requires chemical splashproof goggles and lab coat on the first day of class. A non-programmable/non-graphing scientific calculator is required. TI 30X IIS recommended.
A one-semester course for non-science majors. The course covers the knowledge and understanding of selected fundamentals, principles, facts and laws of chemistry.

CHEM-111L Fundamentals of Inorganic Chemistry Lab
0 Credits 1 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-111 and CHEM-111Q. Note: This course requires basic chemical techniques and practical application of principles.

CHEM-111Q Fundamentals of Inorganic Chemistry Quiz
0 Credits 1 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-111 and CHEM-111L Note: This course requires chemical splashproof goggles, lab coat and a non-programmable/non-graphing calculator on the first day of class. TI 30XIIS recommended. The quiz section of a one-semester course for non-science majors. The course covers the knowledge and understanding of selected fundamentals, principles, facts and laws of chemistry.

CHEM-112 Fundamentals of Organic & Biochemistry
4 Credits 3 Contact
Prerequisite: A 2.0 or better in CHEM-111 or a 2.0 or better in CHEM-131. Note: CHEM-118 may not be used to meet the prerequisite. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CHEM-112L and CHEM-112Q. Note: This course requires chemical splashproof goggles and lab coat on the first day of class.
One semester course in organic chemistry and biochemistry for health-related and non-science majors. Topics include functional groups, reactions, nomenclature and application to biochemical systems.

CHEM-112L Fundamentals of Organic/Biochemistry Lab
0 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-112L and CHEM-112Q. Note: This course requires chemical splashproof goggles and lab coat on the first day of class.
The lab section of the course in organic chemistry and biochemistry for health-related and non-science majors. Topics include functional groups, reactions, nomenclature and application to biochemical systems. Laboratory work is designed to familiarize students with properties, identification, and synthesis of organic and biochemical compounds with emphasis on biochemical application.

CHEM-112Q Fundamentals of Organic/Biochem Quiz
0 Credits 1 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030) is required. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Note: A $1.75 student test fee will be charged.
This course is designed for students who need a review of, an introduction to, or additional experience in the basic mathematical and chemical concepts and skills necessary for satisfactory academic work in CHEM-131.
CHEM-120 Introduction to Forensic Science
4 Credits 3 Contact
Prerequisites: Score of 2.0 or better in CHEM-111 or any higher chemistry laboratory course, and a 2.0 or better in MATH-120. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CHEM-120L Note: Each student will need to supply their own scientific calculator (TI-30 series), splashproof goggles, and full length lab coat. A survey of scientific methods of crime and analysis. Students will use various wet lab and instrumental techniques to examine evidence such as hair, soil, fibers, fingerprints, etc, generally associated with a crime scene.

CHEM-120L Introduction to Forensic Science Lab
0 Credits 3 Contact
Prerequisites: Score of 2.0 or better in CHEM-111 or any higher chemistry laboratory course, and a 2.0 or better in MATH-120. Corequisite: CHEM-120 Note: Each student will need to supply their own scientific calculator (TI-30 series), splashproof goggles, and full length lab coat. A survey of scientific methods of crime and analysis. Students will use various wet lab and instrumental techniques to examine evidence such as hair, soil, fibers, fingerprints, etc, generally associated with a crime scene.

CHEM-123 Fundamentals of Chemistry
4 Credits 6 Contact
Prerequisite: CHEM-111 or CHEM-118 or High School Chemistry. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. A one-semester course primarily for health science and related fields. Selected topics from the basic tenets of general chemistry are reviewed and organic and biochemistry are introduced. Laboratory experiments allow students to demonstrate concepts and principles in general, organic, and bio-chemistry with particular emphasis on biological applications.

CHEM-131 General Chemistry I
5 Credits 3 Contact
Prerequisite: A 2.0 or better in MATH-120 AND a 2.0 or better in CHEM-118 or a 3.0 or better in CHEM-111 or placement into CHEM-131 on the Chemistry Placement Test. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-131L and CHEM-131Q Note: This course requires chemical splashproof goggles and lab coat on the first day of class. A scientific calculator is required. TI 30X IIS, TI-83 or TI-84 recommended.
Principles and laws concerning the structure, properties and behavior of matter and applications in laboratory situations. Topics include atomic and molecular structure, states of matter, thermodynamics, reaction rates, chemical reactions, oxidation, reduction, acids and bases.

CHEM-131L General Chemistry I Lab
0 Credits 3 Contact
Prerequisite: Chemistry placement test or CHEM-111 or CHEM-118 AND a 2.0 or better in MATH-120. Corequisite: CHEM-131 and CHEM-131Q Note: This course requires chemical splashproof goggles and lab coat on the first day of class. A scientific calculator is required. TI 30XIIS recommended. The lab section of the course covering the principles and laws concerning the structure, properties and behavior of matter and applications in laboratory situations. Topics include atomic and molecular structure, states of matter, thermochemistry, bonding, chemical reactions, and organic chemistry. Laboratory work includes basic techniques of recrystallization, chromatography, titration, calorimetry and synthesis.

CHEM-131Q General Chemistry I Quiz
0 Credits 1 Contact
Prerequisite: Chemistry placement test or CHEM-111 or CHEM-118 AND a 2.0 or better in MATH-120. Corequisite: CHEM-131 and CHEM-131L Note: This course requires chemical splashproof goggles and lab coat on the first day of class. A scientific calculator is required. TI 30XIIS recommended. The quiz section of the course covering the principles and laws concerning the structure, properties and behavior of matter and applications in laboratory situations. Topics include atomic and molecular structure, states of matter, thermochemistry, bonding, chemical reactions, and organic chemistry.

CHEM-132 General Chemistry II
5 Credits 3 Contact
Prerequisite: 2.0 or better in CHEM 131 AND a 2.0 or better in MATH-130 or MATH-145. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CHEM-132L and CHEM-132Q Note: This course requires chemical splashproof goggles, lab coat and a stitch bound composition book on the first day of class. A TI-83 or TI-84 calculator is required. A continuation of CHEM-131. Topics include solutions, reaction rates, chemical reactions, ionic and gas phase equilibrium, thermodynamics, applications of chemical reactions, oxidation, reduction, acids and bases.

CHEM-132L General Chemistry II Lab
0 Credits 3 Contact
Prerequisite: 2.0 or better in CHEM 131 AND a 2.0 or better in MATH-130 or MATH-145. Corequisite: CHEM-132 and CHEM-132Q Note: This course requires chemical splashproof goggles, lab coat and a stitch bound composition book on the first day of class. A TI-83 or TI-84 calculator is required. The lab section of CHEM-132. Topics include solutions, reaction rates, chemical reactions, ionic and gas phase equilibrium, thermodynamics, applications of chemical reactions, oxidation, reduction, acids and bases. Laboratory work includes qualitative analysis, volumetric and gravimetric analysis and statistical handling of data.

CHEM-132Q General Chemistry II Quiz
0 Credits 1 Contact
Prerequisite: 2.0 or better in CHEM 131 AND a 2.0 or better in MATH-130 or MATH-145. Corequisite: CHEM-132 and CHEM-132L Note: This course requires chemical splashproof goggles, lab coat and a stitch bound composition book on the first day of class. A TI-83 or TI-84 calculator is required. The quiz section of CHEM-132. Topics include solutions, reaction rates, chemical reactions, ionic and gas phase equilibrium, thermodynamics, applications of chemical reactions, oxidation, reduction, acids and bases.

CHEM-222 Principles of Analytical Chemistry
2 Credits 2 Contact
Prerequisite: CHEM-132 or permission of instructor. Placement into RDNG-016 (ACSR-016) is required. A survey of the basic principles and techniques of classical and instrumental methods of chemical analysis and their utilization in solving modern day problems.
CHEM-224 Analytic Chemistry Laboratory
2 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CHEM-222
A laboratory class designed to teach chemical gravimetric, volumetric and instrumental methods of analysis applied to classical and modern-day problems.

CHEM-226 Air and Water Pollution Analysis Laboratory
2 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CHEM-222
A laboratory course designed to teach a general survey of air and water pollutants including terminology, sources, levels and effects, with a thorough treatment of separation and analysis of pollutants.

CHEM-237 Organic Chemistry I
5 Credits 3 Contact
Prerequisite: CHEM-132. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-237L and CHEM-237Q
The laboratory section of basic principles of organic chemistry with emphasis on structural theory, stereochemistry, reaction mechanisms, spectroscopy and organic synthesis. Laboratory work involves organic laboratory techniques including microscale analysis and instrumental methods.

CHEM-237L Organic Chemistry I Lab
0 Credits 3 Contact
Prerequisite: CHEM-132. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-237 and CHEM-237Q
The laboratory section of basic principles of organic chemistry with emphasis on structural theory, stereochemistry reaction mechanisms, spectroscopy and organic synthesis.

CHEM-237Q Organic Chemistry I Quiz
0 Credits 1 Contact
Prerequisite: CHEM-132. Placement into RDNG-030 (ACSR-030) or completion of RDNG-016 is required. Corequisite: CHEM-237 and CHEM-237Q
The quiz section of basic principles of organic chemistry with emphasis on structural theory, stereochemistry reaction mechanisms, spectroscopy and organic synthesis.

CHEM-238 Organic Chemistry II
5 Credits 3 Contact
Prerequisite: CHEM-237. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CHEM-238L and CHEM-238Q
The second semester of basic principles of organic chemistry with emphasis on structural theory, stereochemistry, reaction mechanisms, spectroscopy and organic synthesis.

CHEM-238L Organic Chemistry II Lab
0 Credits 3 Contact
Prerequisite: CHEM-237; Corequisite: CHEM-238 and CHEM-238Q
The laboratory section of basic principles of organic chemistry with emphasis on structural theory, stereochemistry, reaction mechanisms, spectroscopy and organic synthesis. Laboratory work involves organic laboratory techniques including microscale analysis and instrumental methods.

CHEM-238Q Organic Chemistry II Quiz
0 Credits 1 Contact
Prerequisite: CHEM-237; Corequisite: CHEM-238 and CHEM-238L
Note: This course requires splashproof goggles and lab coat on the first day of class.
The quiz section of basic principles of organic chemistry with emphasis on structural theory, stereochemistry, reaction mechanisms, spectroscopy and organic synthesis.

Chinese
Humanities
CHL-111 Chinese
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course presents a basic listening, speaking, reading and writing curriculum written in English and Romanized Chinese based on Hayu pinyin, as well as a separate but coordinated reading and writing curriculum that includes both simplified and full forms of Chinese characters. The curriculum consists of task-based, interactive classroom activities.

CHL-112 Chinese 112
4 Credits 4 Contact
Prerequisite: CHL-111. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is a continuation of Chinese 111. The course teaches the basic listening, speaking, reading and writing skills. The curriculum includes both simplified and full forms of Chinese characters. This course consists of task-based, interactive classroom activities. The Mandarin dialect of the Chinese language is taught in this course.

Communications
Humanities
COMM-131 Fundamentals of Public Speaking
3 Credits 3 Contact
Prerequisite: Placement into ENGL-101 or an "S1" in ENGL-099. Placement into RDNG-016 (ACSR-016) is required.
This course teaches the fundamentals of public speaking, principles of effective oral communication, and application of these principles in a variety of practical speaking situations.

COMM-132 Advanced Communications
3 Credits 3 Contact
Prerequisite: COMM-131. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course teaches the advanced principles of public speaking, improvement of speech skills in a variety of speech situations, with emphasis on persuasion.

COMM-200 Survey of Human Communication Studies
3 Credits 3 Contact
Prerequisite or corequisite: ENGL-101. Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A survey course in communication that will investigate the theory and scholarly history of the discipline in the following typical and emerging concentration areas in the field: public communication; interpersonal communication; family communication; organizational, workplace, and group communication; interviewing and leadership; healthcare communication; mediated communication and communication technology.

For the most current information, always check www.mcc.edu
COMM-231 Discussion Principles  
3 Credits 3 Contact  
Prerequisite: COMM-131. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course addresses discussion as essential to the democratic process, a study of the methods and principles of discussion, practical experience in the various types of discussion.  

COMM-233 Oral Interpretation  
3 Credits 3 Contact  
Prerequisite: COMM-131, Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
The theory of oral reading; practice in developing vocal and body techniques for the interpretation of literature; readings from prose, poetry, and drama.  

Communications Technology  
Technology  

COMT-110 Introduction to Digital Technology  
3 Credits 3 Contact  
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.  
This course is an introduction to the digital technologies currently used in occupations such as Computer Applications, Sales & Marketing, Corporate Training, Public Relations, Photography, Small Business Management and Distance Learning. Content will include: digital technology overview, development and application exercises in digital technologies used in print media, photography, graphics, video/audio production, basic operation of digital hardware and an introduction to the design of digital media in a PC-based environment.  

COMT-110A Digital Technology Overview  
.5 Credits .5 Contact  
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.  
This module is designed to introduce the basic concepts, vocabulary, and potential of the digital technologies. This is the foundation for creating practical applications of digital techniques for a variety of communications projects. Students will be exploring real-world examples of the major types of digital technology using print and web publications.  

COMT-110B Print Based Publications  
.5 Credits .5 Contact  
Prerequisite: COMT-110A. Placement into RDNG-016 (ACSR-016) is required.  
This module introduces design concepts specific to print-based publications. Design techniques, terminology and elements of graphic design are included. Students will also produce a variety of print materials using current entry-level publications program (i.e. Microsoft Publisher).  

COMT-110C Photo Solutions/Digital Realm  
.5 Credits .5 Contact  
Prerequisite: COMT-110A. Placement into RDNG-016 (ACSR-016) is required.  
This module introduces the basics of Photography. Students will be able to identify elements of composition, use of light and color, depth of field and speed. In addition, they will learn how to create conventional 35mm photographs, scanned images and digital pictures. Images will be produced in a variety of file formats for specific use in print-based and on-line applications.  

COMT-110D Graphic Sols/Digital Realm  
.5 Credits .5 Contact  
Prerequisite: COMT-110A. Placement into RDNG-016 (ACSR-016) is required.  
This module will introduce students to designing business graphics and logos, using clipart images and incorporating the designs in an electronic presentation. Images will be produced in a variety of file formats for specific use in print-based and on-line applications.  

COMT-110E Create Video/Audio Digital Solutions  
.5 Credits .5 Contact  
Prerequisite: COMT-110A. Placement into RDNG-016 (ACSR-016) is required.  
This module will introduce basic video production techniques. Students will be required to design, produce, digitize and edit a short video using PC-based hardware and software. Videos will also include computerized titling. The completed projects will be output to tape.  

COMT-110F Basic Design for On-Line Applications  
.5 Credits .5 Contact  
Prerequisite: COMT-110A. Placement into RDNG-016 (ACSR-016) is required.  
This module will introduce basic design techniques for Web sites. When students complete this module, they will be able to design and create interesting pages. The projects will include adding graphics, logos, e-mail access and navigation components.  

COMT-120 Digital Media Production I  
3 Credits 3 Contact  
Prerequisite: COMT-110 and COMG-153. Placement into RDNG-016 (ACSR-016) is required.  
This course examines advanced digital technologies used in graphics, publications and web development in the PC-based environment. It is a production oriented course using digital technologies found in occupations such as Computer Applications Sales & Marketing, Corporate Training, Public Relations, Photography, Small Business Management and Distance Learning. Content will include: professional level software packages (e.g. Publisher, Pagemaker, Photo Editor, RoboHTML Dreamweaver or new software as developed), project planning and timelines, development and application exercises in print and on-line applications.  

COMT-120A Photo/Graphic Manipulation - Photoshop  
1 Credits 1 Contact  
Prerequisite: COMT-110. Placement into RDNG-016 (ACSR-016) is required.  
Introduces the basics of photographic manipulation using the Photoshop program. Students will be able to use Photoshop tools effectively to edit photographs, use basic painting tools, work with text and colors and manipulate complex selections. In addition, layers, filters, color selection, color correction calibration and paths will be explored.  

COMT-120B Webpage Development: Adobe Dreamweaver  
1 Credits 1 Contact  
Prerequisite: COMT-110. Placement into RDNG-016 (ACSR-016) is required.  
Introduces the basics of webpage development using the Dreamweaver program. Students will be able to use Dreamweaver tools effectively to create text based web pages, use links, images and tables and work with both frames and layers. In addition, templates, libraries, animations, behaviors, plug-ins and site management will be explored.  

For the most current information, always check www.mcc.edu
COMT-120C Publication Development: Adobe InDesign
1 Credits 1 Contact
Prerequisite: COMT-110. Placement into RDNG-016 (ACSR-016) is required.
Introduces the basics of print-based publication development using the PageMaker program. Students will be able to use PageMaker tools effectively to create publications, text manipulation, page styles and graphics. In addition, master pages, advanced text handling, document management and various printing techniques will be explored.

COMT-121A Adobe Photoshop-CS
1 Credits 1 Contact
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies used in photographic and graphic manipulation for web and publication graphics in a PC-based environment. Content will include professional level software applications (e.g. Adobe Photoshop, Adobe Photoshop Elements, etc.), planning and timelines, and development/application exercises in print publications. There will be a different application program taught in each of the sections offered.

COMT-121B Adobe Photoshop Elements
1 Credits 1 Contact
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies used in photographic and graphic manipulation for web and publication graphics in a PC-based environment. Content will include professional level software applications (e.g. Adobe Photoshop, Adobe Photoshop Elements, etc.), planning and timelines, and development/application exercises in print publications. There will be a different application program taught in each of the sections offered.

COMT-122A Dreamweaver-CS
1 Credits 1 Contact
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies used in webpage development in a PC-based environment. Content will include professional level software applications (i.e. Adobe GoLive, Macromedia Dreamweaver, etc.), planning and timelines, and development/application exercises in print publications. There will be a different application program taught in each of the sections offered.

COMT-122B Digital Video Editing: Hardware Based
.5 Credits .5 Contact
Prerequisite: COMT-120. Placement into RDNG-016 (ACSR-016) is required.
Introduces digital video editing using a computer software based solution. Students will be working with Adobe Premiere or a similar professional level editor. The concepts of video capture, scene manipulation, transitions, special effects, titling and exporting completed movies are some of the skills explored.

COMT-123A Adobe Pagemaker
1 Credits 1 Contact
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies used in publications and publication graphics in a PC-based environment. Content will include professional level software applications (e.g. Adobe Pagemaker, Adobe InDesign, etc.), planning and timelines, and development/application exercises in print publications. There will be a different application program taught in each of the sections offered.

COMT-123B Adobe In-Design-CS
1 Credits 1 Contact
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies used in publications and publication graphics in a PC-based environment. Content will include professional level software applications (e.g. Adobe Pagemaker, Adobe InDesign, etc.), planning and timelines, and development/application exercises in print publications. There will be a different application program taught in each of the sections offered.

COMT-220 Digital Media Production II
3 Credits 3 Contact
Prerequisite: COMT-120. Placement into RDNG-016 (ACSR-016) is required.
This course examines advanced digital technologies used in audio and video development used in the PC-based environment. Content will include professional level software packages (e.g. SoundForge, Quicktime Moviemaker, Real Audio/Video or new software as developed), video capture hardware/software, digital video post-production both linear and non-linear, project planning and timelines, and development/application exercises in audio and video for the web. It is a production oriented course using the digital technologies found in occupations such as Computer Applications, Television Production, Photography, Small Business Management and Distance Learning.

COMT-220A Digital Video Editing: Software Based
1 Credits 1 Contact
Prerequisite: COMT-120. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies used in photographic and graphic manipulation for audio and video post-production both linear and non-linear, project planning and timelines, and development/application exercises in print publications. There will be a different application program taught in each of the sections offered.

COMT-220B Digital Video Editing: Hardware Based
.5 Credits .5 Contact
Prerequisite: COMT-120. Placement into RDNG-016 (ACSR-016) is required.
Examines advanced digital technologies using a stand-alone computerized video editor. Students will plan, create and capture raw video and then complete post-production editing (i.e. scene sequencing, transitions, titling and special effects) and render the completed video back to VHS or digital tape stock.

COMT-220C Digital Audio Editing
1 Credits 1 Contact
Prerequisite: COMT-120. Placement into RDNG-016 (ACSR-016) is required.
Explores basic concepts of audio (sound-only) editing using a computer based software program (Sound Forge or similar program). Students will plan, create and record audio files, then complete post-production editing. Final products will be computer files and/or audio tape or CD-R.

COMT-220D Digital Resume: Web/CD Production
.5 Credits .5 Contact
Prerequisite: COMT-110, COMT-120, COMT-220A, COMT-220B, COMT-220C. Placement into RDNG-016 (ACSR-016) is required. Students in this course will be developing a CD based Digital Resume. The resume will be designed using a multi-media builder program to create an auto-run CD. Samples of work from all of the various skills/programs learned in the Communications Technology curriculum as well as a PDF traditional resume will be included.
COMT-260 Educational Technology
3 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Provides educators and trainers with the basic knowledge and skills necessary to implement instructional media in a competency based curriculum. Content will include: development and application exercises in media software; operation of conventional media hardware and computers; and an introduction to instructional design systems.

COMT-270 Field Experience
2 Credits  2 Contact
Prerequisite: COMT-220 and permission of instructor. Placement into RDNG-016 (ACSR-016) is required. This course provides the student with an opportunity to use the skills acquired in the Communication Technology courses in a field work experience. Students will be required to complete 100 work hours in a business, educational or broadcasting environment. Supervision of field work assignment will be done by the field site supervisor. Students are expected to perform as business professionals and adhere to the business practices of their work site. Additional meetings with the student, field site supervisor and instructor will be required. Field Experience is to be taken the last semester of the student's program.

Computer Aided Drafting
Technology

CADD-100 Mechanical Blueprint Reading w/CADD
3 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Optional Co-Requisite: CADD-120. This is a lecture/laboratory course that focuses on the interpretation of engineering drawings and CADD files used in the mechanical design profession. The course reflects current ASME specifications as it relates to the interpretation of two dimensional orthographic detail and assembly drawings.

CADD-110 Architectural Blueprint Reading w/CADD
3 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Optional Co-Requisite: CADD-120. This is an introduction to reading and interpreting architectural blueprints and sketching techniques used in field information gathering and communication. Students develop skills in blueprint reading through interpretation of drawings and CADD files used in the mechanical design profession. The course reflects current ASME specifications as it relates to the interpretation of two dimensional orthographic detail and assembly drawings.

CADD-120 2D CADD Applications
3 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Prerequisite or Co-requisite: CADD-100 or CADD-110. This course is an introduction to CADD drafting for the development of detail drawings. The emphasis of this course is to develop the detailing skills required for an entry level CADD Technician. After successfully completing this course, the student should be able to complete tasks such as the creation of detail drawings for manufacturing products/projects.

CADD-130 Parametric Modeling Fundamentals
3 Credits  4 Contact
Prerequisite: CADD-120, Placement into RDNG-016 (ACSR-016) is required. Optional Co-Requisite: CADD-140. A lecture/laboratory course which introduces fundamental concepts of “Parametric Modeling” applications as it relates to design topics. The course is designed to develop sound fundamentals in creating 3D parametric models using a CADD based design environment. The course will include sketching, geometric and dimensional constraining techniques and applications with regard to product design intent and use.

CADD-140 Mechanical Detailing Applications
3 Credits  4 Contact
Prerequisite: CADD-130, Placement into RDNG-016 (ACSR-016) is required. This introduction to CADD applications used in creating mechanical detail drawings. The emphasis of this course is to develop the mechanical detailing skills required for an entry level detailing Technician. After successfully completing this course, the student should be prepared to complete tasks such as: create the detail drawings for a product, machine, or tooling equipment projects.

CADD-150 Intro to Analysis, CAM & Sim. Tools
3 Credits  4 Contact
Prerequisite: CADD-140, Placement into RDNG-016 (ACSR-016) is required. Student must provide a Flashdrive or Portable Storage Device. This course introduces students to advanced CADD tools used to analyze and simulate design processes for testing and interrogating the design intent. This course introduces students to current design software such as Simulation software, Finite Element Analysis (FEA) software and Computer Aided Manufacturing (CAM) software. All of the tools are used to evaluate the design of products, tools and processes. This class will be delivered in a CADD based format.

CADD-160 Fundamentals of Design
3 Credits  4 Contact
Prerequisite: CADD-140, Placement into RDNG-016 (ACSR-016) is required. This course is a lecture/laboratory course that is focused on creating design solutions in a concurrent environment. Concepts relating to the relationship between design and manufacturing processes will be emphasized. The course will require the critique of details and assemblies related to production parts and their associated tools. The course is delivered in a CADD environment and will also utilize freehand sketching and short written assignments to solve design related problems.

CADD-172 Architectural Detailing Applications
3 Credits  4 Contact
Prerequisite: CADD-120, Placement into RDNG-016 (ACSR-016) is required. This is an introduction to CADD detailing for the development of architectural detail drawings, floor plans, and schedules. The emphasis of this course is to develop the architectural detailing skills required for an entry level Architectural technician. After successfully completing this course, the student should be prepared to complete tasks such as: create the detail drawings for a remodeling project or a manufacturing plant layout, create a site plan, and prepare layouts for mechanical and electrical systems related projects.
CADD-201 Unigraphics Basic Modeling & Drafting I  
4 Credits  6 Contact  
Prerequisite: CADD-120. Placement into RDNG-016 (ACSR-016) is required.  
A class which introduces basic modeling applications with Unigraphics. Major topics to be covered include menu structure, introduction to UG windows, curve creation and editing fundamentals, part file management, preferences, 2D and 3D model creation, sketching, solid modeling fundamentals and an introduction to UG drafting. This course will also cover basic parametric modeling techniques.

CADD-202 Catia Basic Modeling and Drafting I  
4 Credits  6 Contact  
Prerequisite: CADD-120. Placement into RDNG-016 (ACSR-016) is required.  
A class which introduces basic modeling applications with CATIA. Major topics to be covered include menu structure, introduction to CATIA windows, curve creation and editing fundamentals, part file management, preferences, 2D and 3D model creation, sketching, solid modeling fundamentals and an introduction to CATIA drafting. This course will also cover basic parametric modeling techniques.

CADD-203 Advanced Dimensioning & Geometric Dimensioning and Tolerancing  
3 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Prerequisite or Co-Requisite: CADD-140.  
An introduction to Advanced Dimensioning using Geometric Dimensioning and Tolerancing (GD&T) as it relates to the current ASME specification. The course will cover traditional tolerancing and dimensioning formats, as well as all relevant components of geometric tolerancing as it relates to design, implementation, and production of mass-produced products. Additionally, emphasis will be placed on the design of functional gages and inspection procedures that will verify the production parts conform to the specifications.

CADD-204 CADD Product Design Applications  
4 Credits  6 Contact  
Prerequisite: CADD-160 and CADD-203. Placement into RDNG-016 (ACSR-016) is required.  
A lecture/laboratory course which explores design concepts associated with the development of production parts. Concepts relating to design, material selection, manufacturing processes and cost will be emphasized. The course will address practical job-related situations using methods currently in use by industry in the development of new products. Assignments will include design analysis, design reviews, and practical application problems completed in a CADD environment. The course will build on those topics addressed in CADD-160, and is project based.

CADD-205 CADD Tool & Design Applications  
4 Credits  6 Contact  
Prerequisite: CADD-160 and CADD-203. Placement into RDNG-016 (ACSR-016) is required.  
Students will apply tool design principles by completing design and detailing projects. Production tooling concepts are introduced with an emphasis on efficiency, location, clamping, safety, ergonomics, automation, and process capable tooling. This class will be conducted using the latest CADD technology and related peripheral output devices such as rapid prototyping, direct to digital manufacturing, and 3D visualization tools. This course will also explore the integration of process or fabrication tooling and machine controls.

CADD-206 Product Data Management Processes  
3 Credits  4 Contact  
Prerequisite: CADD-140 and CADD-201. Placement into RDNG-016 (ACSR-016) is required.  
This course addresses the creation and organization of product data using CADD data management tools. Various methods of creating, revising, finding, viewing, and managing product data and product data structures are discussed. In addition, an overview of how engineering products and their related processes progress through the product lifecycle is introduced.

COMC-115 A+ Core Hardware Components  
3 Credits  3 Contact  
Prerequisite: COMG-153 or COMI-160. Placement into RDNG-016 (ACSR-016) is required.  
This course provides students with practical, hands-on experience in installing, configuring and upgrading hardware components. Topics include motherboards, processors, memory, printers, basic networking, as well as troubleshooting and preventive maintenance. This course is intended to assist students who are preparing for the Comp TIA A+ Core Hardware exam which is one of two courses required to become A+ certified.

COMC-125 A+ Operating System Technologies  
3 Credits  3 Contact  
Prerequisite: COMC-115. Placement into RDNG-016 (ACSR-016) is required.  
This course provides students with practical, hands-on experience in installing, configuring, and upgrading various operating systems. Topics include operating systems fundamentals, diagnosing and troubleshooting, and networks. This course is intended to assist students who are preparing for the Comp TIA A+ OS Technologies exam which is one of two exams required to become A+ Certified.
**Computer Info Technology**

**COMI-160 Introduction to Computer Info Systems**
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This is a lecture course providing an in-depth survey of data processing and computers in business. Topics include computer hardware, data classifications, computer arithmetic and codes, input/output devices, telecommunications, data structures and programming languages.

**COMI-169 Supporting End Users**
3 Credits 3 Contact
Prerequisite: COMG-150 or COMG-153 or COMG-154 or COMG-164. Placement into RDNG-016 (ACSR-016) is required.
An introduction to supporting end users as help desk and desktop support technicians. Topics include help desk concepts, technical writing, training of end users, technical support methods via the web and face-to-face situations, basic troubleshooting of computer, network and printer errors.

**COMI-261 Database Concepts**
4 Credits 4 Contact
Prerequisite: COMS-170 or BUSN-130. Placement into RDNG-016 (ACSR-016) is required.
This course teaches the concepts of data base design, maintenance, and use. A current data base processor is used for student projects.

**COMI-262 Systems Analysis and Design**
3 Credits 3 Contact
Prerequisite: COMI-160 and COMS-170; and either COMG-153 or COMG-154. Placement into RDNG-016 (ACSR-016) is required.
This course is designed to give a basic knowledge of how computer information systems are developed and implemented. Topics include the systems development cycle and the various tools and techniques used by a systems analyst.

**COMI-263 Structured Query Language (SQL)**
4 Credits 4 Contact
Prerequisite: COMS-170 and one of the following: COMS-171 or COMS-172 or COMS-175. Placement into RDNG-016 (ACSR-016) is required.
Relational databases are the backbone of organizations, and this is where their critical data are stored for their information processing needs. Learning SQL gives students the skills they need to create, retrieve or update information from any relational database (Oracle IBM DB2, Sybase, Ingress, and MS SQL Server). In this course students will learn relational database concepts, writing basic SQL statements, restricting and sorting data, displaying data from multiple tables, aggregating data using group functions, sub queries, creating and managing tables, creating views, and security.

**COMI-268 Externship I**
2 Credits 2 Contact
Division signature required. Prerequisite: 12 credit hours in COMG, COMS, COMI or COMN. Recommendation of 2 IT instructors required and must have officially declared a program within the Information Technology program. Placement into RDNG-016 (ACSR-016) is required.
This course includes specific work experiences tailored to the needs of each student and the employer. Arrangements are made by the program coordinator.

**COMI-269 Externship II**
2 Credits 2 Contact
Prerequisite: COMI-268. Placement into RDNG-016 (ACSR-016) is required.
This course involves specific work experiences tailored to the needs of each student and the employer. Arrangements are made by the program coordinator.

**Computer Networking**

**COMN-112 Principles of Computer Networking**
2 Credits 2 Contact
Prerequisite: COMG-153 or COMG-154 or COMG-164. Placement into RDNG-016 (ACSR-016) is required.
This course serves as a general introduction for students to acquire the basic principles and concepts in current networking technologies for local area networks (LANs), wide area networks (WANs) and the Internet. Topics covered include an introduction to the hardware, software, terminology, components, design, connections of a network, the topologies and protocols for LANs, as well as the basic concepts and approaches involved in maintaining and administering a network.

**COMN-114 Fundamentals of Network Cabling**
2 Credits 2 Contact
Pre- or corequisite: COMN-112. Placement into RDNG-016 (ACSR-016) is required.
This course focuses on the physical aspects of data network cabling and installation. Topics covered include cabling issues related to data connections, types of media and cabling, physical and logical networks as well as providing an understanding of the industry and its worldwide standards. In this hands-on, lab-oriented course, students will develop skills in installing cable using the proper cable installation techniques, cable management, patch panel installation and cable testing.

**COMN-128 Introduction to Wireless Networking**
3 Credits 3 Contact
Prerequisite: COMN-112. Placement into RDNG-016 (ACSR-016) is required.
This course provides an overview of the wireless networking industry. Topics covered include the transmission methods and IEEE 802.11 standards of wireless communications, as well as wireless security vulnerabilities and solutions. Students will develop the skills needed to plan, install, configure and secure a wireless network as well as addressing wireless device problems and troubleshooting wireless networks.

**COMN-130 Implementing and Supporting Microsoft Network Clients**
3 Credits 3 Contact
Prerequisite: COMN-112. Placement into RDNG-016 (ACSR-016) is required.
This course provides students with the knowledge required to install, configure, support, and troubleshoot the Microsoft Windows operating system in both stand-alone and network environments. This course includes descriptions of maintenance and troubleshooting tools, communications and networking protocols, and hardware support, and describes interoperability with Microsoft Windows networks and with Novell Netware. Partial preparation for associate industry certification examinations (Microsoft MCP and MCSE).
COMN-132 Supp Microsoft Wnds Ntwrk Core Techn
3 Credits 3 Contact
Prerequisite: COMN-130. Placement into RDNG-016 (ACSR-016) is required.
Provides students with the core foundation for supporting Microsoft Windows network servers, and the skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Microsoft Windows network operating systems. Partial preparation for continued advancement in Microsoft Windows networking studies, and associate industry certification examinations (Microsoft MCP and MCSE).

COMN-152 Routing Protocol/Networking Fundamentals
3 Credits 3 Contact
Prerequisites: COMN-112 and COMN-114. Placement into RDNG-016 (ACSR-016) is required.
Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation.

COMN-181 Digital & Physical Security of Data
3 Credits 3 Contact
Prerequisite: COMG-161 and COMI-160 and COMN-112. Placement into RDNG-016 (ACSR-016) is required.
Introduces students to computer network security. Communications network security planning, infrastructure, operational, and organizational security and cryptography will be covered. This course will also help to prepare students for the CompTIA Security+ exam.

COMN-228 Management of Information Security
3 Credits 3 Contact
Prerequisite: COMN-181. Placement into RDNG-016 (ACSR-016) is required.
This is an advanced level computer security course emphasizing the managerial aspects to computer security. Topics covered include contingency planning, information security policy, the identification and assessment of risk, laws and ethics of information security and how to maintain information security during the development process.

COMN-271 Computer Forensics
3 Credits 3 Contact
Prerequisite: COMC-125. Placement into RDNG-016 (ACSR-016) is required AND Pre or co-requisite:COMN-181.
This advanced course deals with the preservation, identification, extraction, documentation and interpretation of computer data. Topics covered include evidence handling, chain of custody, collection, preservation, identification and recovery of computer data using forensic recovery software and methods. Students learn the theory of computer forensics as well as complete hands-on activities to produce a legitimate computer forensics case analysis.

COMN-282 Computer Networking Capstone
3 Credits 3 Contact
Prerequisites: COMN-228 and COMN-271. Placement into RDNG-016 (ACSR-016) is required. Pre-or co-requisite: COMN-132.
This course serves as the capstone course for all computer networking students and will integrate all of the networking skills acquired throughout the computer networking degree program. In this course, students will design, develop and implement a network in a simulated or real-world environment.

Computer Science
Technology

COMS-130 Intro to Linux Administration
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This class will concentrate on the installation and configuration of the Linux operating system. Students will gain experience by setting up their own individual Linux servers/workstation. The course will teach the student to use the shell to configure a wide arrangement of services. In addition, students will examine the popular X-windows interface, and look at the possibility of a Linux desktop replacing an MS Windows counterpart. It will also cover the principles that have allowed Linux to become a leading edge server software. Students will begin to cover material, which is essential to completing Sair- Linux3XO-101 test.

COMS-170 Intro to Programming
4 Credits 4 Contact
Prerequisite: Math-082, or placement into Math-082 on the MCC Placement test or a higher level Math course. Placement into RDNG-016 (ACSR-016) is required.
An introduction to computer programming using a common programming language. Developing program logic as well as the programming development process will be stressed.

COMS-171 Introduction to C++
4 Credits 4 Contact
Prerequisite: COMS-170. Placement into RDNG-016 (ACSR-016) is required. Note: Some previous programming experience strongly recommended.
This course provides an introduction to programming techniques using the language C++.

COMS-172 Introduction to Visual Basic
4 Credits 4 Contact
Prerequisite: COMS-170. Placement into RDNG-016 (ACSR-016) is required.
This course provides an introduction to the computer language Visual Basic. Special attention will be paid to object oriented programming techniques.

COMS-175 Introduction to Java
4 Credits 4 Contact
Prerequisite: COMS-170. Placement into RDNG-016 (ACSR-016) is required.
This course provides an introduction to the computer programming language Java. Special attention will be paid to object oriented programming techniques.

COMS-270 Advanced Java
4 Credits 4 Contact
Prerequisite: COMS-175. Placement into RDNG-016 (ACSR-016) is required.
This is the second in a two-course sequence to introduce the student to leading-edge Java technologies. This course covers JavaBeans, AWT, Swing, JDBC and other API’s. Students will also learn how to develop Java database applications, using JDeveloper for rapid application development.

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COMS-272 Advanced Visual Basic
3 Credits  3 Contact
Prerequisite: COMS-172. Placement into RDNG-016 (ACSR-016) is required. This course is designed to introduce the advanced features of the Visual Basic programming language. Topics include concepts, object oriented programming in a Visual Basic environment and data access.

COMS-280 Adv Programming in C++
4 Credits  4 Contact
Prerequisite: COMS-171. Placement into RDNG-016 (ACSR-016) is required. This is a capstone programming course in which students will use C++ to develop programs of increasing size and difficulty. The course will assume that students understand programming concepts such as modularization, program flow and looping, functions and arrays. This course will continue with advanced data handling, dynamic data structures, and specific components of object-oriented programming, including classes. In addition, students will work together on team projects, simulating the work environment.

Computers, General
Technology

COMG-099 Computer Fundamentals
1 Credits  1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must provide a secondary storage device. This course is intended for those who are new to computers. Using a demonstration and practice model, students will learn the fundamental procedures for operating a personal computer. They will also learn terms associated with computer use.

COMG-150 Introduction to Computer Technology
1 Credits  1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course will review computers and their use. Students will learn the names and functions of the parts of a computer. They will become familiar with the general categories of computer software. In the hands-on component of the course, students will become comfortable with basic computer processes and procedures. They will be introduced to several software programs and will use e-mail and the Internet.

COMG-153 Computers-A Practical Approach
3 Credits  3 Contact
Prerequisite: Basic knowledge of keyboard. Placement into RDNG-016 (ACSR-016) is required. This is a lecture/lab course to provide knowledge of the basic aspects of computers with emphasis on the growing impact of computers on society. Computer lab work will include the use of integrated software systems.

COMG-154 Intermediate Practical Computer Skills
3 Credits  3 Contact
Prerequisite: COMG-153. Placement into RDNG-016 (ACSR-016) is required. A second semester of computer skills emphasizing practical business applications. Students will use software in all of the basic productivity categories to produce documents and accomplish tasks that are important in the workplace.

COMG-161 Intro to Computer Security
1 Credits  1 Contact
Prerequisite: COMG-150 or COMG-153 or COMG-154 or COMG-162. Placement into RDNG-016 (ACSR-016) is required. Students will study the basic theory behind computer security, and complete several hands-on practical exercises in methods for securing personal computers. This class will discuss security awareness and will walk users through every aspect of Information Security in a very broad, easily understood way and explain the value of securing data. This course is suitable for both computer and non-computer majors.

COMG-162 GUI Operating Systems
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course provides an overview of GUI (Graphical User Interface) operating systems used with personal computing systems. Topics will be covered in detail from both a practical and theoretical standpoint. Concepts such as multitasking, user profiles, disk organization and maintenance, etc., will be covered.

COMG-164 Introduction to Productivity Software
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course provides hands-on training in a general overview of the applications of productivity software.

COMG-165 Using the Internet
1 Credits  1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course provides an introduction to the Internet, including access at MCC and from other locations, E-mail use, information about Internet resources and services, necessary equipment requirements, language, ethical, legal, security and social issues discussion. Students may use the MCC computer labs which have Internet access or personal computers at office or home which have access.

COMG-168A Personal Computers - an Overview
.5 Credits  .5 Contact
Prerequisite: COMI-160 or COMG-153. Placement into RDNG-016 (ACSR-016) is required. A course module intended to give beginning computer users a theoretical background on the internal workings of a PC. This will address how hardware and software function both independently and collaboratively.

COMG-168B PCs System Board, Power & Memory
.5 Credits  .5 Contact
Prerequisite: COMI-160 or COMG-153. Placement into RDNG-016 (ACSR-016) is required. This module is designed to provide beginning computer users with a practical hands-on experience with the internal components of a PC. This will address the system board, power supplies and computer memory.

COMG-168C Pcs Hard Drives and Floppy Drives
.5 Credits  .5 Contact
Prerequisite: COMI-160 or COMG-153. Placement into RDNG-016 (ACSR-016) is required. This modules is designed to give beginners hands-on practice working with computer hard drives and floppy drives. Students will install drives, learn about the different types of hard drives and simulate and correct common drive problems.
COMG-168D PCs I/O, Multimedia and Troubleshooting  
.5 Credits  .5 Contact  
Prerequisite: COMI-160 or COMG-153. Placement into RDNG-016 (ACSR-016) is required.  
This module is designed to give beginners hands-on experience with installing various I/O and multimedia devices into a computer. Students will learn about the different kinds of I/O and multimedia devices and practice computer troubleshooting techniques.  

COMG-168E PCs Build a PC, Printers, & Viruses  
.5 Credits  .5 Contact  
Prerequisite: COMI-160 or COMG-153. Placement into RDNG-016 (ACSR-016) is required.  
This module is designed to give beginners hands-on practice assembling a computer, learning about printer types and understanding computer viruses. Students will need to demonstrate the ability to successfully install all internal components into a computer and demonstrate that it works upon completion.  

COMG-168F PCs Windows/Modems/Internet  
.5 Credits  .5 Contact  
Prerequisite: COMI-160 or COMG-153. Placement into RDNG-016 (ACSR-016) is required.  
This module is designed to give beginners hands-on practice installing a computer operating system and establish computer communication. Students will install a Windows operating system, and configure a computer to access the Internet.  

Corrections  
Fine Arts & Social Sciences  

CORR-101 Introduction to Corrections  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course addresses the historical and philosophical development of corrections to include definition of the correctional process through the criminal justice system, the legal process, and the role of the correctional officer.  

CORR-102 Client Relations to Corrections  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
The identification and analysis of various appropriate professional responses to correctional offender behavior, meaning and function of culture, the impact of discrimination, and the process of attitude formation as it relates to the system of corrections.  

CORR-103 Legal Issues in Corrections  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course provides an overview of the various procedural laws that have a direct impact upon the management of the convicted offender and the rights of prisoners. The law and the court process, Constitutional law, and various current legal topics are explored.  

CORR-104 Client Growth and Development  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course examines the differences between normal and criminal behavior, the criminal pattern of juvenile and adult offenders; the specific problems of inmates and various criminal justice corrections, interventions, strategies.  

CORR-105 Correctional Institutions/Facilities  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course addresses the purpose and functions of prisons and various other correctional institutions; treatment and rehabilitative programs; the management and organization of correctional facilities; prisoner rights; and future incarceration system concerns.  

Cosmetology  
Business  

CSMO-100 Basic Cosmetology Theory I  
12 Credits  5 Contact  
Coordinator's signature required to register in this course.  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Co-Requisite: CSMO-101  
This course provides the student with the beginning cosmetology instruction in preparation for the advanced cosmetology courses and lays the foundation for CSMO-101 Basic Cosmetology Lab. In addition, the student will be using the StrengthsFinder 2.0 to identify their top five Strengths or Themes, which will be used to engage in class activities. Documentation will be collected in a Strengths-based portfolio.  

CSMO-101 Basic Cosmetology Lab  
6 Credits  12.5 Contact  
Coordinator's signature required to register in this class.  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Corequisite: CSMO-100  
This course provides students with the beginning cosmetology skills to prepare them for the advanced cosmetology courses and functions in conjunction with CSMO-100.  

CSMO-102 Basic Cosmetology Theory II  
12 Credits  5 Contact  
Coordinator's signature required to register in this course.  
Prerequisite: CSMO-100 and CSMO-101 or a minimum of 250 hours. Placement into RDNG-016 (ACSR-016) is required.  
Co-Requisite: CSMO-103  
This course is a continuation of Basic Cosmetology and provides students with the opportunity to learn basic cosmetology procedures in preparation for servicing clients and lays the foundation for CSMO-103, CSMO-200 and CSMO-201. In addition, the student will be using the StrengthsFinder 2.0 to continue developing their strengths in more detail by participation in additional class activities. Student will continue work on a Strengths-based portfolio.  

CSMO-103 Basic Cosmetology Lab II  
6 Credits  12.5 Contact  
Coordinator's signature required to register in this course.  
Prerequisite: CSMO-100 and CSMO-101 or a minimum of 250 hours. Placement into RDNG-016 (ACSR-016) is required.  
Corequisite: CSMO-102  
This course provides students with the basic cosmetology skills to work towards a cosmetology license and functions in conjunction with CSMO-102.  

CSMO-104 Nail Technology Theory I  
12 Credits  6 Contact  
Coordinator's signature required to register in this course.  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Corequisite: CSMO-105  
This course is an introduction to the 400 hour State Specialty License for Nail Technology (Manicuring). It provides beginning instruction into the theory of Nail Technology and lays the foundation for CSMO-105, Nail Technician Lab I. In addition, the
student will be using the StrengthsFinder 2.0 to identify their top five Strengths or Themes, which will be used to engage in class activities. Documentation will be added to a Strengths-based portfolio.

CSMO-105 Nail Technology Lab I
0 Credits 8 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CSMO-104
This course provides the student with the opportunity to obtain the knowledge and skills necessary to become a licensed Nail Technician in the State of Michigan.

CSMO-106 Nail Technology Theory II
12 Credits 6 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-104 and CSMO-105. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CSMO-107
This course completes the required theory instruction for the State Specialty License in Nail Technology (Manicuring) and prepares the student for the State Board Theory Exam to become a licensed Nail Technician. In addition, the student will be using the StrengthsFinder 2.0 to continue developing their strengths in more detail by participation in additional class activities. Student will complete a Strengths-based portfolio.

CSMO-107 Nail Technology Lab II
0 Credits 8 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-104 and CSMO-105. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CSMO-106
This course provides the student with the opportunity to obtain the knowledge and skills necessary to become a licensed Nail Technician in the State of Michigan.

CSMO-109 Intro to Advanced Cosmetology
5 Credits 10 Contact
Coordinator's signature required to register in this course.
Prerequisite: Minimum 350 hours from GASC Technology program. Placement into RDNG-016 (ACSR-016) is required. This 8-week course is a continuation of the 350 hour basic cosmetology course that allows GASC cosmetology students to accumulate up to 150 hours, resulting in the 500 required hours and skills necessary to register for the advanced cosmetology courses. Emphasis will be on proper procedures, including hair cutting, chemical texture services, haircoloring, hairstyling, facials, nail services and sanitation methods.

CSMO-110 Esthetics Theory I
12 Credits 6 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CSMO-111
This course is an introduction to the 400 hour State Specialty License for Esthetics (Skin Care Specialist). It provides beginning instruction into the theory of Esthetics and lays the foundation for CSMO-111, Esthetics Lab I. In addition, the student will be using the StrengthsFinder 2.0 to identify their top five Strengths or Themes, which will be used to engage in class activities. Documentation will be added to a Strengths-based portfolio.

CSMO-111 Esthetics Lab I
0 Credits 8 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CSMO-110
This course provides the basic skills necessary to provide professional skin care to the public and completes the first 200 hours of the state required 400 hours.

CSMO-112 Esthetics Theory II
12 Credits 6 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-110, CSMO-111 or 200 hours in a State of Michigan approved Esthetician course. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CSMO-113, Esthetics Lab II
This course completes the required theory instruction for the State Specialty License in Esthetics (Skin Care Specialist) and prepares the student for the State Board Theory Exam to become a licensed Esthetician. In addition, the student will be using the StrengthsFinder 2.0 to continue developing their strengths in more detail by participation in additional class activities. Students will complete a Strengths-based portfolio.

CSMO-113 Esthetics Lab II
0 Credits 8 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-110 and CSMO-111 or 200 hours in a State of Michigan approved Esthetician course. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CSMO-112
This course completes the required instruction for 400 hours for State licensing and prepares the student for the State Board Practical Exam and employment as an Esthetician.

CSMO-200 Advanced Cosmetology Theory I
12 Credits 6 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-100, CSMO-101, CSMO-102 and CSMO-103 or completion of 500 hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CSMO-201 Cosmetology Textbook by Milady and StrengthsFinder 2.0 by Tom Roth.
This course provides the student with advanced instruction for CSMO-201 when servicing clients in the cosmetology lab and lays the foundation for CSMO-202 and CSMO-203. In addition, the student will continue to complete in-class activities to further develop their strengths using Strengths Finder 2.0 to added to their Strengths-based portfolio.

CSMO-201 Advanced Cosmetology Lab I
0 Credits 11.5 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-100, CSMO-101, CSMO-102, CSMO-103 or minimum 500 hours from a state licensed cosmetology school.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CSMO-200
This course prepares the student with advance cosmetology skills necessary to provide cosmetology services to clients in a professional salon environment.

CSMO-202 Adv Cosmetology Theory II
12 Credits 6 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-100, CSMO-101, CSMO-200 and CSMO-201 or completion of 1000 hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required.
Corequisite: CSMO-203 Cosmetology Textbook by Milady and StrengthsFinder 2.0 by Tom Roth.

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This course provides the student with advanced instruction for CSMO-203 when servicing clients in the cosmetology lab and lays the foundation for CSMO-204 and CSMO-205. In addition, the student will continue to complete in-class activities to further develop their strengths using StrengthsFinder 2.0 to be added to their strengths-based portfolio.

**CSMO-203 Advanced Cosmetology Lab II**

0 Credits 11.5 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-100, CSMO-101, CSMO-102, CSMO-103, CSMO-200, CSMO-201 or 750 hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required. Corequisite: CSMO-202
This course prepares the student with advanced cosmetology skills necessary to provide cosmetology services to clients in a professional salon environment.

**CSMO-204 Advanced Cosmetology Theory III**

12 Credits 6 Contact
Coordinator's signature required to register in this course.
Prerequisite: CSMO-100, CSMO-101, CSMO-102, CSMO-103, CSMO-200, CSMO-201, CSMO-202, CSMO-203, or minimum 1000 hours from a state licensed cosmetology school. Corequisite: CSMO-205. Placement into RDNG-016 (ACSR-016) is required. Cosmetology Textbook by Milady and StrengthsFinder 2.0 by Tom Rath
This course provides the student with advanced instruction for CSMO-205 when servicing clients in the cosmetology lab and lays the foundation for CSMO-206 and CSMO-207. In addition, the student will continue to complete in-class activities to further develop their strengths using StrengthsFinder 2.0 to be added to their strengths-based portfolio.

**CSMO-205 Advanced Cosmetology Lab III**

0 Credits 11.5 Contact
Prerequisite: CSMO-100, CSMO-101, CSMO-200 and CSMO-201 or completion of 1000 hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required. Co-requisite: CSMO-204. Note: Coordinator's signature required to register in this course.
This course provides advance cosmetology skills necessary to pass the State Board exam and emphasizes the transition from the classroom to employment.

**CSMO-206 Advanced Cosmetology Theory IV**

12 Credits 6 Contact
Prerequisite: CSMO-100, CSMO-101, CSMO-102, CSMO-103, CSMO-200, CSMO-201, CSMO-202, CSMO-203, CSMO-204, CSMO-205 or a minimum 1250 hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required. Co-requisite: CSMO-207. Note: Coordinator's signature required to register in this course. Cosmetology Textbook by Milady and StrengthsFinder 2.0 by Tom Rath.
This course provides the student with advance instruction for CSMO-207 when servicing clients in the cosmetology lab and prepares the student for the State Board of Cosmetology exam to become licensed in cosmetology. The student will develop job seeking skills in the cosmetology profession. In addition, the student will continue to complete in-class activities to conclude their strengths-based portfolio.

**CSMO-207 Advanced Cosmetology Lab IV**

0 Credits 11.5 Contact
Prerequisite: CSMO-100, CSMO-101, CSMO-102, CSMO-103, CSMO-200, CSMO-201, CSMO-202, CSMO-203, CSMO-204, CSMO-205 or completion of 1250 hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required. Co-requisite: CSMO-206. Note: Coordinator's signature required to register in this course.
This course provides advanced cosmetology skills necessary to pass the State Board exam and emphasizes the transition from the classroom to employment.

**CSMO-209 Cosmetology Exam and Refresher Course**

3 Credits 3 Contact
Coordinator's signature required to register in this course.
Prerequisite: Minimum 1500 cosmetology hours from a state licensed cosmetology school. Placement into RDNG-016 (ACSR-016) is required.
This course allows the student to prepare for the State Board of Cosmetology Licensing Exam and/or to update cosmetology skills for already Licensed Cosmetologists.

**CSMO-209A Cosmetology Refresher Course**

3.5 Credits 3.5 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course allows the student to prepare for the State Board of Cosmetology Licensing Exam and/or to update cosmetology skills for already Licensed Cosmetologists.

**CSMO-209B Cosmetology Refresher Course**

3.5 Credits 3.5 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course allows the student to prepare for the State Board of Cosmetology Licensing Exam and/or to update cosmetology skills for already Licensed Cosmetologists.

**CSMO-209C Cosmetology Refresher Course**

3.5 Credits 3.5 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course allows the student to prepare for the State Board of Cosmetology Licensing Exam and/or to update cosmetology skills for already Licensed Cosmetologists.

**CSMO-209D Cosmetology Refresher Course**

3.5 Credits 3.5 Contact
Coordinator's signature required to register in this course.
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course allows the student to prepare for the State Board of Cosmetology Licensing Exam and/or to update cosmetology skills for already Licensed Cosmetologists.

**CSMO-210 CSMO/Nailtech/Esthetic Inst Theory I**

6 Credits 1 Contact
Coordinator's signature required to register in this course.
Prerequisite: Must meet State of Michigan licensing requirements, high school diploma or equivalent, current Michigan Cosmetology Nail Technology license, minimum three years salon experience. Placement into RDNG-030 (ACSR-016) or completion of RDNG-016, is required. Corequisite: CSMO-211
This course is an introduction to the Michigan Licensed program of Cosmetology/Nail Technology/Esthetics Student Instructor. Taken along with CSMO-211, it provides 165 of the required hours and training to pass the Michigan State Board of Cosmetology/Nail Technology/Esthetics Instructor Licensing Exam. The art and
CSMO-211 Csmo/Nailtech/Esthetic Instr Lab I
0 Credits 10 Contact
Coordinator's signature required to register in this course. Prerequisite: Must meet State of Michigan licensing requirements, high school diploma or equivalent, current Michigan Cosmetology/Nail Technology license, minimum three years salon experience. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Corequisite: CSMO-210
This course is an introduction to the Michigan Licensed program of Cosmetology/Nail Technology/Esthetics Student Instructor. Taken along with CSMO-210, it provides 165 of the required hours and training to pass the Michigan State Board of Cosmetology/Nail Technology/Esthetics Instructor Licensing Exam. While under the guidance of licensed Cosmetology/Nail Technology/Esthetics instructors, the student will gain practical experience in a Cosmetology/Nail Technology/Esthetics environment.

CSMO-212 Csmo/Nailtech/Esthetic Inst Theory II
6 Credits 1 Contact
Coordinator's signature required to register in this course. Prerequisite: CSMO-210 and CSMO-211 or a minimum of 165 hours from a Michigan Licensed Cosmetology/Nail Technology Instructors program. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Corequisite: CSMO-213
A continuation of CSMO-210, this course completes necessary theory requirements to prepare the student to pass the Michigan State Board of Cosmetology/Nail Technology/Esthetics Instructor Licensing Exam. Methods of teaching, evaluating student performance and State laws and rules are some of the topics covered.

CSMO-213 Csmo/Nailtech/Esthetics Instr Lab II
0 Credits 10 Contact
Coordinator's signature required to register in this course. Prerequisite: CSMO-210 and CSMO-211 or a minimum of 165 hours from a Michigan Licensed Cosmetology/Nail Technology Instructor program. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Corequisite: CSMO-212
A continuation of CSMO-211, this course completes the required hours and instructor training necessary to pass the Michigan State Board of Nail Technology Licensing Exam (300 hours). This course provides the Cosmetology Student Instructor an additional 165 required hours towards the State mandated 500 hours of instruction. While under the guidance of licensed Cosmetology/Nail Technology/Esthetics instructors, the student will gain practical experience in a Cosmetology/Nail Technology/Esthetics environment.

CSMO-215 Csmo/Nailtech/Esthetic Inst Lab III
6 Credits 12 Contact
Coordinator's signature required to register in this course. Prerequisite: CSMO-210, CSMO-211, CSMO-212 and CSMO-213 or a minimum of 330 hours from a Michigan Licensed Cosmetology Instructor program. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
A continuation of CSMO-213, this course completes required hours and instructor training necessary to pass the Michigan State Board of Cosmetology Licensing Exam (500 hours). While under the guidance of licensed Cosmetology instructors the student will gain practical experience in a Cosmetology environment.

Counsel/Student Development
Counseling

CASD-120 Assertive Communication
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Designed for those who wish to become more assertive in dealing with other people. A communication-skill approach with emphasis on personal growth. Topics include self-awareness of one’s own assertiveness, and assertive skills, such as confrontation techniques, changing self-defeating behavior, and contracting for behavior change. Video taping of skills is also included.

CASD-121 Study and Learning Skills
1 Credits 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Designed to help students develop successful study skills. Includes time management, note-taking styles, organizing textbook readings, memory techniques, test-taking strategies and developing a positive attitude toward learning.

CASD-122 Survival Skills for College
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course assists students in learning skills and behaviors enabling them to build a foundation for success in college.

CASD-123 Stress Management
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. In this course, cognitive behavioral concepts will be applied to the management of stress within a small group interactive setting. Participants will learn strategies to manage their own stress more effectively.

Criminal Justice
Fine Arts & Social Sciences

CRJU-151 Introduction to Security Administration
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course covers security and loss prevention, including the historical, philosophical, and legal framework for security operations, as well as detailed presentations of specific security processes and programs currently utilized in providing security.

CRJU-152 Principles of Loss Prevention
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course involves a detailed analysis of the role of security and the security industry in criminal justice. Administrative, personnel and physical aspects of the security field are studied. Loss prevention management in proprietary and governmental institutions and security measures that can be established in a total security program are explored.

CRJU-161 Introduction to Law Enforcement and the Administration of Justice
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This is an introduction to the criminal justice system, the field of law enforcement and the administration of the justice process. The vocational opportunities and functions of all levels of law enforcement are explored.
CRJU-162 Administrative Concepts
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course addresses an analysis of functional divisions of modern police departments. The application of principles of administration and organization of law enforcement. Functions and activities of patrol bureaus, the problems of management, communication, budgeting, training, public relations, and recruitment are explored.

CRJU-163 Patrol Administration Procedures
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course examines the historical development of police patrol (foot, motorized, mounted, water, air) and its use. An in-depth examination of patrol function in the total police structure and its role in the prevention and suppression of criminal acts.

CRJU-165 Hwy Traffic Administration
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course provides an overview of the development of transportation and its impact upon society today. The study of construction of various modes of transportation and particularly the role this has held in the criminal justice system. A close examination of the laws that govern transportation, accident causation, investigation and prevention.

CRJU-263 Techniques of Criminal Investigation
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course covers the fundamentals of criminal investigation. It includes techniques of surveillance, search at the crime scene, developing sources of information, and collecting and preserving evidence. Methods of investigation and the operations of detective divisions are also discussed.

CRJU-264 Court Testimony and Documentation
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
A basic course focusing on the procedures and techniques of testifying in court as an investigator or expert witness. The course explores the written documentation of evidence, visual aid preparation and the presentation of physical evidence. Course topics include the rules governing the admissibility of evidence; qualifications of scientific and other experts and legal issues relating to expert witnesses. Lecture, discussion, and simulated courtroom situations and use of presentation technology.

CRJU-265 Criminal Law and Procedure
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course covers the elements, purposes, and functions of criminal law and procedure and the elements necessary to establish crime and criminal intent. Other areas of study include sources of criminal law, attempts and conspiracy, criminal responsibility, defenses to crime, laws of arrest, search and seizure, and miscellaneous laws.

CRJU-266 Computer Crime and Cyber Law
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course introduces students to the investigation and prosecution of computer-related crime. It explores cyber offenses including identity theft, identity fraud, cyber terrorism, organized crime, exploitation of children and other criminal acts. Course topics also include international, federal and Michigan cyber crime laws, searching and seizing computer related evidence, processing evidence, report writing, forensic terminology and evaluation. Students will learn how to detect computer crimes and conduct cyber crime investigations. Recommended Internet knowledge and basic computer skills.

CRJU-269 Introduction to the Juvenile Justice System
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course provides an in-depth examination of the juvenile justice system to include offender classification, historical procedural laws, and the legal processing of juvenile offenders. Delinquency causation, prevention and adjudication will be studied to ascertain the philosophy and treatment that could be utilized.

CRJU-271 Practicum in Criminal Justice
3 Credits 3 Contact
Prerequisite: CRJU 161 and the permission of the coordinator of the Criminal Justice Program. Placement into RDNG-016 (ACSR-016) is required.
This course includes 150 hours of supervised work experience and observation in a criminal justice agency and bi-monthly seminars that provide the student with the opportunity to gain a practical understanding of the role of the criminal justice processes in a planned program. The Program Coordinator secures the initial placement sites for student interns. The agency has the final right to screen, accept, reject and/or terminate student participants. Students enrolled in this course are expected to follow the accepted code of ethics of the profession and adhere to policies of the placement agency.

Culinary Arts
Business

CULA-101 Culinary Knife Skills
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Approved uniform and knife set required.
Knives are the most important tool in the chef's tool kit and are a critical component of the preparation of fruits and vegetables, texture, butchering and fabricating meat, poultry, fish and shellfish. Learning to perform these tasks safely and efficiently is an essential part of a student training. This course will introduce the student to the various tasks that can be accomplished with the correct knife, develop the student's culinary knife skills as well as their understanding in how knives improve the color, flavor, texture and overall visual appeal of food.

CULA-103 Introduction to Ala Carte Dining
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Students will gain knowledge in serving the customers; how to sell, service and market the menu; five needs of every customer; service, price, quality, action and application; the challenges of customer service; problem solving, standards and rules for basic table-service; professional appearance; serving food and beverages; technology of service and common menu terms.

CULA-105 Intro to Professional Cookery
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course is designed to give the student an introduction to the production kitchen and preparation techniques. The student will gain competency in knife skills, food safety practices, vegetable cutting and techniques; effect of heat on starch, common cereal grains and techniques for combining cereal and water; fiber component of vegetables, selection and USDA grades and
Course Descriptions

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veggie prep; meat, poultry and seafood and their composition, structure and classification; factors affecting tenderness, storage and cooking techniques.

CULA-106 Professional Cookery I
6 Credits 6 Contact
This course reinforces knowledge and skills achieved in Introduction to Professional Cookery and helps the student build confidence in techniques of basic cookery while cooking from menus that exemplify American and regional cooking. Students participate in food preparation and production, and attention is given to portion control, plate presentation and team work in a production setting.

CULA-107 A la Carte Dining/Tablerservice
6 Credits 6 Contact
Prerequisite: CULA-103 and FMG.-102. Placement into RDNG-016 (ACSR-016) is required. Note: Approved uniform required for this class.
This course introduces the student to modern food and beverage service. Classroom lectures focus on the basic beverage techniques, service language and equipment used in the service of modern buffet service. Sanitation, safety, personal hygiene and grooming are emphasized. Table arrangements and setups are taught along with organization and responsibilities of staff within the dining room. Advanced techniques are introduced in the second half of the class. Proper dress and service techniques are emphasized.

CULA-108 Nutrition and Menu Planning
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course covers nutrient composition of food; functions of nutrients in the body; recommended amounts of nutrients to promote health throughout the life cycle; digestion, metabolism and absorption of nutrients in the healthy individual; selection of food to meet the normal nutrient requirements of the body; planning healthy menus, menu mechanics and analysis.

CULA-109 Catering Techniques
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is designed to give the student an overview of the catering process, with emphasis on planning, preparing and managing events.

CULA-111 Garde Manger I
3 Credits 3 Contact
Prerequisite: FMG.-102 and CULA-101. Placement into RDNG-016 (ACSR-016) is required.
This course provides the student with a foundation in Garde Manger including history, ingredients, procedures, culinary terms, equipment, knife skills and sanitation practice. Emphasis is placed on classical techniques using modern recipes and preparation styles. Three hours scheduled practicum per semester.

CULA-201 Automated Purchasing and Cost Control
4 Credits 4 Contact
Prerequisite: FMG.-104. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course covers the nature and importance of purchasing to the food and beverage manager, fundamentals involved in controlling costs, and computer applications connected with buying and handling food and beverage items.

CULA-203 Buffets and Banquets
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course is designed to give the student knowledge and skills needed to plan and execute buffet and banquet services, with emphasis on buffet table sizes and skirting, arrangement of serving pieces, menu planning and arrangement of foods and other items.

CULA-205 International Cuisine
6 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Co-requisite: CULA-106. Note: Approved uniform required for this class.
Students will study food and customs of international cuisines, with emphasis on quality food preparation and timing to adequately prepare them for the restaurant industry. Students work in a live environment by rotating through all the traditional brigade stations and explore the foundations of classical cooking based on the principles of Careme, Escoffier and Point.

CULA-207 Garde Manger II
6 Credits 6 Contact
Prerequisite: FMG.-102 and CULA-101. Placement into RDNG-016 (ACSR-016) is required. Note: Approved uniform required for this class.
Skills required for the garde manger department are refined. Emphasis is placed on eye appeal, texture, color contrast, artistic touch, harmony of combinations, taste, as well as the processing, production and storage of ingredients. Ice carvings, tallow, salt dough pieces, and mirrors for buffets are used, and professional competition skills are enhanced. The student's sense of speed, timing and teamwork are emphasized.

CULA-208 Management of Services
6 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Note: Approved uniform required for this class.
This course provides an educational experience in the management of fine dining establishments, including the planning, marketing, and coordinating for service of food.

CULA-209 Cooperative Education/Internship
4 Credits 4 Contact
Prerequisite: Successful completion of a minimum 12 credits of specific requirements for the Baking and Pastry Arts Certificate Program, the Foodservice Management Program and/or the Culinary Arts Program. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Provides the student an opportunity to obtain employment in a commercial food service operation under the supervision of a professional chef or manager. Classroom discussion centers around employment conditions and problems in a food operation. Work experience is arranged by the coordinator of the program. Students are placed where they can most effectively utilize their education and abilities. Students must complete 400 hours of work experience.
CULA-210 Food and Wine Pairing  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Students will be introduced to the concepts involved in food and  
and wines are paired.  

Dental Assisting  
Health Sciences  
DAST-110 Orientation to Dentistry  
1 Credits  1 Contact  
Division signature is required for registration. Prerequisite:  
Program Eligibility Requirements. Placement into ENGL-100  
(ACSR-100), or completion of RDNG-030, ACLT-075, or  
A comprehensive study of nutrition and preventive dentistry.  
Nutrition encompasses the process involved in the taking in and  
itself and its blood and nerve supply. The lab portion will provide knowledge of eruption dates,  
and 117.  

DAST-112 Dental and Oral Anatomy  
2.5 Credits  2 Contact  
Division signature is required for registration. Prerequisite: Program  
A study of basic structure, form and functions of the teeth and their  
and external features of the teeth. Experience will be provided in identifying teeth.  

DAST-112L Dental & Oral Anatomy Lab  
0 Credits  1 Contact  
Division signature is required for registration. Prerequisite: Program  
The lab portion of DAST-112, Dental & Oral Anatomy. Provides  
and 117.  

DAST-113 Dental Office Emergencies  
1 Credits  1 Contact  
Division signature is required for registration. Prerequisite:  
Program Eligibility Requirements. Placement into ENGL-100  
A study of preparation for and responding to medical  
This course is a study of preparation for and responding to medical  
and 117.  

DAST-115 Nutrition & Preventive Dentistry  
1 Credits  1 Contact  
Division signature is required for registration. Prerequisite:  
Program Eligibility Requirements. Placement into ENGL-100  
This course is designed to introduce the dental assisting student to  
the role of professional organizations, and national and state credentialing requirements.  

DAST-116 Dental Materials  
2 Credits  2 Contact  
Division signature is required for registration. Prerequisite: Program  
The course is designed to introduce the dental assisting student to  
and 117.  

DAST-117 Operative Techniques I  
6 Credits  2 Contact  
Division signature is required for registration. Prerequisite:  
Program Eligibility Requirements. Placement into ENGL-100  
This course is an introduction to dental chairside procedures.  
Techniques of four-handed dentistry will be included, along with  
and 117.  

DAST-117C Operative Techniques I Clinic  
0 Credits  4 Contact  
Division signature is required for registration. Prerequisite:  
The clinical portion of DAST-117, Operative Techniques I  

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DAST-117L Operative Techniques I Lab
0 Credits 4 Contact
Division signature is required for registration. Prerequisite: Program Eligibility Requirements. Co-requisite: DAST-117 and 117C.
The lab portion of DAST-117, Operative Techniques I

DAST-120 Oral Pathology for Dental Assistants
1 Credits 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. A comprehensive study of oral anatomy and commonly seen oral diseases. This exposure will give the dental assisting student basic knowledge of oral pathology relative to their area of specialization in health care and enable them to successfully complete their licensing requirements.

DAST-121 Dental Jurisprudence
1 Credits 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course includes the principles of law and legality related to dentistry. It is an introduction of types of law, contracts, liabilities of practice and the Michigan Dental Practice Act.

DAST-122 Pharmacology for Dental Assistants
1 Credits 1 Contact
Division signature is required for registration. Prerequisite: DAST-110, 111, 112, 113, 115, 116, and 117. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is a study of basic pharmaceutical terminology, law, therapeutic principles, methods of administration and effects of drugs and medications used in dentistry.

DAST-123 Advanced Clinical Procedures
2 Credits 4 Contact
Division signature is required for registration. Prerequisite: DAST-110, 111, 112, 113, 115, 116, and 117. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is designed to provide students with the opportunity to practice expanded duty functions on patients in the clinical setting. These duties include oral examinations, oral hygiene instructions, topical fluoride application, alignate impressions, selective coronal polishing, rubber dam applications, and application of pit and fissure sealants.

DAST-124 Expanded Functions for Dental Assistants
2.5 Credits 1 Contact
Division signature is required for registration. Prerequisite: DAST-110, 111, 112, 113, 115, 116, and 117. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is designed to provide students the opportunity to practice the expanded functions permitted for delegation to dental assistants by the State of Michigan. Included in these expanded functions are selective coronal polishing, certain preventive procedures, and intracoronal, metallic, and nonmetallic temporary restorations.

DAST-124L Expanded Functions for Dental Assistants Lab
0 Credits 3 Contact
The lab portion of DAST-124, Expanded Functions for Dental Assistants.

DAST-125 Operative Techniques II Clinic
2 Credits 4 Contact
Division signature is required for registration. Prerequisite: DAST-110, 111, 112, 113, 115, 116, and 117. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is designed to provide the student with an opportunity to assist a dentist with operative chairside dental procedures in a clinical setting. Students will assist the dentist during a variety of procedures, including amalgam and composite restorations.

DAST-126 Dental Specialities
2 Credits 2 Contact
Prerequisites: DAST-110, DAST-111, DAST-112, DAST-112L, DAST-113, DAST-115, DAST-116, DAST-116L, DAST-117, DAST-117C, and DAST-117L. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course of study introduces the dental assistant to specialty areas of dental practice. These specialities approved by the Council on Dental Education and Licensure, and the American Dental Association include the following: dental public health, endodontics, oral and maxillofacial radiology, oral and maxillofacial surgery, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics and prosthodontics. A brief introduction to forensic dentistry is included.

DAST-127 Dental Business Practices
2 Credits 2 Contact
Division signature is required for registration. Prerequisite: DAST-110, 111, 112, 113, 115, 116, and 117. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is designed to provide the student with the opportunity to practice expanded duty functions on patients in the clinical setting. These duties include oral examinations, oral hygiene instructions, topical fluoride application, alignate impressions, selective coronal polishing, rubber dam applications, and application of pit and fissure sealants.

DAST-128 Dental Specialities
2 Credits 2 Contact
Prerequisites: DAST-110, DAST-111, DAST-112, DAST-112L, DAST-113, DAST-115, DAST-116, DAST-116L, DAST-117, DAST-117C, and DAST-117L. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is designed to provide the student with the opportunity to practice expanded duty functions on patients in the clinical setting. These duties include oral examinations, oral hygiene instructions, topical fluoride application, alignate impressions, selective coronal polishing, rubber dam applications, and application of pit and fissure sealants.

DAST-130 Operative Techniques III
7 Credits 1 Contact
Division signature is required for registration. Prerequisite: DAST-120, 121, 122, 123, 124, 125 and DHDA-114. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course provides practice in a clinical setting in assigned dental offices in order to further practice skills learned in the Fall and Winter semesters, plus a seminar session. The seminar will be conducted weekly with students to discuss the clinical extern experience. Students must come prepared each week to share positive dental office experiences through the use of class participation and journal entries.
DAST-130C Operative Techniques III Clinical
0 Credits 18 Contact
Division signature is required for registration. Prerequisite:
DAST-120, 121, 122, 123, 124, 125 and DHDA-114 and DHDA-114. Co-requisite:
DAST-130.
The clinical portion of DAST-130, Operative Techniques III.

Dental Hyg/Dental Assisting
Health Sciences

DHDA-114 Dental Radiography
4 Credits 2 Contact
Division signature is required for registration. Prerequisite:
Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Co-requisite: DHDA-114L.
The biology, physics, health and safety of radiology as well as the exposure, processing, mounting, evaluation and interpretation of radiographs.

DHDA-114L Dental Radiography Lab
0 Credits 4 Contact
Division signature is required for registration. Prerequisite:
The biology, physics, health and safety of radiology as well as the exposure, processing, mounting, evaluation and interpretation of radiographs.

Dental Hygiene
Health Sciences

DHYG-102 Aspects of Infection & Hazard Control in Dentistry
1 Credits 1 Contact
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A lecture course designed to introduce infection control procedures and guidelines in the dental office. OSHA, MIOSHA, CDC and ADA laws, rules and regulations will be discussed.

DHYG-112 General and Oral Pathology
2 Credits 2 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A study of the fundamentals of general and oral pathology including immunology, inflammation and repair with emphasis on the classification and etiology of specific oral diseases.

DHYG-113 Oral Radiology
2 Credits 2 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
The study of oral radiology encompasses the principles of radiology in the study of teeth and their surrounding structures, as well as radiographic interpretation and patient treatment planning.

DHYG-114 Oral Radiography Lab
2 Credits 4 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This hands-on radiography lab allows the dental hygiene student to become entry-level proficient in the application of the principles of dental radiography.

DHYG-115 Head, Neck, and Oral Anatomy Lecture
2 Credits 2 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A study of the head and neck and oral anatomy as it relates to the oral cavity. Anesthetic sites and techniques will be discussed.

DHYG-116 Head, Neck and Oral Anatomy Lab
1 Credits 2 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
The study of dental science that deals with tooth morphology and dental occlusion. Tooth morphology is the structure and form of the tooth and occlusion is the study of the relationship of the teeth in arches to each other.

DHYG-118 Oral Embryology & Histology
1 Credits 1 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A study of the embryological development of the head and neck and microscopic anatomy of tissue of the oral cavity.

DHYG-120 Oral Disease Prevention
1 Credits 1 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An introductory course in nutrition and relationship to oral disease prevention. Counseling techniques for dental patients is included.

DHYG-121 Dental Hygiene I
6 Credits 2 Contact
Coordinator's signature required to register in this course.
Prerequisite: DHYG-102 Corequisite: DHYG-115 and DHYG-121L.
Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An introduction to preventative techniques and the development of necessary skills for deplaquing and debridement of teeth. Includes instruction in oral examination, charting, recording and application of topical fluoride. Patient education is introduced.

DHYG-121L Dental Hygiene I Lab
0 Credits 8 Contact
An introduction to preventative techniques and the development of necessary skills for deplaquing and debridement of teeth. Includes instruction in oral examination, charting, recording and application of topical fluoride. Patient education is introduced.
DHYG-122 Dental Hygiene II
5 Credits  1 Contact
Coordinator's signature required to register in this course.
Prerequisite: DHYG-121 Corequisite: DHYG 122C. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An introductory course where students perform dental hygiene preventive procedures and patient education on patients from the community under supervision.

DHYG-122C Dental Hygiene II Clinic
0 Credits  8 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements  Corequisite: DHYG:122
An introductory course where students perform dental hygiene preventive procedures and patient education on patients from the community under supervision.

DHYG-127 Legal and Ethical Aspects of Dentistry
1 Credits  1 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A lecture class devoted to the study of ethics and law related to the professional practice of dental hygiene, assisting and dentistry.

DHYG-130 Dental Materials for Dental Hygiene
2 Credits  1 Contact
Coordinator's signature required to register in this course.
Prerequisite: DHYG-115. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
The introductory lecture will consist of theory as it relates to materials used in dentistry. The laboratory will provide an opportunity to apply the knowledge gained through lecture assignments.

DHYG-130L Dental Materials for Dental Hygiene Lab
0 Credits  2 Contact
Coordinator's signature required to register for this course.
Prerequisite: Program Eligibility Requirements Corequisite: DHYG-130
The introductory lecture will consist of theory as it relates to materials used in dentistry. The laboratory will provide an opportunity to apply the knowledge gained through lecture assignments.

DHYG-180 Pain Management
3 Credits  2 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: DHYG-180L
This course will provide the student with basic current concepts of local anesthetic and pain control for the safe and effective administration of local anesthetics and nitrous oxide/oxygen sedation. This course will prepare candidates for the NERB examination for local anesthesia and nitrous oxide/oxygen sedation certification.

DHYG-180L Pain Management Lab
0 Credits  2 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements Corequisite: DHYG-180
This course will provide the student with basic current concepts of local anesthetic and pain control for the safe and effective administration of local anesthetics and nitrous oxide/oxygen sedation. This course will prepare candidates for the NERB examination for local anesthesia and nitrous oxide/oxygen sedation certification.

DHYG-203 Oral Radiographic Interpretation
1 Credits  1 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An advanced course in dental radiography emphasizing theory and application of theory in interpretation of dental radiographs. Included is treatment planning, patient education and legal issues delegated to charting and interpretation.

DHYG-210 Dental Hygiene Practical
2 Credits  4 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An optional course for dental hygiene students who have completed Dental Hygiene II. It will provide an opportunity for these students to receive optional clinical skills. In addition, this course will meet mandated continuing education requirements for the licensed dental hygienist.

DHYG-211 Dental Hygiene III
7 Credits  1 Contact
Coordinator's signature required to register in this course.
Prerequisite: DHYG-122. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course provides a higher order discussion of nutritional considerations of oral health and disease and general nutrition information. Periodontal health is stressed.

DHYG-212 Nutrition
1 Credits  1 Contact
Coordinator's signature required to register in this course.
Prerequisite: DHYG-120. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course will provide the student with basic current concepts of local anesthetic and pain control for the safe and effective administration of local anesthetics and nitrous oxide/oxygen sedation. This course will prepare candidates for the NERB examination for local anesthesia and nitrous oxide/oxygen sedation certification.

DHYG-221C Dental Hygiene III Clinic
6 Credits  12 Contact
Coordinator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements Corequisite: DHYG-221
A continuation of clinical experience with patients, including treatment planning, initial and maintenance appointments, patient education, nutritional counseling, sealant application and radiographic surveys.
DHYG-224 Dental Hygiene IV
7 Credits 4 Contact
Co-operator's signature required to register in this course.
Prerequisite: DHYG-221. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: DHYG-224. The fourth in a series of clinical courses that prepares the dental hygiene student for practice. Advanced skills necessary for oral health screening, initial, maintenance and advanced treatment appointments are taught.

DHYG-224C Dental Hygiene IV Clinical
0 Credits 12 Contact
Co-operator's signature required to register in this course.
Prerequisite: DHYG-221. Corequisite: DHYG-224. The fourth in a series of clinical courses that prepares the dental hygiene student for practice. Advanced skills necessary for oral health screening, initial, maintenance and advanced treatment appointments are taught.

DHYG-225 Dental Pharmacology
2 Credits 2 Contact
Co-operator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A study of the properties, indications and therapeutic effects of drugs, with special consideration given to those used in dentistry.

DHYG-231 Community Dental Health
2 Credits 2 Contact
Co-operator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
An introduction to local, state, national and international health agencies. Also, an overview of epidemiology and research in dentistry. Dental hygiene students are guided through stages of program assessment, planning, implementation and evaluation, employing the scientific method to develop a dental disease prevention project for diverse target populations, including non-European cultures.

DHYG-240 Periodontics
2 Credits 2 Contact
Co-operator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course is a beginning, evidence based study of the etiology and the classification of periodontal diseases. Topics include, the periodontium in health and disease states, assessment for clinical decision making, treatment planning, implementation of therapies, and evaluation of therapies.

DHYG-241L Periodontics II Lab
0 Credits 4 Contact
Co-operator's signature required to register in this course.
Prerequisite: Program Eligibility Requirements Corequisite: DHYG-241
The course provides students with a lecture and laboratory experience to develop advanced skills in periodontal charting, use of ultrasonic instruments and exposure to local anesthesia for patient treatment.

DHYG-250 Review for National Dental Hygiene Boards
2 Credits 2 Contact
Co-operator's signature required to register in this course.
Prerequisite: DHYG 222 or graduate from an accredited dental hygiene program. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. The course will provide students of dental hygiene an opportunity to review subjects that are included on the Dental Hygiene National Board Examination.

Early Childhood Education
Fine Arts & Social Sciences

ECED-100 Intro to Early Childhood Education
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. An introduction to the field of early childhood education, which includes current trends, models, Child Development Associate Credential, Developmentally Appropriate Practices and future directions. Various job opportunities will be discussed. Ten hours of observation outside of class is required to complete this course.

ECED-101 Infant & Toddler Developmental Education
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course will help students develop an understanding of the psychological and physical growth patterns, nutritional requirements, emotional, social and cognitive skills of infants and toddlers.

ECED-102 Preschool Development and Education
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course, which focuses on the child from three to five years of age, will address physical, social, emotional, cognitive and linguistic development as well as topics which relate to growth and development in each of these areas. Traditional and contemporary families, parenting styles, and child development in other cultures will also be discussed.

ECED-103 Professional Ethics Early Childhood Educ
1 Credits 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course introduces the early childhood education students to the NAEYC’s Code of Ethical conduct for early childhood professionals. Topics include an introduction to morality and ethics; ethical responsibilities to children, families, colleagues, and the community.
ECED-104 CDA Completion
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course will support the student in the completion of the CDA process. It will discuss the thirteen functional areas, which serve as a basis for assessing the ability of the student to work with children. There will be an emphasis on completing the Resource File.

ECED-105 School Age Development and Education
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course is designed to develop an understanding of the physical, intellectual, social, and emotional development of the child ages 5-9. The influence of the culture, the family, the school, and the peer group upon the developing school age child is considered.

ECED-111 CDA Fieldwork Experiences I
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This class is the first of a two part series that includes regular seminars and a minimum of 120 hours/maximum of 240 hours field experience in an approved licensed early childhood setting; providing the student the opportunity to demonstrate competency in meeting the National CDA requirements.

ECED-112 CDA Fieldwork Experiences II
3 Credits 3 Contact
Prerequisite: ECED-111. Placement into RDNG-016 (ACSR-016) is required. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This class is the second of a two part series that includes regular seminars and a minimum of 120 hours/maximum of 240 hours field experience in an approved licensed early childhood setting; providing the student the opportunity to demonstrate competency in meeting the National CDA requirements.

ECED-190 Literacy and Numeracy
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course will focus on approaches, techniques and materials which can be used to enhance the physical and intellectual development of young children. The laboratory experience of 45 hours at the MCC Four-Year-Old Program will be required simultaneously.

ECED-199 Guidance and Discipline
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. Many students are and will be faced with challenging behaviors as they work in the field of early childhood. This course presents behavior management strategies for students or professionals working with children ages two through eight who are troubled, behaviorally challenged or have many unmet needs.

ECED-200 Early Childhood Learning Environments
4 Credits 6 Contact
Prerequisite: ECED-102. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course focuses on the physical and social learning environments for young children. Topics include safe and healthy environments, self esteem, theories and practices of guidance and discipline, and social behavior.

ECED-201 Curriculum Planning in Early Childhood
4 Credits 6 Contact
Prerequisite: ECED-102. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. After a brief discussion of major theories of early childhood education, this course will focus on approaches, techniques and materials which can be used to enhance the physical and intellectual development of young children. The laboratory experience of 45 hours at the MCC Four-Year-Old Program will be required simultaneously.

ECED-202 Admin of Programs for Young Children
3 Credits 3 Contact
Prerequisite: ECED-100 and ECED-102. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course includes an analysis of the planning, administration, and operation of a child development center. Licensing standards, staffing, financial operation, physical facilities, and program planning to meet the needs of children, parents, and staff will be considered. Procedures for parent involvement and the continued growth and development of the early childhood professional will also be discussed.
ECED-203 Learning Env: Infants and Toddlers
3 Credits 5 Contact
Prerequisite: ECED-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course will help develop an understanding of the programs and activities needed to be implemented, which match the developmental needs of infants and toddlers. The course will also include discussion and practice in designing appropriate environments for infants and toddlers. A required 45 hour lab experience in an approved infant/toddler setting is included in this course. The lab site and college faculty will provide field supervision.

ECED-204 Infant and Toddler Curriculum Planning
4 Credits 6 Contact
Prerequisite: ECED-103 and ECED-203. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005.
This course will focus on approaches, techniques and materials that can be used to enhance the physical and intellectual development of infants and toddlers. Specific areas to be discussed include: motor skills, sensory skills, language, creativity, social and emotional development. This course requires 48 hours of participation outside of class in an approved infant/toddler classroom to be completed simultaneously.

ECED-205 Field Work
4 Credits 4 Contact
Coordinator's signature required to register in this course.
Prerequisite: ECED-103, ECED-105, ECED-200, ECED-201, ECED-203 ECES-204, minimum GPA of 2.0 in these courses. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. Includes 200 hours of field work at an approved program and regular seminars. Provides the student with the opportunity to demonstrate competency in the infant/toddler classroom. Field supervision is provided by the agency and college faculty. The program coordinator has the responsibility of securing the initial placement site for student interns. Students are expected to follow the accepted code of ethics of the profession and adhere to policies of the placement agency.

ECED-206 Infant & Toddler Fieldwork Practicum
4 Credits 6 Contact
Prerequisite: ECED-103 ECED-203 ECES-204. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (NA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. This course, which consists of 200 field hours and seminars, provides the student with the opportunity to demonstrate competency in the infant/toddler classroom. The field site and college faculty will provide field supervision.

Early Childhood Special Needs
Fine Arts & Social Sciences

ECES-203 Young Children With Special Needs
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required; ECED-102. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005.
This course addresses the theoretical principles of child development and the implications of handicapping conditions on the teaching strategies/techniques used. This course includes a 45 hour lab experience in an approved special needs classroom. Lab site staff and college faculty will provide lab supervision.

ECES-204 Adapt Early Child Curricula-Special Need The Special Needs Child
3 Credits 5 Contact
Prerequisite: ECES-203. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. Students must meet state licensing health requirements and any other requirements of the chosen lab site prior to the start of the lab experience. Must have transportation to/from lab worksite.
This course addresses the following: development and the implications of handicapping conditions involving young children and the effects of these conditions on total growth and development. Emphasis will be placed on strategies used by child care workers to facilitate the growth and development of special needs children.

ECES-206 Principles & Techniques of Behavior Management
3 Credits 3 Contact
Prerequisite: ECES-203. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. A practical orientation to behavior management techniques and alternatives. Included will be applied behavior management approaches for the special needs child.

ECES-207 Legal/Social Issues of the Special Needs Child
3 Credits 3 Contact
Prerequisite: ECES-203. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. Acquaints students with social services available to the developmentally disabled and familiarizes students with procedures necessary for referral. Legal issues and concerns involving families of special needs children are addressed.
ECES-208 Learning Environment for the Special Needs Child
3 Credits 3 Contact
Prerequisite: ECES-204. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. An overview of the basis of movement and conditions resulting in physical disabilities. Development of safe and healthy environments will be addressed.

ECES-209 Field Experience in the Area of Special Needs
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Completion of Child Development/Special Needs courses, minimum GPA of 3.0 in these courses and permission of instructor. Students must meet child care licensing health requirements and have current Child Abuse/Neglect Central Registry (CA/NR) clearance obtained from the Michigan Department of Human Services to be presented in the first class. A copy must be on file in the Social Sciences Office, MMB 2005. Includes 200 hours of field work in a special needs program and/or agency and regular seminars. Provides the student with the opportunity to demonstrate competency in the classroom. Field supervision is provided by the agency and college faculty. The program coordinator secures the initial placement site for student interns. Students are expected to follow the accepted code of ethics of the profession and adhere to policies of the placement agency.

Economics
Fine Arts & Social Sciences

ECON-101 Financial Literacy
1 Credit 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course provides an overview of the basic principles of personal finance, with a focus on the use of financial data to make personal financial decisions and achieve personal financial goals. Topics include financial planning, taxes, saving, credit, purchases, financing automobiles, and life insurance.

ECON-125 Personal Money Management
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This practical course provides an introduction to the personal financial planning process. Topics include planning and managing personal finances, making purchasing decisions, insuring resources, investing, retirement planning, and estate planning.

ECON-221 Principles of Economics (Macroeconomics)
4 Credits 4 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course provides an overview of the modern market economy and how it addresses the issue of scarcity. Topics include supply and demand, GDP, economic growth, unemployment, inflation, the economic role of the government, fiscal policy, monetary policy, and other selected current topics.

ECON-222 Principles of Economics (Microeconomics)
4 Credits 4 Contact
Prerequisite: ECON-221. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course analyzes the behavior of individual decision-making units in the economy (particular households, resource suppliers, and businesses), with an emphasis on how individual firms attempt to maximize profit under different competitive conditions. Additional topics include elasticity, consumer behavior, income distribution and poverty, the demand for economic resources, public choice theory, international trade and finance, and selected current topics.

Electronics
Technology

ELEC-101 Introduction to Elec. Systems
1 Credit 1 Contact
Placement into RDNG-016 (ACSR-016) is required. Recommended co-requisite: ELEC-133. Basic electrical knowledge is becoming mandatory for many professions. As systems become smaller, faster, and smarter, the need to understand basic electrical fundamentals increases. This course was designed with the non-major or undecided student in mind as basic electrical theory, safety and systems are explored.

ELEC-109 The Exotic World of Embedded Systems
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course will invite non-majors, hobbyists, and undecided students into the world of electronics and electrical technology. This unique, entry level course will focus on using microcontroller-based development tools and hardware to create an entirely new breed of projects for the hobbyist or the student curious about technology. Utilizing embedded systems and the FABLab, electromechanical devices can be developed for a near limitless array of innovative applications from robotics to simple household projects.

ELEC-110 Electrical Industry Orientation
1 Credit 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to provide insight on the licensing and certification required for members of the electrical field and the state and federal acts that govern them. Areas of emphasis include licensing requirements for electrical contractors, apprentices, journeyman, and master electricians and the Michigan Electrical Codes and Acts.

ELEC-131 Residential Electrical Wiring
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Recommended co-requisite is ELEC-133. Course fee includes supplies. This course covers basic electrical theory, print reading, use of tools, safety, and related topics applied to residential wiring. The student will learn to apply the National Electric Code to basic wiring situations. Laboratory work includes actual wiring and testing of common residential circuits.

ELEC-133 Electrical Circuits
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre or Co-Requisite: ELEC-131 or ELEC-101. Note: Course fee includes electronics kit and supplies. This course covers direct current and alternating current theories applied to resistive, capacitive, and inductive circuits. Computer circuit simulation will be utilized in design and analysis. Laboratory
assignments will emphasize proper wiring, analysis and troubleshooting of actual circuits using test equipment such as digital multimeters, oscilloscopes and functional generators.

ELEC-135 Electronic Components and Applications
6 Credits 8 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required. Note: Course fee includes electronics kit and supplies.
Introduction to semi-conductor devices, integrated circuits, and their applications. Typical circuits will be studied and analyzed including DC power supplies, voltage regulators, amplifiers, power control circuits, and signal conditioning circuits. Laboratory work will allow the students to develop skill at design, construction, measurement, and troubleshooting of actual circuits. Test equipment will be available for each student to use in the lab.

ELEC-139 Logical Control Systems
6 Credits 8 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required.
Digital electronics is the foundation of industrial control systems, microprocessor based systems and computers. This lab-centered course will teach the fundamentals of digital control as it relates to these areas. There will be numerous lab experiences to help you master number systems, industrial I/O devices, switching and relay logic, TTL circuit logic, programmable controller logic, microcontroller logic, print and schematic reading, point to point wiring from prints and schematics, and circuit trouble shooting. Students will practice the skill of prototyping circuit board and component assembly.

ELEC-139A Hard Contact and TTL Device Logic
2 Credits 2.75 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required.
The foundations of logical control systems are the switches, safety relays and an integrated logic family called TTL. This module will cover all aspects of switch types from toggles to heavy industrial types, such as NEMA rated limit switches. Simple relay controllers will be wired and de-bugged. Fundamental industrial print reading will be covered and an introduction to binary based number systems. The TTL family of logic devices will be used to master basic logic structures and circuit reduction techniques such as Boolean algebra and Karnaugh mapping.

ELEC-139B PLC-Level 1
2 Credits 2.75 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required.
Programmable Logic Controllers are at the heart of industrial based environments from the auto industry to amusement parks. They manage the automated machine control system. They ride over the operation of everything that moves electronically, including robots. This module will take the learner through the basic architecture of PLCs, constructing a system, RS Logix 5 software functions, and fundamentals of ladder logic, basic instruction set, basic troubleshooting, and program construction.

ELEC-139C Microcontroller Fundamentals
2 Credits 2.5 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Because of the low cost of Microcontrollers and their versatility as a logic device, they now replace virtually all of the logic devices used in the past. Wiring of logical controls are being replaced with programming. Microcontrollers have become the cornerstone of any logical control curriculum. In this module, students will learn how to replace older style logic circuits with the device known as a Microcontroller. Topics include how to learn to connect I/O devices properly as well as how to use some of the tools common to these devices, such as development boards and in circuit emulators. The basic instruction set will be covered and used in practical circuits.

ELEC-140 Electrical Principles of Fire Alarm and Safety Systems
1 Credit 1 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required.
Electrician apprentices and electrical technicians alike will benefit from this introductory course on fire alarm and safety systems approached from an electrical standpoint. Students will review the National Electric Code (NEC) and National Fire Alarm Code (NFPA) that governs the installation, inspection and system design of these systems. The electrical principles, sensing mechanisms, electronic circuits and design of fire alarm and similar safety systems will be investigated in this course.

ELEC-150 National Electrical Code
3 Credits 3 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required.
This course will prepare students to successfully pass the State of Michigan Journeyman Electrician exam, where passing of this exam is a testimony of NFPA 70 proficiency. Thoroughly investigating, interpreting, and using the NEC on practical applications will accomplish this preparation. The larger objective of this course is to improve the safety and reliability of the electrical systems that its students come in contact with. Because states can add to the code, the Michigan Residential Code 2000/Electrical will be interjected into the course.

ELEC-151 Sizing of Commercial/Industrial Electrical Systems
3 Credits 3 Contact
Prerequisite: ELEC-131 and ELEC-133. Placement into RDNG-016 (ACSR-016) is required.
This course is designed as a follow-up to the National Electric Code class. In this class, students will learn to calculate and size the entire electrical system and how to choose the correct conductor size and type for various installations. They will also be able to calculate conduit size and type for installations requiring the use of conduit. In addition, students will size electrical equipment and choose types of equipment for different applications, such as motor starter, fuses, heaters and disconnects. Correct size grounding and bonding conductors and methods will also be reviewed.

ELEC-231 Fundamentals of Labview
3 Credits 4 Contact
Prerequisite: ELEC-135 and ELEC-139. Placement into RDNG-016 (ACSR-016) is required.
This course will introduce the student to the LabVIEW environment, its features and data flow programming. This course prepares you to develop: test and measurement, data acquisition, instrument control, data logging, and measurement analysis applications using LabVIEW. At the completion of this course, you...
will be able to create applications using basic design templates and architectures to acquire, process, display and store real-world data.

**ELEC-233 Embedded Controllers**  
6 Credits  8 Contact  
Prerequisite: ELEC-135 and ELEC-139. Placement into RDNG-016 (ACSR-016) is required. Note: Course fee includes electronics kit and supplies. 
Microcontrollers are responsible for the large component reduction of everything that is electronic in nature. They are the future of the electronics industry and what we used to wire will now be programmed. Through the use of extensive lab experiments, this course will take you through all pertinent aspects of I/O interfacing, microcontroller programming and fundamental embedded control system development. If your present or future job is in electronics these devices will have an impact on you and this course will give you the necessary skills to function in the new age of Embedded Controllers.

**ELEC-235 Instrumentation and Industrial Electronics**  
6 Credits  8 Contact  
Prerequisite: ELEC-135 and ELEC-139. Placement into RDNG-016 (ACSR-016) is required. 

**ELEC-237 Electronics Communications**  
6 Credits  8 Contact  
Prerequisite: ELEC-135 and ELEC-139. Placement into RDNG-016 (ACSR-018) is required. 
This course covers the following topics: Amplitude, frequency, light and phase modulation components and systems. Detection, r-f amplifiers, oscillators, and multipliers. Linear integrated circuit applications as applied to pulse width, frequency shift keying, phase locked loop and touch tone transmission systems. Antennas, transmission lines, high power r-f amplifiers and complete transmitting system. Avionics, video systems and specialized instrumentation as applied to communications. Laboratory is an essential phase of the course, emphasizing practical technical level construction, repair and design concepts.

**Engineering**  
Science & Math

**ENGR-242 Principles of Engineering Materials**  
4 Credits  8 Contact  
Prerequisite: CHEM-131. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisite: PHYS-287 
This course provides an introduction to the science of engineering materials. Emphasis is on single phase metals, polymers, ceramics, as well as multiphase materials. A discussion of phase diagrams and microstructures is included.

**ENGR-247 Vector Mechanics I**  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisites: PHYS-287 and MATH-250 
This course addresses the engineering effects of forces and distribution of forces on rigid bodies which are, and remain, at rest.

**ENGR-248 Mechanics of Deformable Solids**  
4 Credits  4 Contact  
Prerequisite: ENGR-247. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisite: MATH-268 
This course covers the elastic behavior of loadbearing members and the engineering aspects of using these types of materials.

**ENGR-249 Vector Mechanics II**  
3 Credits  3 Contact  
Prerequisite: ENGR-247. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisite: MATH-268 
This course teaches the engineering aspects of the motion of rigid bodies caused by the forces acting upon them.

**English**  
Humanities

**ENGL-095 Writing Exploration**  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. 
Writing Exploration is an intensive writing course that develops students’ literacy, employability, and college learning skills. Guest speakers, team projects, and campus exploration will encourage student success as we focus on using writing to learn. This course is designed for students with a reading placement test score between grade five and grade eight, but everyone is welcome.

**ENGL-098 Basic Sentence Skills**  
3 Credits  3 Contact  
Prerequisite: Placement into ENGL-098 or higher on the MCC placement test or "S8” in ENGL-095. 
In English 098, students have the opportunity to build their confidence in their language abilities. Course activities help students develop their expressive powers to produce personal, social, and academic writing for various purposes. Significant time is spent on sentence building skills. Graded S/U.

**ENGL-099 Basic Writing 2**  
3 Credits  3 Contact  
Prerequisite: Placement into ENGL-099 or higher on the MCC placement test or "S9” in ENGL-098 or ENGL-095. 
This writing course uses reading and writing to foster the development of ideas, critical thinking, and audience awareness. Writing in the course will include informal pieces, reading responses, short essays, reflections on one’s own writing, and other writing assignments based on personal experience and reading. Students will learn how to compose focused, detailed writing that sustains a central idea and will build confidence in their ability to meet the expectations of an academic audience.

**ENGL-100 College Reading and Study Skills**  
3 Credits  3 Contact  
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Placement into this course is determined by testing. The course provides students with repeated opportunities to work with written print in an effort to develop a greater understanding of the purposes of construction of meaning and the acquisition of reading strategies and skills.
ENGL-101 English Composition I
3 Credits 3 Contact
Prerequisite: Placement into ENGL-101 on the MCC placement test or "S1" in ENGL-095, ENGL-098, ENGL-099, ACLT-075, or ACLT-076 with teacher recommendation to move to ENGL-101/103.
A writing course that emphasizes organization and communication of thought through writing developed with clear, convincing detail and supporting a thesis (controlling idea or main point). Writing in the course will include single paragraphs, short essays, and a library research assignment, which includes a longer, multiple-source, documented essay.

ENGL-102 English Composition II
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
Focuses on the development of critical thinking, reading, and writing abilities. Areas emphasized include language awareness, critical reading and analysis, persuasion and argument, and research. A substantial research project is required, including evaluating and selecting a variety of sources and writing a narrowly focused essay in support of the students' own positions.

ENGL-103 Composition for Technical Fields I
3 Credits 3 Contact
Prerequisite: Placement into ENGL-101 on the MCC placement test or "S1" in ENGL-095, ENGL-098, ENGL-099, ACLT-075 or ACLT-076 with teacher recommendation to move to ENGL-101/103.
ENG 103 provides students with the equivalent of traditional freshman composition experience, but with an emphasis on "technical" writing that is geared toward specialized fields such as healthcare, criminal justice, and various technologies. The course emphasizes clear, active writing style and precise word choice, and it includes a research project and oral presentation incorporating presenting software.

ENGL-104 Composition for Technical Fields II
3 Credits 3 Contact
Pre-requisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
ENG 104 is a technical writing equivalent to ENGL 102. It provides students with the equivalent of a second-component traditional freshman composition experience, but with an emphasis on "technical" writing that is geared toward specialized fields such as healthcare, criminal justice, and various technologies. This course builds on skills taught in English 101 or ENGL 103, focusing on enhancing critical thinking and writing skills through investigation and summarizing information, adapting language levels to user needs, evaluating evidence and logical reasoning, and assembling documents based on these processes.

ENGL-112 Reading for College Courses
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to help students learn effective reading strategies for studying and understanding college level textbooks and other material.

ENGL-100 English Grammar
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Prerequisite: ENGL-101
This is a course in grammar (primarily sentence structure of syntax) and parsing of sentences. Although discussions of standard and non-standard sentence patterns and verb forms will be part of the course, the course will primarily emphasize study of, reflection on, and analysis of the variety of grammatical choices available to writers and speakers, first at the sentence level and later at the level of longer texts. Students will parse sentences using phrase structure (tree) diagrams, complete sentence practices to expand and develop their repertoire of sentence options, and read a novel to analyze how syntax reinforces theme. They will be required to lead discussions and deliver a lecture.

ENGL-200 English Grammar
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
The study and practice of the techniques of imaginative writing. Emphasis on writing poetry and fiction with attention to character, conflict, specificity, theme, atmosphere, point of view, dialogue, imagery and symbolism.

ENGL-105 Creative Writing
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
A survey of the development of literature for children and adolescents from earliest times to the present. An examination of standards for judging picture books, fantasy, nonfiction, and poetry. Assignments include experience in the elementary school classroom.

ENGL-211 Introduction to Storytelling Literature
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
This course is designed to help you gain confidence as you learn the how's and why's of presenting books and oral tales to children. This course is designed to provide the theory and practice of oral techniques used in telling stories and reading aloud in a daycare, pre-school, elementary classroom or library.

ENGL-205 Creative Writing
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
An introduction to the study and practice of imaginative writing. Emphasis on writing poetry and fiction with attention to character, conflict, specificity, theme, atmosphere, point of view, dialogue, imagery and symbolism.

ENGL-206 Creative Writing
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
A survey of the development of literature for children and adolescents from earliest times to the present. An examination of standards for judging picture books, fantasy, nonfiction, and poetry. Assignments include experience in the elementary school classroom.

ENGL-102 English Composition II
3 Credits 3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
Focuses on the development of critical thinking, reading, and writing abilities. Areas emphasized include language awareness, critical reading and analysis, persuasion and argument, and research. A substantial research project is required, including evaluating and selecting a variety of sources and writing a narrowly focused essay in support of the students' own positions.

ENGL-103 Composition for Technical Fields I
3 Credits 3 Contact
Prerequisite: Placement into ENGL-101 on the MCC placement test or "S1" in ENGL-095, ENGL-098, ENGL-099, ACLT-075 or ACLT-076 with teacher recommendation to move to ENGL-101/103.
ENG 103 provides students with the equivalent of traditional freshman composition experience, but with an emphasis on "technical" writing that is geared toward specialized fields such as healthcare, criminal justice, and various technologies. The course emphasizes clear, active writing style and precise word choice, and it includes a research project and oral presentation incorporating presenting software.

ENGL-104 Composition for Technical Fields II
3 Credits 3 Contact
Pre-requisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
ENG 104 is a technical writing equivalent to ENGL 102. It provides students with the equivalent of a second-component traditional freshman composition experience, but with an emphasis on "technical" writing that is geared toward specialized fields such as healthcare, criminal justice, and various technologies. This course builds on skills taught in English 101 or ENGL 103, focusing on enhancing critical thinking and writing skills through investigation and summarizing information, adapting language levels to user needs, evaluating evidence and logical reasoning, and assembling documents based on these processes.

ENGL-112 Reading for College Courses
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to help students learn effective reading strategies for studying and understanding college level textbooks and other material.
ENGL-221 Introduction to Literature  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course provides an introduction to a variety of literary styles and themes and explains writing forms such as drama, fiction, nonfiction, and poetry. Selections include a variety of authors, countries and periods.

ENGL-222 Science Fiction  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course provides a study of classic and representative works of science fiction including novels, short stories and films. Emphasizes ideas and values in the literature.

ENGL-223 American Black Literature  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
An intensive study of African-American literature from the 1700s to the present. Students will read and discuss works such as slave narratives, short stories, novels, poems and plays by such authors as Douglass, Chesnutt, Hughes, Gaines, Morrison, Baraka, Hayden, Hansberry and Wilson.

ENGL-225 Poetry  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course is the study of poetry, designed to develop student's ability to read poems critically with understanding and appreciation.

ENGL-227 Fiction  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course is a study of fictional short stories and novels and is designed to develop the students' ability to read fiction critically and with understanding and appreciation. Readings include a variety of authors, countries and periods.

ENGL-231 American Literature  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course is a study of classic and representative works of modern American literature, including novels, drama, short stories and poetry.

ENGL-232 Modern American Literature  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course is a study of classic and representative works of modern American literature, including novels, drama, short stories and poetry.

ENGL-235 American Indian Literature  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This is an introductory course in the literature of North American Indians, primarily in the 20th century. Recognizing that there are literally hundreds of tribal traditions in the Americas, we will focus on the mythology, history and literature of a handful of indigenous cultures, including an extended study of the Spokane and Ojibwa traditions. We will study two authors in depth from these distinctly different tribal backgrounds as we strive to understand the specific effects of geography and history on tribal life, traditions and literature.

ENGL-236 War Stories: America's Conflict in Iraq  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 with a grade of 2.0 or higher.  
This course explores representations of war and conflict through fiction, poetry, memoir, and journalistic accounts written by Americans and Iraqis, both soldiers and civilians. The course examines how various genres and voices shape our understanding of events and explores questions about the kinds of truth found in what we call fiction and non-fiction. Students will engage in detailed literary analysis as well as study of historical and cultural contexts.

ENGL-240 Shakespeare  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
An overview of Shakespeare through the study of seven to eight plays ranging from early to late and from various genres, such as histories, comedies, tragedies, and fantasies. Sonnets and other poems may also be included. A goal of the course is viewing of at least one play, either in video or in a live performance.

ENGL-242 English Literature II  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
A study of six to ten representative authors of British literature from 1750 to present, including poetry, essays and fiction from such writers as Wordsworth, Coleridge, Byron, Keats, Tennyson, Arnold, Dickens, Wilde, Conrad, Lawrence and Eliot.

ENGL-253 The Bible As Literature  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 with a grade of 2.0 or higher.  
This course examines the Bible as literature extending beyond an "inspired word" definition and forming a foundation for much of Western literature, music and art. Students will learn literary concepts, techniques, and terminology applications. Please note that belief systems and theology are not the focus; rather, the course investigates the Bible as a literary and historical text.

ENGL-261 Readings in Popular Culture  
3 Credits  3 Contact  
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.  
This course will give students an increased ability to identify and comment upon the ways that popular culture both shapes and reflects the desires of citizens and consumers. By looking critically at a range of popular artifacts including literary/cultural criticism, short stories, articles, essays, photos, songs, films and television episodes, students learn to "read" them more critically and actively. At the end of the semester students should be able to explain the social, historical, political, and cultural contexts surrounding popular culture and the ideologies it carries, including the ways it is exported to, and influenced by, other cultures and groups.
ENGL-271 Film As Literature
3 Credits  3 Contact
Prerequisite: Successful completion of ENGL-101 or 103 with a grade of 2.0 or higher.
This course provides a study of classic and representative films. Emphasis is placed on understanding, appreciation, and analysis of the literary elements of film.

FILM-250 Film Genre - Horror
3 Credits  3 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course covers the basic terms and techniques found in horror films. Examines and discusses select films, and allows students to discover the historical background behind techniques, films, and directors.

ENGLISH as a 2nd Language
Humanities

ESL-005 Intermediate ESL
4 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This English as a Second Language course, designed for non-native speakers of English, provides intensive conversation and composition practice for students with limited English proficiency. Spelling, vocabulary, grammar, speaking, writing, and sentence structure are covered to prepare students for standard college-level English courses.

FILM-251 The Cross Cultural Film
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
The Cross Cultural Film is designed to help students understand and appreciate the cultural and ethnic diversity in various societies concerning customs, values, morals, and relationships via the films produced by members of that culture.

ESL-006 Advanced ESL
4 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This English as a Second Language course, designed for non-native speakers of English, is designed to improve speaking abilities and skills for ESL students and will concentrate on the pronunciation component of regular ESL courses. This course is aimed at both students presently enrolled in ESL courses as well as those who wish to improve their English speaking abilities, accent reduction, and their oral usage of grammar.

FIRE-101 Philosophy of the Fire Service
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course covers an analysis of national fire problems, examining fire prevention procedures, identifying fire fighters equipment, interpreting fire codes and standards, recognizing transportation hazards, working with outside fire agencies, identifying citizen responsibility, and studying future fire problems.

ESL-007 ESL: Pronunciation and Speaking
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This English as a Second Language course, designed for non-native speakers of English, is designed to improve speaking abilities and skills for ESL students and will concentrate on the pronunciation component of regular ESL courses. This course is aimed at both students presently enrolled in ESL courses as well as those who wish to improve their English speaking abilities, accent reduction, and their oral usage of grammar.

FIRE-102 Fireground Tactics
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course addresses the basic rules of fire-fighting strategy, defining engine company responsibilities, determining ladder company functions, coordinating mutual aid fires, and analyzing general fire problems.

FILM-181 Introduction to Film
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A survey of film history and production. Involves actual film making and learning about camera, lenses, lighting, editing, and scripting.

FIRE-104 Arson Awareness
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course develops students' skills in analyzing fire causes, classifying arson motives, studying arson laws, identifying arson control agencies, recognizing the role of arson in fire fatalities, reviewing courtroom procedures and learning fire characteristics.

FILM-249 Film Genre: Film Appreciation
3 Credits  3 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A survey of basic terms and techniques found in film. This course allows students to examine and discuss select types of film including: The Silent Film; The Western; The Foreign Film; The Minority Film; The Documentary Film; The Musical; Women in Film; The Epic Film; Film Noir; The Social Issues Film. Includes discussion of the historical background of techniques and directors.

FIRE-107 Automatic Sprinklers and Standard Pipe Systems
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course teaches the skill of identifying various types of fixed fire suppression and control systems and extinguishing agents.

FILM-252 Film Genre: Film Appreciation
3 Credits  3 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A survey of basic terms and techniques found in film. This course allows students to examine and discuss select types of film including: The Silent Film; The Western; The Foreign Film; The Minority Film; The Documentary Film; The Musical; Women in Film; The Epic Film; Film Noir; The Social Issues Film. Includes discussion of the historical background of techniques and directors.

FIRE-201 Supervision and Leadership for Company Officers
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Designed to analyze the leader-follower relationship, explain three basic methods of leadership styles, recognize responsibilities of fire service leadership, recognize group characteristics, and recognize followers' goals.

FIRE-202 Fire Company Management
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course teaches the skill of recognizing responsibility for the personal welfare of the firefighters, utilizing reports, analyzing purpose of company inspection, recognizing good public-relations practices and analyzing employee performance-evaluation.
systems.

FIRE-203 Company Fire Ground Management  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Applying supervisory techniques to fire situations, utilizing knowledge of characteristics of fire, recognizing the responsibility for the safety of the company, employing supervisory techniques in emergency situations other than fire, and recognizing basic fire-fighting strategy priorities.

FIRE-204 Instructor Training for Company Officers  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Recognizing responsibilities as a fire officer in the training of subordinates, organizing training programs, identifying necessary teaching skills, analyzing the purpose of fire training and recognizing training aids used in fire-service training.

FIRE-205 Fire Hydraulics and Equipment  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Recognizing the vital importance of water, studying water pressures, examining gallonage as it relates to extinguishing fires, identifying the role of the water officer, and analyzing the responsibilities of the driver-engineer.

FIRE-206 Supervision, Personal & Team  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
The student will study all phases of the unique supervisory procedures in the Fire Service. Case studies and role playing will be a significant portion of the semester work. Guided discussions, group activities and brainstorming will be featured. Fire Service Supervision as related to Fire Service Strategy will be defined.

FIRE-207 Fire Service Health & Safety  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
The student will study developing, implementing and managing all aspects of a Fire Department Health and Safety Program. Studies will include Physical Fitness Programs, Safety investigation, Emergency Scene Safety, Procurement of Protective Clothing and Equipment and an Employee Assistance Program.

FIRE-208 Fire Inspector I  
4 Credits 4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
The goal is to prepare students to apply for state and national certification as a fire inspector and to provide current fire inspectors the opportunity to update their knowledge and skills in the fire inspection field. To accomplish this the course will familiarize the student with the development, adoption and use of fire related codes and standards including the importance of code enforcement and the overall fire protection of a community. Students will use documents that are referenced by the NFPA.

Food Management  

Business  

FMG.-101 Orientation to the Hospitality Industry  
1 Credit 1 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Covers the history of the food service industry, the scope and variety of service facilities, and employment opportunities in the industry. Students will study and compare various types of operations and meet with professionals to help explore personal objectives related to careers in the food service industry.

FMG.-102 Food Safety & Sanitation  
2 Credits 2 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Designed to meet the standards of the Educational Foundation of the National Restaurant Association. Students will qualify to take the NRAEF examination, and with successful completion of the examination, will receive NRAEF certification as a ServSafe Food Protection Manager, a nationally recognized certification program for the food service industry.

FMG.-104 Food Service Math  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Provides students with the fundamentals of mathematics as it relates to the food service industry. Special problems of menu pricing, food costs and their percentages, recipe conversions, labor cost and payroll deductions. Calculating annual revenue required for a restaurant to cover all its forecasted cost and converting the required revenue into average check amount.

FMG.-107 Layout and Design  
2 Credits 2 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Provides students with the fundamentals of mathematics as it relates to the food service industry. Special problems of menu pricing, food costs and their percentages, recipe conversions, labor cost and payroll deductions. Calculating annual revenue required for a restaurant to cover all its forecasted cost and converting the required revenue into average check amount.

FMG.-110 Layout and Design  
2 Credits 2 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Experience in planning a food service facility, developing familiarity with specific needs, knowledge of standards acceptable to the clientele, and an awareness of suitable methods of operation and available resources.

FMG.-113 Hospitality Law  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Designed to aid students in developing knowledge of legal rights and responsibilities of the hospitality industry. Prepares students to anticipate, recognize and resolve legal ramifications, ranging from civil liability suits to sale of alcoholic beverages.

FMG.-114 Meat Fabrication & Identification  
2 Credits 2 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Approved uniform required.  
A complete overview of the standards established by the National Association of Meat Purveyors of wholesale butchering. Students will be able to identify and establish standards of beef, lamb, pork, veal, poultry, and seafood. Includes field trips to acquaint students with various meat purveyors at progressive levels in meat fabrication.
FMG-202 Food Service Organization and Management
3 Credits 3 Contact
Prerequisite: FMG-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is designed for students interested in management positions in the hospitality industry. Management and supervision, planning, organizing, staffing, control, leadership directing, marketing, and other tools to aid an effective manager are addressed.

FMGM-202 Food Service Organization and Management
3 Credits 3 Contact
Prerequisite: FMG-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is designed for students interested in management positions in the hospitality industry. Management and supervision, planning, organizing, staffing, control, leadership directing, marketing, and other tools to aid an effective manager are addressed.

FMG-210 Beverage Management
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Beverage Management is designed to train the student how to plan and develop a beverage business for profit; select appropriate equipment; hire and train staff for TIPS (Training for Intervention Procedures Programs); select beer, wine and spirits. This course is a springboard for any food and beverage server who pours beverages for profit and enables him/her to maintain safety procedures as the business develops.

Forensic Science
Fine Arts & Social Sciences

FRSC-160 Introduction to Forensic Pathology and Morgue
3 Credits 3 Contact
Prerequisites: BIOL-151 with a minimum grade of 2.5 and ENGL-101 or ENGL-103 with a minimum grade of 2.0. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will give an overview of the discipline of Forensic Pathology, the function of the Medical Examiner Office and the layout of the morgue in both the hospital setting and a medical examiner's office. It will cover the history of these disciplines, their relationships and discuss the physical structure of the morgue and the equipment used to perform the autopsy. This course will review the role of the autopsy assistant and medical examiner investigator in death investigations.

FRSC-161 Occupational Safety
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course will instruct the student on the universal precautions and procedures they will need to follow when working in occupations in which they will encounter chemical or biological hazards. Students will be trained in OSHA safety standards for personal protective equipment, blood-borne pathogens, chemical safety, hazard recognition, hand-washing, disinfections methods and hazardous waste disposal. Students will also be instructed on how to handle personal information in regard to the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

FRSC-162 Autopsy Assistant Practicum I
4 Credits 4 Contact
Pre-requisite(s): Successful completion of each of the following courses with a minimum grade of 3.0 in each: BIOL 152, FRSC 160, and FRSC 161 and signature of Autopsy Assistant program coordinator. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will instruct the student in preparing the body and morgue for autopsy through hands-on experience in a morgue. Students registering for this course will be assigned to a designated fieldwork site at which they will be trained in the procedures, allowing for graduated responsibility. Students will be evaluated through oral, practical and written examinations. During the course of the semester students will need to accumulate 300 hours in the morgue under the supervision of morgue personnel. To register for FRSC 162 students must have been accepted into the Autopsy Assistant Program and must obtain the signature of the program coordinator.

FRSC-163 Autopsy Assistant Practicum II
6 Credits 6 Contact
Prerequisite: FRSC-160 with a 3.0 and taken no more than one year prior. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will instruct the student in the practical aspects of performing a complete body evisceration with a focus on the student performing daily eviscerations under the guidance of designated morgue personnel. Students will be evaluated through oral, practical and written examinations, during the course of the semester students will need to accumulate 300 hours in the morgue under the supervision of morgue personnel. To register for FRSC 163 students must have been accepted into the Autopsy Assistant Program and must obtain the signature of the program coordinator.

French
Humanities

FREN-151 Elementary French
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
The study of the basic structure of the French language with oral and written practice. Readings and discussion based on French life and culture.

FREN-152 Elementary French II
4 Credits 4 Contact
Prerequisite: FREN-151 or one year of high school French. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is a continuation of the study of the basic structure of the French language.

FREN-251 Intermediate French
4 Credits 4 Contact
Prerequisite: FREN-152 or two years of high school French. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course provides a review of grammar, conversation and composition. Reading and discussion in the history, culture and literature of France and French speaking areas.
FREN-252 Intermediate French II
4 Credits  4 Contact
Prerequisite: FREN-251 or two years of high school French. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course covers the advanced conversation and advanced composition of the French language. Oral and/or written individualized reports are required. Readings and discussion on French history, culture and/or literature are included.

Geography
Fine Arts & Social Sciences

GEOG-100 Map Reading/GPS for Motor Carriers
1 Credit  1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to provide motor carriers with the skills to read and interpret digital and paper road maps, use GPS tools to plan and complete their routes, and use online/software mapping & GIS technology to plan routes that are accessible for motor carriers, in regard to vehicle height requirements, weight requirements, fueling, etc.

GEOG-141 Physical Geography
4 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A survey of the physical elements of geography as they affect people. A study of earth-sun relationships, weather, climate, geologic processes, landforms, and the distribution of natural vegetation.

GEOG-142 World Regional Geography
4 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A survey of the major geographic regions of the world. Emphasis on the physical environment, population characteristics, economic activities, political organization, and international relations.

GEOG-143 Intro to Geographic Information Systems
4 Credits  4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This is a computer mapping course that introduces the student to mapping, database and analytical software. Students will create maps and analyze data using imagery and mapping data from the web and local organizations. Discussions will focus on the numerous applications of GIS throughout our society and its future direction. Industry-standard software will be used.

GEOG-145 Economic Geography
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The geography of human economic activities including agriculture, energy, and mineral resources, manufacturing, service industries, and trade. Emphasis is on the locational factors which affect their distribution.

GEOG-147 Geography of Latin America
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A systematic and regional approach to the study of the natural setting, the cultural milieu, and the economic factors of Latin America. Similarities and differences within and between countries and regions are stressed as are the special relationships that exist between Latin America and the United States.

GEOG-243 Geography of Africa
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A regional survey of the continent including the political pattern, natural resources, economic development, and population characteristics.

GEOG-245 Advanced Geographic Info Systems
4 Credits  4 Contact
Prerequisite: GEOG-143. Placement into RDNG-016 (ACSR-016) is required. This course explores the use of applications within the field of Geographic Information Systems. A variety of software programs will be used to demonstrate Spatial Analysis, Linear Network Analysis and other current technology within the field. Exercises will be performed demonstrating the value of spatial analysis within a variety of disciplines.

GEOG-248 Geographic Info Systems Field Work
3 Credits  5 Contact
Prerequisite: GEOG-143 and permission of Program Coordinator. Placement into RDNG-016 (ACSR-016) is required. This course provides the student the opportunity to obtain experience while working in an assigned professional setting. It is required that each student perform 150 hours of field work in either a governmental, business, non-profit or an educational organization. The Program Coordinator and the site staff will organize the placement and provide supervision.

GEOG-251 Crime Mapping
3 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is the study of the Geographic Aspects of Crime. Students will examine Crime Mapping with a comprehensive approach including its history and crime pattern analysis. The course will incorporate the use of crime mapping technology. Computer software will be used for data creation, statistical analysis and to display crime patterns. This is a core course in the Criminal Justice program.

Geology
Science & Math

GEOL-111 Geology of Dinosaurs
4 Credits  3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: GEOL-111L In this course, students will explore the topics of stratigraphy, geologic time, evolution, and plate tectonics as related to the life and times of the dinosaurs. Students will gain an informed perspective on current scientific data and theory on the origin, behavior, anatomy, and extinction of these animals.

GEOL-111L Geology of Dinosaurs Lab
0 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Corequisite: GEOL-111 In this course, students will explore the topics of stratigraphy, geologic time, evolution, and plate tectonics as related to the life and times of the dinosaurs. Students will gain an informed perspective on current scientific data and theory on the origin, behavior, anatomy, and extinction of these animals.

For the most current information, always check www.mcc.edu
GEOL-151 Physical Geology  
4 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Corequisite: GEOL-151L.  Placement enrollment is not required for the e-learning or hybrid sections as lab is included in those sections. 
A course offering classroom, laboratory and field study of the earth and the dynamic processes which affect and alter its surface.

GEOL-151L Physical Geology Lab  
0 Credits  2 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Corequisite: GEOL-151L.  The lab section of a course offering classroom, laboratory and field study of the earth and the dynamic processes which affect and alter its surface.

GEOL-152 Historical Geology  
4 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Prerequisite: GEOL-151; Corequisite: GEOL-152L  
This course addresses the origin and evolution of the Earth and of life on it.  Topics include classroom, lab and field study of sedimentary rocks, fossils and geologic features.

GEOL-152L Historical Geology Lab  
0 Credits  2 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Prerequisite: GEOL-151; Corequisite: GEOL-152L  
The lab section of the course which addresses the origin and evolution of the Earth and of life on it.  Topics include classroom, lab and field study of sedimentary rocks, fossils and geologic features.

German  
Humanities  
GERM-111 Elementary German  
4 Credits  4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016), or completion of RDNG-016 is required.  
The study of the basic structure of the German language with oral and written practice.  Readings and discussion based on German life and culture.  

GERM-112 Beginning German  
4 Credits  4 Contact  
Prerequisite: GERM-111 or one year of high school German.  
Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course is a continuation of the study of basic structure of the German language with oral and written practice.  Readings and discussion based on German life and culture.  

GERM-211 Intermediate German I  
4 Credits  4 Contact  
Prerequisite: GERM-112.  Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course covers grammar review, conversation and composition.  Readings in the history, culture and literature of Germany and German speaking areas.

GERM-212 Intermediate German II  
4 Credits  4 Contact  
Prerequisite: GERM-211.  Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course teaches advanced conversation and composition.  Oral and/or written individualized reports are required; readings on German history, culture and/or literature.

Health  
Health Sciences  
HEAL-122 Emergency Care for Infants and Children  
2 Credits  2 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Provides students in Child Development related careers with knowledge and experience about emergency care for injured children.  American Red Cross standard first aid and cardiopulmonary resuscitation guidelines are followed.

HEAL-125 Cardiopulmonary Resuscitation (CPR)  
1 Credits  1 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Provides knowledge of CPR and psychomotor skills practice.  
Prudent living habits, risk factors and signals, and survival actions are included.  Meets American Heart Association and American Red Cross requirements for certification.

HEAL-129 1st Aid Responding to Emergencies  
3 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course provides knowledge and skills necessary in an emergency to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until professional medical help arrives.  CPR and First Aid Certificate awarded upon successful completion of the course.

Health Unit Coordinator  
Health Sciences  
HUC.-100 Health Unit Coordinator Foundations  
4 Credits  4 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
Provides basic knowledge and specific skills for the health unit coordinators.  Includes topics, such as, basic transcription of physicians' orders, vital sign graphing, maintenance of patient kardex and medical record.  

HUC.-101 Health Unit Coordinator-Practicum  
3 Credits  8 Contact  
Coordinator's signature required to register in this course.  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
AHLT-102 and basic computer course from Gen Ed requirements with a grade of 2.0 or better.  2.0 cumulative GPA.  Corequisite: HUC.-101 Lab days and times subject to change based on facility preceptor's work schedule.  
For the first 11 weeks, practice will take place in the college laboratory.  Lab practice includes basic transcription of physicians' orders, communication skills, vital sign graphing, nursing kardex and medical record maintenance.  During the last four weeks the student will be assigned to a clinical nursing unit in one of the area hospitals.  Clinical experience includes observation of and assistance to a Health Unit Coordinator in an area hospital.
History
Fine Arts & Social Sciences

HIST-112 History of E Asia to 1600
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will cover the political, social, and cultural history of China, Japan, and Korea from antiquity to 1600. This course will emphasize the relationship of human creativity to needs, beliefs and values, showing how others have understood themselves and how this understanding has shaped our views and conditions today.

HIST-113 History of E Asia 1600 to Present
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will cover the political, social, and cultural history of China, Japan and Korea from 1600 C.E. to the present. This course will emphasize the relationship of human creativity to needs, beliefs and values showing how others have understood themselves and how this understanding has shaped our views and conditions today.

HIST-151 World History: Prehistory to 1500 C.E.
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course is a study of the historical development of civilization in West Asia and North Africa, Europe, Sub-Saharan Africa, South and East Asia and the Western Hemisphere to 1500 C.E. Emphasizes 1) organization and functions of the state; 2) economic behavior; 3) philosophy, religion, literature and science; and 4) families, women and social structure. Concentration on the human aspect of history and contacts among these centers of civilizations.

HIST-152 World History: 1500 C.E. To the Present
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The study of the historical development of civilization in West Asia and North Africa, Europe, Sub-Saharan Africa, South and East Asia and the Western Hemisphere from 1500 C.E. to the present. Emphasis on the integration of the human community and the impact as a result of Western commercial expansion, imperialism and technological innovation.

HIST-154 United States History to 1877
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This is the history of the United States from its beginnings through Reconstruction.

HIST-155 History of United States: 1877 - Present
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The study of the development of the United States following Reconstruction. Discussion includes the problems of an evolving society and the increasing responsibilities of world leadership.

HIST-220 Oral History
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This is a course on the methods and practice of oral history. It will introduce oral history by considering the principles of oral history research and interview techniques and the use of oral testimony in creating community histories.

HIST-254 African American History to 1877
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The study of the African American experience from African origins to 1877. Pre-16th century African civilizations, the Atlantic slave trade, the middle passage, racial slavery during the colonial and early republic, survival strategies of the enslaved and free, struggles for freedom, equality, and social justice during the colonial and post revolutionary periods, the abolitionist movement, the role of African Americans in the Civil War and Reconstruction. Reading of primary and secondary historical sources, critical thinking, creative discussion and oral presentation will be required of all students.

HIST-255 African American History Since 1865
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The study of the African American experience from the Reconstruction era to today. Reconstruction, the rise and fall of Jim Crow, African Americans in the Progressive Movement, the makings of the "New Negro", the Great Migration, the origins and evolution of the Civil Rights Movement, and the struggles over an African American identity from the 1970’s to today. Special attention is paid to the migration of African Americans to the urban north and the social-economic situation which they encountered there. Reading of primary and secondary historical sources, critical thinking, creative discussion and oral presentation will be required of all students.

HIST-257 History of the Holocaust
3 Credits 3 Contact
Prerequisite: Placement into ENGL-100 or successful completion of RDNG-030, ACLT-075, or ACLT-076.
This course examines the background, context, and consequences of the Holocaust. Starting with the history of the Jewish people and anti-Semitism in Germany and Eastern Europe, the course focuses on the experience of the European Jews, as well as the other ethnic, cultural, and political victims of the Nazi regime in the 1930’s and 1940’s within the global context of the Second World War.

HIST-259 History of Mexico
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
The history of Mexico from the Mayans and the Aztecs to the present day. Emphasis on the following periods in the history of Mexico: Pre-Columbian era, the Spanish conquest, the independence movement, the age of Juarez, the Mexican Revolution and Mexico since 1945.
HIST-260 History of Michigan
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or
completion of RDNG-016, is required.
A survey of Michigan's history from prehistoric times to the present
day. The social, economic, and political growth of the state will be
studied often in relation to the history of the United States.

HIST-261 United States Labor History
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or
completion of RDNG-016, is required.
An introduction to United States labor history from its beginnings to
the present day. This class will study the ethnic and cultural
diversity of the American working class and will emphasize the
economic, social, and political contexts in which working people
lived. We will evaluate the development and transformation of the
unionized and non-unionized workers of the United States. Class,
race and gender will be significant categories of analysis. Reading
of primary and secondary historical sources, critical thinking,
creative discussion and oral presentation will be required of all
students.

HIST-262 American Military History
3 Credits 3 Contact
Prerequisite: ENGL-101, Placement into RDNG-030 (ACSR-030),
or completion of RDNG-016, is required.
This course surveys the military experiences of U.S. from the
colonial period to the present. In addition to studying strategy,
tactics, and weapons, issues such as the social composition of the
armed forces, the influence of new technologies on warfare, the
tension between "professional" and "citizen" soldiers, popular
attitudes toward war and the military, and the effects of war on
American society will be explored.

HIST-263 Women in the United States
3 Credits 3 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030),
or completion of RDNG-016, is required.
This course introduces the political, social, cultural, and intellectual
history of Europe from the decline of the western Roman Empire to
the dawn of the Italian Renaissance.

HIST-264 Darkness & Light: Medieval Europe
3 Credits 3 Contact
Prerequisite: ENGL-101. Placement into RDNG-030 (ACSR-030),
or completion of RDNG-016, is required.
This course will examine the social, economic, political and cultural
history of women in America up to the present. It will explore how
the daily lives, legal rights, educational and professional
opportunities and social position of women has changed over time.

HONS-250 Social Diversity & Civic Engagement
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Optional Co-requisite: HONS-251
A growing expectation for today's college graduate is the ability to
work effectively in a diverse environment. This course focuses on
human relations skill (e.g., valuing diversity) essential for
collaborating with others in socially diverse teams, groups and
communities. Students will also explore how various dimensions of
diversity can bring about personal and social barriers (e.g., biases,
sterotypes) that influence the quality of human relationships.
Students will apply their academic learning by completing 45 hours
of community service.

HONS-251 Social Diversity & Civic Engagement Lab
1 Credit 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Instuctor signature and concurrent enrollment in HONS-250
are required.
Alternative Breaks have emerged as a popular form of service
learning at colleges and universities. Students who enroll in this
service learning lab must complete two Alternative Break
weekends during Fall Semester or a weeklong Alternative Spring
Break during Winter Semester. Completion of the
curriculum-based Alternative Break(s) also fulfills the community
service requirement for HONS-250.

Human Relations
Counseling

HREL-101 Interpersonal Communication
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Individual and small-group interaction including interpersonal
communication and helping relationships, self-awareness,
decision-making and problem-solving. Helps students to function
more effectively in personal relationships and community activities.
Roleplaying, demonstrations, video recordings, simulation, and
other experiential activities are used.

HREL-102 Leadership and Group Techniques
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Developing leadership skills through experiential learning in a
small group setting, emphasizing small-group process.
Opportunities to experience and/or lead small groups to prepare
students to facilitate group interaction. Readings and the use of
media and roleplaying are included.

HREL-151 Interpersonal Multicultural Communication
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Provides understanding and application of specific human relations
principles to interpersonal cultural communication involving people
who may be from a dominant culture yet desire a better
understanding of members of other cultures.

Insurance Fundamentals
Business

INSU-101 Personal Insurance, Health & Life
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
An introductory overview of the insurance industry including, but
not limited to, the function of Insurance Companies, Brokers,
Agents and support staff in providing various types of insurance to
their clients. This course explores whole and term life, health,
disability, and workers compensation policies.

INSU-102 Property Insurance, Auto & Casualty
3 Credits 3 Contact
Prerequisite: INSU-101. Placement into RDNG-016 (ACSR-016) is
required.
An introductory overview of the insurance industry including, but
not limited to, the function of Insurance Companies, Brokers,
Agents, and support staff in providing various types of insurance to
their clients. This course explores automotive, personal property
and real property policies.
INSU-103 Michigan Code

3 Credits 3 Contact
Prerequisite: INSU-101. Placement into RDNG-016 (ACSR-016) is required.
A thorough overview of the four Michigan State Insurance
Producer/Agent licensing exams. This course is solely for
preparation for the Michigan Insurance Producers/Agents exam in:
1) Life, Health and Disability theory exam; 2) Life, Health and
Disability Michigan Code exam; 3) Automotive, Casualty and
Property theory exam; and 4) Automotive, Casualty and Property
Michigan Code exam. Michigan law mandates that an individual
sitting for either the Life, Health, and Disability exam, or the
Automobile, Casualty and Property Exam shall pass two exams to
be licensed as a Producer/Agent in that area. One exam in theory
and the second in the corresponding Michigan Code.

International Business

Business

INTL-101 Introduction to International Business

3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course provides the student with international business
terminology and information about the growth of international
trade, reasons for international trade, barriers to international
trade, trade policies, monetary denominations, government
departments and resources, and exports and imports.

INTL-130 Intro International Transportation/Dist

3 Credits 3 Contact
Prerequisite: INTL-101. Placement into RDNG-016 (ACSR-016) is required.
The course provides the student with an introduction to the various
methods of transportation and distribution affecting the import and
export of products and services. Discussion will include trade
documents regulatory agencies, freight forwarders, ocean
shipping, air shipping, containers and duties.

INTL-140 Pacific Rim Business Opportunities

3 Credits 3 Contact
Prerequisite: INTL-101. Placement into RDNG-016 (ACSR-016) is required.
This course will survey Pacific Rim business opportunities with
emphasis on historical, cultural and religious differences as well as
protocol.

INTL-150 Cross Cultural Business Issues

3 Credits 3 Contact
Prerequisite: INTL-101. Placement into RDNG-016 (ACSR-016) is required.
This course provides the student the opportunity to analyze the
impact of local customs and protocols of potential international
business opportunities.

INTL-260 International Marketing

3 Credits 3 Contact
Prerequisite: INTL-101 or BUSN-255. Placement into RDNG-016
(ACSR-016) is required.
This course identifies the impact of language problems, customs
and religious influences, import and export procedure, tourism,
finance and pricing packaging and distribution, transportation,
documents, and research on international marketing opportunities.

INTL-270 International Management/Legal Issues

3 Credits 3 Contact
Prerequisite: INTL-101 and MGMT-181. Placement into RDNG-016 (ACSR-016) is required.
This course identifies legal issues which influence international
management of international business transactions. Students will
consider differences in world legal systems, discuss sovereignty,
immunity, treaties, customs, import and export controls,
commercial transactions and contract enforcement.

INTL-290 International Busn Internship/Externship

12 Credits 12 Contact
Prerequisite: INTL-101; Successfully completed 12 credits of
International Business courses with a minimum overall 2.5 GPA.
Placement into RDNG-030 (ACSR-030), or completion of
RDNG-016, is required.
This course allows the student the opportunity to practice the
international business classroom theories and employment skills at
an International organization in a foreign country. On-the-job work
experience and performance appraisal evaluations measure the
practical application of individual and group projects. The student
may be provided a stipend. The business co-op coordinators will
help the student to secure employment. The student should work
a minimum of 320 hours at the international organization in the
foreign country. Option of this course or BUSN-280, Business
Co-op/Internship/Externship.

Japanese

Humanities

JAPA-111 Beginning Japanese

4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or
completion of RDNG-016 is required.
Basic structure of the Japanese language with oral and written
practice. Emphasis on pronunciation with particular attention to
sentence structure and how the language relates to Japanese
culture.

JAPA-112 Beginning Japanese II

4 Credits 4 Contact
Prerequisite: JAPA-111. Placement into RDNG-030 (ACSR-030),
or completion of RDNG-016 is required.
Continuation of the basic structure of Japanese. Emphasis on
vocabulary and learning to write katakana and hiranga and some
kanji. Converse with others in class.

JAPA-211 Intermediate Japanese

4 Credits 4 Contact
Prerequisite: JAPA-112. Placement into RDNG-030 (ACSR-030),
or completion of RDNG-016 is required.
Intermediate Japanese emphasis on the reading and writing of
Japanese phonetic characters (Kazakana and Hiragana). Also
Kanji (Chinese characters) will be introduced. The study of
grammar and sentence structure will continue. Students will be
required to converse in Japanese.

JAPA-212 Intermediate Japanese II

4 Credits 4 Contact
Prerequisite: Successful completion of JAPA-211. Placement into
RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
An intermediate course in Japanese with emphasis on more
advanced reading, writing of Japanese phonetic characters
(Kazakana and Hiragana) and kanji building. The study of
grammar and sentence structure will continue. Students will be
required to speak in Japanese.
Leadership Development
Fine Arts & Social Sciences

LDDV-101 Leadership Development
1 Credit 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course will introduce students to and help them formulate and clarify their definitions of leadership. Topics will include governing beliefs and specific behaviors that characterize effective leadership. Goal setting and team building concepts will be introduced and developed.

LDDV-190 Prin of Leadership: Soc Science Approach
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The course will focus on the development of common leadership skills to include: identifying personal strengths; developing a leadership philosophy; developing and sharing a vision; leading group decision making; collaborative problem solving; appreciating diversity and communication skills will be included as will techniques of empowering group members and methods of effective delegation of tasks and responsibility.

LDDV-195 Service Learning
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Co-Requisite: Instructor-selected specific courses. See current schedule book for specific sections. Service learning is a course that may be linked with any academic course in the college catalog. It gives students the opportunity to apply academic principles in the real world. Students will also enhance their educational experience and see the relationship between their activity and their academic studies. The activity and content of the course would vary according to the content of the parallel academic course. Students will spend a minimum of 45 hours (2700 minutes) in community service time and 24 hours in class (1440 minutes).

Management
Business

MGMT-181 Principles of Management
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A study of philosophy, principles, and concepts of the field of management, including the planning organizing, evaluating and controlling functions.

MGMT-183 Small Business Management
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is intended for students interested in establishing and/or operating their own small business. The course will spend time in entrepreneurship and what is needed to be successful in today's world and is designed to look at the service, retail, and manufacturing types of business.

MGMT-184 Introduction to Entrepreneurship
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course will enable students to execute their ideas, grow their business and tap into a greater power-the ability to use their ideas and energy to achieve social and political goals that will help empower their communities. Fundamentals of being an entrepreneur will be addressed.

MGMT-186 Business Leadership Supervision
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is intended to assist the current or prospective supervisor in the day-to-day operation of a department or small business operation. Particular emphasis is given to process improvement and employee relations issues such as discipline, grievance, contracts, health and safety.

MGMT-210 Diagnostics and Procedural Coding
3 Credits 3 Contact
Prerequisite: BHSR-200. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Corequisite: MGMT-220 Procedures for third party billing and reimbursement after a physician visit, laboratory, imaging services or surgery. Simulations and exercises code treatment, post charges and transmit claims; manage patient accounts and health record; generate statements and incremental reports.

MGMT-220 Patient Case Management
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course teaches the procedures for monitoring the documentation of patient care for maximum reimbursement. Topics cover evaluation and classification diagnostic, clinical, laboratory and procedural service. Assignments present problem-solution situations requiring critical thought and attention to service code guidelines.

MGMT-283 Organizational Behavior
3 Credits 3 Contact
Prerequisite: MGMT-181 or at least two years of business experience. Placement into RDNG-016 (ACSR-016) is required. This course utilizes experiential and other learning activities to affect the integration of business, management, and human behavior disciplines. Students will develop an understanding of the impact of the interrelationship between employees and the internal and external environments of their respective organizations.

MGMT-284 Labor Relations for the Supervisor
3 Credits 3 Contact
Prerequisite: MGMT-181 or minimum two years of business and/or industrial experience. Placement into RDNG-016 (ACSR-016) is required. A study of labor relations as it pertains to the supervisor in union collective bargaining environments. Emphasizes the methods of preparing for negotiation, grievance procedures and the role of the supervisor and union representative.

MGMT-286 Human Resources Management
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A study of the personnel program with emphasis on formal personnel department functions, manpower and organizational planning, administration of personnel procurements and development programs, psychological testing, and employee appraisal programs.
Manufacturing Design

Technology

MDES-101 Modern Industrial Robotics I
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This is an introductory course on robotic systems and programming. This course will review robotic system application, automated system safety, robotic system composition, robotic motion control, fundamental programming commands and program editing. Through lectures and labs students will learn the fundamentals of robot control. This course will aid students in electronics, welding, computer technology, and general sciences.

MDES-102 Modern Industrial Robotics II
3 Credits 4 Contact
Prerequisite: MDES-101. Placement into RDNG-016 (ACSR-016) is required.
This is an advanced course on robotic systems and programming. This course will review advanced programming techniques, communications and interfacing, offline programming using simulation tools and creating automation efficiency. Through lectures and labs students will learn the advanced robot control through the creation of programs to accomplish various tasks. This course will aid students in electronics, welding, computer technology, and general science.

Marketing

Business

MKT.-151 Retail Management
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
An overview of retail merchandising systems and procedures as they relate to stock planning, inventory control, product mix, and organizational structure.

MKT.-153 Sales Promotion Methods
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course teaches the knowledge of basic marketing information related to visual promotion: display windows, store design and packaging.

MKT.-159 Management Co-Op I
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course provides the opportunity for work experience under the supervision of MCC Marketing faculty and a participating employer. Progress reports and specialized projects are required. Class discussion of problems encountered on the job are also conducted.

MKT.-251 Management of Marketing Techniques
4 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
This course provides students with the opportunity to learn and practice a case-problem approach to studying Marketing Management, integrating materials from previous courses in a decision-making framework.

MKT.-258 Management Co-Op II
2 Credits 2 Contact
Prerequisite: MKT.-159. Placement into RDNG-016 (ACSR-016) is required.
This course provides the opportunity for work experience under the supervision of the Marketing Program Coordinator and a participating employer. Progress reports and specialized projects are required. Includes class discussion of problems encountered on the job.

MKT.-259 Management Co-Op III
2 Credits 2 Contact
Prerequisite: MKT.-258. Placement into RDNG-016 (ACSR-016) is required.
This course is a continuation of MKT.-258. Work experience under the supervision of the Marketing Program Coordinator and a participating employer. Progress reports and specialized projects are required. Includes class discussion of problems encountered on the job.

Mathematics

Science & Math

MATH-011 The Foundations of Basic Mathematics
3 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is designed for students who need the basic concepts of arithmetic. The course is not designed for STEM students. The course will begin with the counting, and progress to fundamental operations on: Whole numbers, fractions, decimals, integers, and percents.

MATH-021 Basic Mathematics
5 Credits 5 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course develops skill in counting, elementary theory of numbers, fundamental operation of both positive and negative numbers, fractions, decimals, percentages, measurement, metric system and equations. Designed to meet the needs of students who require a better understanding of the basic concepts of arithmetic.

MATH-021A Whole Numbers
1 Credits 1 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This module develops the learner’s skills with whole number operations in order to solve application problems.

MATH-021B Fractions and Decimals
1 Credits 1 Contact
Prerequisite: MATH-021A. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This module develops skills with fractional number operations in order to solve application problems.

MATH-021C Signed Numbers and Equations
1 Credits 1 Contact
Prerequisite: MATH-021B. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This module develops the learner’s skills with signed numbers, algebraic expressions and equations.
MATH-021D Percent, Proportions and Data
1 Credit  1 Contact
Prerequisite: MATH-021C; Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This module develops the learner's skills with ratio, proportions and percents in order to solve application problems. Interpreting graphs and calculating mean, median and mode are also skills developed in this module.

MATH-021E Geometry and Measurement
1 Credit  1 Contact
Prerequisite: MATH-021C; Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This module develops the learner's skills with Geometry and measurement in order to solve application problems.

MATH-072 Foundations of Mathematics I
3 Credits  4 Contact
Prerequisite: MATH-021 with grade of "S" or 2.0 or higher or MATH-021A and MATH-021B and MATH-021C and MATH-021D and MATH-021E with grade of "S" or 2.0 or higher or placement into MATH-072. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Course includes topics related to a mathematical foundation for college students. Topics of study to include simplifying arithmetic, exponential, and algebraic expressions, solving linear equations, representing data using mathematical models, graphs adn tables and solving application problems.

MATH-082 Beginning Algebra
4 Credits  4 Contact
Prerequisite: MATH-021 with grade of "S" or 3.0 or higher or MATH-021A and MATH-021B and MATH-021C and MATH-021D and MATH-021E with a grade of "S" or 3.0 or higher or placement into MATH-082. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course teaches math topics equivalent to the first year of High School algebra and is recommended for students who did not take algebra or who need a review. Topics covered include real numbers, solving linear equations and inequalities, ratio, proportion and percent, problem solving, polynomials, factoring, algebraic fractions, graphing linear equations and square roots and radicals.

MATH-084 Introduction to Graphing Calculators
1 Credit  1 Contact
Prerequisite: Placement into Math courses at the 100 level or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Student must provide calculator approved by the Mathematics Area.
This course introduces students to the use of a graphing calculator in preparation for other math classes.

MATH-100 Math Approaches for Paraprofessionals
4 Credits  4 Contact
Prerequisite: Placement into MATH-101 or higher, or successful completion of MATH-021 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is designed to aid paraprofessionals in acquiring mathematical skills and concepts as well as learn ways to present these to facilitate learning in others. Students will learn to develop and support multiple teaching strategies that promote student learning and support multiple learning styles. Concepts and skills include computation with whole numbers, decimals, fractions, percents, and integers. There will be a brief introduction to algebra skills and concepts as well. When possible, concepts and skills will be tied to real world applications.

MATH-115 Foundations of Mathematics II
4 Credits  4 Contact
Prerequisite: MATH-072 or MATH-082 with 2.0 or higher or placement into MATH-115. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is intended for students who need algebraic and statistical skills for applications in varied careers. Topics will include linear equations and inequalities, quadratic and exponential equations, operations with polynomials, functions, introduction to probability, descriptive statistics, systems of equations and matrices, sequences and series, and the use of technology in mathematics.

MATH-120 Intermediate Algebra
4 Credits  4 Contact
Prerequisite: MATH-082 with a minimum grade of 2.0 or MATH-072 with a minimum grade of 3.0 or MATH-115 with a minimum grade of 2.0 or placement into MATH-120. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is intended for the student who has had one year of High School Algebra or Beginning Algebra. Topics include linear, rational and quadratic functions, system of equations, inequalities, polynomials, exponents, roots and radicals and logarithms.

MATH-123 Beginning and Intermediate Algebra
4 Credits  5 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required and 4.0 in MATH-021 or placement into MATH-123 by the MCC placement exam. This is an accelerated one-semester Algebra course that will combine topics typically covered over two semesters in an Algebra I & II sequence. The course will include topics from Elementary Algebra through Intermediate Algebra to prepare a student for Pre-Calculus mathematics. Topics covered will include: Real Number System, Linear and Quadratic equations, Linear and Quadratic inequalities, Polynomials, Factoring, Functions, Graphs, Solving Systems of Equations.

MATH-128 Technical Mathematics
5 Credits  5 Contact
Prerequisite: MATH-021 with an "S" grade or MATH-021A-E with an "S" grade or placement into MATH-072. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is intended for students who need to fulfill their math requirements in the technical fields. Topics covered include solving linear and quadratic equations; ratio and proportion; problem solving and applications; graphing; measurement and geometry; and right angle trigonometry.

MATH-130 College Algebra
4 Credits  4 Contact
Prerequisite: MATH-120 with a 2.0 or higher or placement into MATH-130. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This course is intended for the student who has completed Intermediate Algebra or its equivalent. Topics covered in this course are sets and real numbers, exponents and radicals, quadratics, the binomial theorem, progressions, inequalities, complex numbers, theory of equations, matrices, determinants and series and sequences.
MATH-140 Trigonometry
3 Credits  3 Contact
Prerequisite: MATH-120 with a 2.0 or higher. MATH-128 with a 2.0 or higher or placement into MATH-130. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course is designed for the student who has completed Intermediate Algebra or one and one-half years of High School Algebra and Plane Geometry. Topics studied include trigonometric functions, their graphs and identities, right and oblique triangle trigonometry, radians, trigonometric equations and linear and angular velocity.

MATH-145 Pre-Calculus
5 Credits  5 Contact
Prerequisite: MATH-120 with a 3.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course will incorporate all of the objectives in MATH-130 and MATH-140 into one course. Students will study the algebraic techniques necessary to solve problems of polynomial, rational, radical, exponential, logarithmic and trigonometric functions. Students will also study sequences and series, and solving systems of equations. Other relations will be studied through parametric equations, polar equations, and conic sections. This course will be an effective preparation for calculus, science courses, and other advanced mathematics courses.

MATH-150 Probability and Statistics
4 Credits  4 Contact
Prerequisite: MATH-120 with a minimum grade of 2.0 or MATH-115 with a minimum grade of 3.0 or placement into MATH-130. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course is an introduction to elementary probability and statistics. It addresses concepts as applied to the sciences, business and social science fields. Topics covered will include descriptive statistical ones such as graphs and numerical measures and inferential statistical ones on various aspects of estimation and hypothesis testing.

MATH-165 Applied Calculus
4 Credits  4 Contact
Prerequisite: MATH-120 with a minimum grade of 2.0 or MATH-115 with a minimum grade of 3.0 or placement into MATH-130. Note: TI-83 calculator is required. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course is designed primarily for students in the fields of biology, medicine, ecology, business economics and the social sciences. Many applications of calculus to these fields are included. Differentiation and integration are approached in an intuitive and applied manner.

MATH-170 Analytic Geometry & Calculus I
5 Credits  5 Contact
Prerequisite: MATH-130 and MATH-145, both with a 2.0 or higher OR MATH-140 with a 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This is the first course in a calculus sequence. Topics covered include the review of algebra and trigonometry functions, analytic geometry, limits and derivatives of algebraic and transcendental functions. Applications involving derivatives and integrals will also be covered.

MATH-180 Analytic Geometry & Calculus II
5 Credits  5 Contact
Prerequisite: MATH-170 with a 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This is the second course in the calculus sequence. Topics covered include analytic geometry, integration techniques, applications of integration, sequences and series, Taylor series, power series, parametric equations and polar coordinates.

MATH-210 Math for Elementary Teachers I
4 Credits  5 Contact
Prerequisite: MATH-120 with a 2.0 or higher and ENGL-101. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. A study of number systems, geometry and variables and functions with an emphasis throughout on problem solving and writing. Learning will occur via discovery-based activities done in a group work setting and skill for elementary classrooms will be emphasized.

MATH-220 Math for Elementary Teachers II
4 Credits  5 Contact
Prerequisite: MATH-210 with a 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course is a continuation of MATH-210. Topics include probability, statistics and number theory with emphasis throughout on problem-solving. Learning will occur via discovery-based activities done in a group work setting. Skills for the elementary classroom will be emphasized.

MATH-250 Multivariable Calculus
3 Credits  3 Contact
Prerequisite: MATH-180 with a 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Note: TI-83 calculator is required. This course is the third course in the Calculus sequence. Topics covered include: Vectors and the Geometry of Space, Vector-Valued Functions, Multivariable Functions, Directional Derivatives, Extrema of Multivariable functions, Multiple Integration and Vector Analysis.

MATH-270 Linear Algebra
3 Credits  3 Contact
Prerequisite: MATH-180 with a 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This is an introductory course in linear algebra and includes a study of systems of linear equations, matrix algebra, vector spaces and subspaces, linear transformations, eigenvalues and eigenvectors with applications.

MATH-280 Differential Equations
4 Credits  4 Contact
Prerequisite: MATH-180 with a 2.0 or higher. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. An introduction to methods for solving first order differential equations with applications, higher order differential equations with application, Laplace transforms, systems of linear differential equations and numerical methods.
Mechanical Operations Tech

Technology

MECH-144 Machining
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A lecture and laboratory course introducing traditional metal cutting theory and practice. Includes shop safety, measurement, operation of the lathe, mill, drill press, and grinders. Students learn machining theory through hands-on projects.

MECH-150 Material Systems & Evaluation
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The study of materials commonly used in engineering and industry; sources, chemical structure, physical properties, methods of processing, classification and commercial forms, metallic and nonmetallic groups.

MECH-151 Physical Metallurgy
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course covers the structures and properties of metals and alloys; effect of composition, mechanical and thermal treatment, resultant analysis; control procedures, destructive and non-destructive testing; types of tool steels; selections and comparison; and industrial applications.

MECH-162 Industrial Pipefitting
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must provide safety glasses. Industrial pipefitting is a broad field covering basic knowledge of pipefitting tools, safety, pipe layout, print reading, sprinklers, waste handling, steam, pumps, pipe connections, basic plumbing, hydraulics, and pneumatics. This course is designed for individuals who want to become familiar with pipfitting and gain hands-on experience in the various areas of pipefitting in an industrial manufacturing setting.

MECH-246 CNC Lathe
2 Credits 2 Contact
Prerequisite: MECH-144. Placement into RDNG-016 (ACSR-016) is required. A lecture laboratory course covering the knowledge of the computer numerical control (CNC) lathe as it relates to the machine tool industry. The fundamental concepts of CNC control units will be introduced using tutorial trainer, micro computers, test materials, and demonstrations. Numerous programming and machining objectives will be designed into the laboratory projects to give students a working knowledge of the CNC lathe. Emphasis is to develop basic skills in CNC lathe machining operations, coordinated systems and simple part programming.

MECH-247 CNC Mill
2 Credits 2 Contact
Prerequisite: MECH-144. Placement into RDNG-016 (ACSR-016) is required. A lecture laboratory course covering the knowledge of the computer numerical control (CNC) mill as it relates to the machine tool industry. The fundamental concepts of CNC control units will be introduced using tutorial trainer, micro computers, test materials, and demonstrations. Numerous programming and machining objectives will be designed into the laboratory projects to give students a working knowledge of the CNC mill. Emphasis is to develop basic skills in CNC milling machine operations, coordinated systems and simple part programming.

MECH-249 Mastercam
3 Credits 4 Contact
Prerequisite: MECH 246 or MECH 247. Placement into RDNG-016 (ACSR-016) is required. This course is designed to provide students with the concepts and techniques used in computer assisted part making requiring the concepts used in computer-aided design (CAD) and computer-aided manufacturing (CAM). This course is used to provide the skills and competencies needed by qualified machining personnel to operate computerized equipment such as CNC lathes, mills and EDM. Students are encouraged to take CADD classes prior to this course.

Media Arts & Entertainment

Fine Arts & Social Sciences

MAET-100 Intro to Media Production
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. In this course students will learn the basic equipment, technologies and techniques used throughout the audio and video pre-production and post-production industries. Students will be introduced to the basics of video camera operation, lighting, sound recording and non-linear editing in order to create real world projects. (Note: MAET-100 is equivalent to COMV-141. Students who have taken COMV-141 should not take MAET-100)

MAET-110 Media History and Theory
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course will explore both the history and structure of the electronic media industry and the many ways in which it impacts our daily lives. This course is directed at students as both consumers and producers of media. This class will focus on the various forms and functions of electronic media, as well as the industry's social and ethical implications. Development of critical vocabulary for analyzing and discussing electronic media will be stressed.

MAET-120 Media Aesthetics
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016), or completion of RDNG-016, is required. The principles of media aesthetics - light, color, space, time, motion visualization and sound - as they function in a finished product are examined. Students will learn to interpret and analyze the major aesthetic principles that drive a viewer's perception of mediated messages and apply them to their own work.

MAET-150 Radio-Television News Production
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016), or completion of RDNG-016, is required. This course will focus on the fundamentals of ethics, gathering, writing, editing, producing, and delivering news stories, features, and documentaries for electronic media. Students will use both virtual set and electronic field production (EFP) techniques to report, shoot and edit news stories with an appropriate theoretical background. This course will prepare students for work in television and radio news reporting, online journalism, corporate communications, public relations, advertising, education, or other related fields.

For the most current information, always check www.mcc.edu
MAET-180 Intro to Screenwriting
4 Credits 4 Contact
Prerequisite: 2.0 or higher in ENGL-101.
This course focuses on the fundamental concepts of screenwriting with emphasis placed on structure, plot and character development, theme, dialogue, and critical analysis. Hands-on classroom exercises include writing several short form scripts. Students will also examine "real world" applications such as script marketing, making a pitch, and copywriting their work.

MAET-190 Media Production Internship I
1 Credits 1 Contact
Prerequisite: MAET-100 and program coordinator approval. Placement into RDNG-016 (ACSR-016) is required. Provides first year students an opportunity to intern in a media arts related position with a business or an organization under professional supervision. Students work closely with faculty in arranging and evaluating the workplace experience. Placement is contingent upon interview results between the student and interview site. Students will choose an internship according to their area of interest and are expected to work a minimum of 50 hours per credit in the semester for which the course is offered.

MAET-200 Television Production
4 Credits 6 Contact
Prerequisites: MAET-100. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Covers advanced planning, techniques, and aesthetic principles for cinema, television, web and mobile based digital video productions. Content will focus on these production styles: informative, lifestyle, reality, contest, event, and promotional. Students will gain skills needed to work both on set and in a studio.

MAET-210 Cinema Production
4 Credits 6 Contact
Prerequisite: MAET-100. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Covers advance planning, techniques, and aesthetic principles for cinema, television, web and mobile based digital video productions. Content focus will be on dramatic film-style (single-camera) narrative production. Students will gain skills needed to work both on set and in a studio.

MAET-250 Documentary Production
4 Credits 6 Contact
Prerequisites: MAET-150 and MAET-180. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Recommended: MAET-200 and MAET-120 Provides a conceptual overview of the forms, strategies, structures and conventions of documentary film and video. Combines critical viewing skills with practical, hands-on instruction in documentary production techniques and aesthetics. Emphasis on research, development, financing, distribution, and marketing as integral components of the overall production process.

MAET-270 Music Recording
3 Credits 3 Contact
Prerequisite: 2.0 minimum in MUS.-105 and MUS.-106. Placement into RDNG-016 (ACSR-016) is required. An exploration of recording music in a studio environment. Students will learn the fundamental concepts of recording audio using digital recording software and hardware, as well as editing, mixing and producing work suitable for diverse media applications.

MAET-271 Music Post Production
3 Credits 3 Contact
Prerequisite: MAET-270. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Students must provide USB flashdrive, external hard drive, or online storage. This course is a continuation of the practices and concepts explored in MAET-270 Music Recording. Students will learn the fundamental concepts of mixing and mastering live-recorded audio, using industry-standard audio recording software and hardware. Students will also learn analog audio signal flow, and how to build, troubleshoot, and maintain a studio environment built exclusively of analog software.

MAET-290 Media Production Internship II
1 Credits 1 Contact
Prerequisite: MAET-200 and program coordinator approval. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Provides second year students an opportunity to intern in a media arts-related position with a business or an organization under professional supervision. Students work closely with faculty in arranging and evaluating the workplace experience. Placement is contingent upon interview results between the student and interview site. Students will choose an internship according to their area of interest and are expected to work a minimum of 50 hours per credit in the semester for which the course is offered.

Music Fine Arts & Social Sciences

MUS.-102 Music Fundamentals
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Designed for two groups of students, Music Fundamentals is for non-music majors interested in learning the basics of reading and playing music or for music majors lacking sufficient background to successfully complete Music Theory I. Course work covers fundamentals of music notation, piano keyboard knowledge, and writing basic notes, symbols, scales, chords, intervals, sight-singing and ear training.

MUS.-105 Introduction to Music Technology
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Basic computer knowledge highly recommended. An introduction to utilizing computers to record and produce music. Students will learn the fundamental concepts of MIDI and digital audio recording and editing, mixing and producing work suitable for diverse media applications.

MUS.-106 Advanced Music Technology
3 Credits 3 Contact
Prerequisite: MUS.-105. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course offers further exploration of computer-based music recording and production, with emphasis on industry-standard software. Students will build upon the fundamental concepts learned in MUS.-105, and develop a more focused understanding of MIDI, digital audio recording, editing, mixing and producing work suitable for diverse media applications.

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MUS.-108 Music Notation
3 Credits 3 Contact
Prerequisite: MUS.-101 or MUS.-191 and MUS.-105 with a minimum grade of 2.0. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course is an introduction to industry-standard music notation software, and is designed for students with fundamental music theory skills. Students will utilize notation software to create professional-quality sheet music, suitable for diverse musical, performance, and educational applications.

MUS.-111 Applied Music I
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Audition demonstrating college-level music ability. Enrollment must be cleared through College Music Office. Credit for private lessons.
Private vocal and instrumental music instruction. Fifteen private lessons each semester with a minimum of six additional hours of practice each week. Final examination by faculty jury. Additional private instruction is required. Auditions for MUS.-111 will be conducted prior to the beginning of each semester and may be arranged by contacting the College Music Office (762-0459).

MUS.-112 Applied Music II
2 Credits 2 Contact
Prerequisite: MUS.-111. Placement into RDNG-016 (ACSR-016) is required. Credit for private lessons.
Private vocal and instrumental music instruction. Fifteen private lessons each semester with a minimum of six additional hours of practice each week. Final examination by faculty jury. Additional private instruction is required. Auditions for MUS.-112 will be conducted prior to the beginning of each semester and may be arranged by contacting the College Music Office (762-0459).

MUS.-121 Band I
1 Credits 3 Contact
Prerequisite: High School band experience. Placement into RDNG-016 (ACSR-016) is required. The study and performance of significant college-level band literature. Note: Under special circumstances, students may participate in band on a non-credit basis. Contact the College Music Office for more information (762-0459).

MUS.-122 Band II
1 Credits 3 Contact
Prerequisite: MUS.-121. Placement into RDNG-016 (ACSR-016) is required. The study and performance of significant college-level band literature. Note: Under special circumstances, students may participate in band on a non-credit basis. Contact the College Music Office for more information (762-0459).

MUS.-131 Choir I
1 Credits 3 Contact
Prerequisite: High School choral experience. Placement into RDNG-016 (ACSR-016) is required. The study and performance of significant college-level choral literature. Note: Under special circumstances, students may participate in choir on a non-credit basis. Contact the College Music Office for more information (762-0459).

MUS.-132 Choir II
1 Credits 3 Contact
Prerequisite: MUS.-131. High School experience. Placement into RDNG-016 (ACSR-016) is required. The study and performance of significant college-level choral literature. Note: Under special circumstances, students may participate in choir on a non-credit basis. Contact the College Music Office for more information (762-0459).

MUS.-135 Voice Class I
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The fundamentals of vocal training through solo and class singing of art songs, musical theater pieces, and folk songs. No previous vocal training is required, but students should be interested in singing as an art. Can be used to help students prepare for auditions into the applied music courses.

MUS.-136 Voice Class II
2 Credits 2 Contact
Prerequisite: Placement into MUS.-135. Placement into RDNG-016 (ACSR-016) is required. The fundamentals of vocal training through solo and class singing of art songs, musical theater pieces, and folk songs. No previous vocal training is required, but students should be interested in singing as an art. Can be used to help students prepare for auditions into the applied music courses.

MUS.-140 Survey of Music Business
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. The primary objective of this course is to develop a fundamental working knowledge of the music business. Topics will include: entrepreneurship, live performance, the record industry, music merchandising, contracts and licenses, taxes, and career opportunities. Discussion regarding music business on the internet will be included.

MUS.-1410 Brass Chamber Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course. The Brass Ensemble focuses on performance techniques and literature for brass quintet, sextet and brass choir. Members focus on individual performance in a smaller and more intimate setting. Brass ensemble performs music from a wide range of repertoire, including classical, contemporary, and popular styles. Students will perform in at least one public concert.

MUS.-1411 Chamber Singers I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course. The Chamber Singers are selected by the director for their vocal and sight-reading abilities. The group studies and performs a wide variety of music ranging from the Renaissance to contemporary periods that is arranged for a smaller choral ensemble. Students will perform in at least one public concert.

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MUS.-1412 Guitar Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The Guitar Ensemble studies and performs guitar music of diverse styles (classical, jazz, and contemporary) for large group, small combo and solo performance on acoustic, electric, and bass instruments. Other instrumentalists/vocalists may join to expand the ensemble. Students will perform in at least one public concert.

MUS.-1413 Jazz Combo I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The Jazz Combo consists of four to six members forming quartets, quintets, and sextets. The instrumentation will vary each semester. Improvisation will be taught and emphasized in performance. Additional instrumentalists may include wind and string players. Students will perform in at least one public concert.

MUS.-1414 Jazz Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The Jazz Ensemble studies and performs diverse styles of jazz and big band music. The group's instrumentation varies each semester, but typically includes saxophone, trombone, trumpet, bass, drums, piano, guitar, and vocalists. Students will perform in at least one public concert.

MUS.-1415 Percussion Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The Percussion Ensemble studies and performs works of various styles, genres, cultural traditions and repertoires. Members utilize skills on keyboard, battery, concert, auxiliary, hand percussion, and world percussion instruments. Students will perform in at least one public concert.

MUS.-1416 Piano Chamber Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The Piano Chamber Ensemble is a trio or quartet that studies and performs piano-based chamber music from a wide range of repertoire, including classical, contemporary, and popular styles. Additional instrumentalists may include wind and string players. Students will perform in at least one public concert.

MUS.-1417 String Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The String Ensemble studies and performs a wide variety of string-based chamber music from a wide range of repertoire, including classical, contemporary, and popular styles. The configuration of the ensemble may include trios, quartets, octets and sextets, and may include non-string instrumentalists. Students will perform in at least one public concert.

MUS.-1418 Woodwind Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.
The Woodwind Ensemble studies and performs a wide variety of music from a wide range of repertoire, including classical, contemporary, and popular styles. The ensemble may take the form of a full woodwind ensemble for all woodwind instruments or it can take the forms of sax quartets, flute choirs, clarinet choirs, or other groups as instrumentation allows. Students will perform in at least one public concert.

MUS.-1419 Steel Drum Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.

MUS.-141A Chamber Ensemble I
1 Credits 2 Contact
Prerequisite: Audition and music reading ability. Placement into RDNG-016 (ACSR-016) is required. Note: Instructor permission required to register in this course.

MUS.-141B Chamber Singers II
1 Credits 2 Contact
Prerequisite: MUS.-1411. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.

MUS.-141C Brass Chamber Ensemble I
1 Credits 2 Contact
Prerequisite: MUS.-1410. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.

MUS.-141D Woodwind Ensemble II
1 Credits 2 Contact
Prerequisite: MUS.-1412. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.

MUS.-141E Jazz Combo II
1 Credits 2 Contact
Prerequisite: MUS.-1413. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
MUS.-1424 Jazz Ensemble II
1 Credit 2 Contact
Prerequisite: MUS.-1414. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Jazz Ensemble for students in their second semester of music study. Students will perform in at least one public concert.

MUS.-1425 Percussion Ensemble II
1 Credit 2 Contact
Prerequisite: MUS.-1415. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Percussion Ensemble for students in their second semester of music study. Students will perform in at least one public concert.

MUS.-1426 Piano Chamber Ensemble II
1 Credit 2 Contact
Prerequisite: MUS.-1416. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Piano Chamber Ensemble for students in their second semester of music study. Students will perform in at least one public concert.

MUS.-1427 String Ensemble II
1 Credit 2 Contact
Prerequisite: MUS.-1417. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of String Ensemble for students in their second semester of music study. Students will perform in at least one public concert.

MUS.-1428 Woodwind Ensemble II
1 Credit 2 Contact
Prerequisite: MUS.-1418. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Woodwind Ensemble for students in their second semester of music study. Students will perform in at least one public concert.

MUS.-1429 Steel Drum Ensemble II
1 Credit 2 Contact
Prerequisite: MUS.-1419. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Steel Drum Ensemble for students in their second semester of music study. Students will perform in at least one public concert.

MUS.-150 Basic Guitar
2 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Designed to teach basic guitar techniques and music reading. For beginning students who are unable to read music. Must have own instrument.

MUS.-152 Intermediate Guitar
2 Credits 3 Contact
Prerequisite: MUS.-150. Placement into RDNG-016 (ACSR-016) is required. Designed to present advanced playing techniques for classical guitar. Must have own instrument.

MUS.-153 Advanced Guitar
2 Credits 3 Contact
Prerequisite: MUS.-152. Placement into RDNG-016 (ACSR-016) is required. Designed to present advanced playing techniques for classical guitar. Must have own instrument.

MUS.-158 Piano I
2 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The first in a sequence of courses devoted to the development of basic piano playing skills and music reading. Includes a study of repertoire by classical, romantic, and modern composers as well as a section on chordal improvisation.

MUS.-159 Piano II
2 Credits 4 Contact
Prerequisite: MUS.-158. Placement into RDNG-016 (ACSR-016) is required. The second in a sequence of courses devoted to the development of piano playing skills and music reading. Includes a study of repertoire by classical, romantic, and modern composers as well as a section on chordal improvisation.

MUS.-165 Piano Proficiency I
1 Credit 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Permission of Instructor. Students must take a piano proficiency test to be placed in this class. Arrangements can be made to take the test by contacting the Fine Arts and Social Sciences Division Office at (810)762-0332. Teaches keyboard skills necessary both for accompaniment of simple music and for developing understanding of basic musical concepts. The course will cover fundamentals of music reading, keyboard techniques, sight-reading, major scales, solo literature and harmonization.

MUS.-166 Piano Proficiency II
1 Credit 2 Contact
Prerequisite: MUS.-165 with a minimum grade of 2.0. Placement into RDNG-016 (ACSR-016) is required. A continuation of MUS.-165. Development of minor scales with arpeggios, advanced harmonization and solo literature. Any break in the continuity of the piano proficiency sequence will require an audition before resumption of study.

MUS.-180 Music Appreciation
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. An introductory course intended to increase the student’s awareness of basic musical concepts and forms. Includes a survey of composers and various periods of music developed primarily from Western European traditions.

MUS.-181 Twentieth Century Music
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Recommended Prerequisite: MUS.-180. Designed to give a broad overview of the works of modern music. Various musical styles are studied, ranging from classical to popular, folk to jazz, and blues to rock.
MUS.-182 Jazz Appreciation
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Recommended: ENGL-101.
A chronological study of jazz history, survey of current trends, relevance of jazz to other forms of modern music, and descriptive elements of jazz for listening analysis.

MUS.-183 World Music Appreciation
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Recommended: ENGL-101.
While focusing on the music, this class also covers the culture and history of countries throughout the world. It allows the student to experience the sights, sounds and tastes of Africa, the Caribbean, Asia and Indonesia. No prior music experience required.

MUS.-184 Music Literature (Instrumental Forms)
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Recommended for Music majors.
An introduction to the literature of instrumental music, with a survey of specific periods and styles. Works of representative composers are studied by means of listening to recordings and discussion.

MUS.-186 Introduction to Film Music
3 Credits 3 Contact
Prerequisite: ENGL-101 with a minimum grade of 2.0.
This course is a study of the role that music plays in film. It includes a historical overview of film, from the silent era to the present day. The importance of music to the film medium will be demonstrated through the classroom viewing of selected films and film scenes. A select number of composers will be emphasized, with surveys of their most significant works.

MUS.-187 History of Rock & Roll
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course will blend musical commentary into an historical and social framework as it traces the development of rock music from its roots in country and blues to the most contemporary trends. Students will experience firsthand the defining characteristics of rock-styles and develop the ability to make connections between the popular music of yesterday and today.

MUS.-191 Music Theory I
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-requisite: MUS.-195.
Course of study in basic musicianship. Beginning with a review of music fundamentals, the course proceeds to a study of the principles underlying tonal relations.

MUS.-192 Music Theory II
4 Credits 4 Contact
Prerequisite: Minimum grade of 2.0 in MUS.-191. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-requisite: MUS.-196.
A continuation of the course of study in basic musicianship. Beginning with a review of music fundamentals, the course proceeds to a study of the principles underlying tonal relations.

MUS.-195 Aural Skills I
1 Credits 2 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-requisite: MUS.-191.
Development of fundamental sight-singing techniques using movable "Do" solfege as well as skills in notating performed melodic and harmonic musical examples.

MUS.-196 Aural Skills II
1 Credits 2 Contact
Prerequisite: Minimum 2.0 in MUS.-195. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-requisite: MUS.-192.
A continuation of MUS.-195. Development of movable "Do" solfege intermediate sight-singing techniques as well as skills in notating performed melodic and harmonic musical examples, including two-part and four-part dictation.

MUS.-205 Music Technology for Musicians
3 Credits 3 Contact
Prerequisites: MUS.-102 or MUS.-191 with a minimum grade of 2.0. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Designed for students who have fundamental music theory skills, this course is an introduction to the role of computers in music composition, recording and production. Students will learn the fundamental concepts of MIDI and digital audio recording, editing, mixing and producing. Music notation and printing software will also be covered.

MUS.-206 Scoring for Media
3 Credits 3 Contact
Prerequisites: 2.0 minimum in the following: MUS.-101 or MUS.-191; MUS.-105; and MUS.-158 or MUS.-165. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Student must provide USB flash drive or external hard drive or online storage subscription.
The study of creating original music for video, designed for students who have a foundation in music fundamentals, notation, and keyboard skills. Students will utilize computer software and hardware to provide original musical scores to video projects produced by Media Arts students.

MUS.-207 Electronic Music Composition
3 Credits 3 Contact
Prerequisite: 2.0 minimum in MUS.-102 or MUS.-191 and MUS.-105. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
Students will learn to create original musical compositions utilizing MIDI software. Students will be introduced to the fundamental concepts of music composition: rhythm, melody, harmony, texture, timbre, register, dynamics, tempo, and form.

MUS.-211 Applied Music III
2 Credits 2 Contact
Prerequisite: MUS.-112. Placement into RDNG-016 (ACSR-016) is required. Credit for private lessons.
Private vocal and instrumental music instruction. Fifteen private lessons each semester with a minimum of six additional hours of practice each week. Final examination by faculty jury. Additional private instruction is required. Auditions will be conducted prior to the beginning of each semester and may be arranged by contacting the College Music Office (762-0459).
MUS.-212 Applied Music IV
2 Credits 2 Contact
Prerequisite: MUS.-211. Placement into RDNG-016 (ACSR-016) is required. Credit for private lessons.
Private vocal and instrumental music instruction. Fifteen private lessons each semester with a minimum of six additional hours of practice each week. Final examination by faculty jury. Additional private instruction is required. Auditions will be conducted prior to the beginning of each semester and may be arranged by contacting the College Music Office (762-0459).

MUS.-221 Band III
1 Credits 3 Contact
Prerequisite: MUS.-122. Placement into RDNG-016 (ACSR-016) is required.
The study and performance of more advanced, significant band literature. Note: Under special circumstances, students may participate in band on a non-credit basis.

MUS.-222 Band IV
1 Credits 3 Contact
Prerequisite: MUS.-221. Placement into RDNG-016 (ACSR-016) is required.
The study and performance of more advanced, significant band literature. Note: Under special circumstances, students may participate in band on a non-credit basis.

MUS.-231 Choir III
1 Credits 3 Contact
Prerequisite: MUS.-132. High School experience or the equivalent. Placement into RDNG-016 (ACSR-016) is required.
The study and performance of more advanced, significant choral literature. Note: Under special circumstances, students may participate in choir on a non-credit basis.

MUS.-232 Choir IV
1 Credits 3 Contact
Prerequisite: MUS.-231. High School experience or equivalent. Placement into RDNG-016 (ACSR-016) is required.
The study and performance of more advanced, significant choral literature. Note: Under special circumstances, students may participate in choir on a non-credit basis.

MUS.-235 Voice Class III
2 Credits 2 Contact
Prerequisite: MUS.-136. Placement into RDNG-016 (ACSR-016) is required.
The fundamentals of vocal training through solo and class singing of art songs, musical theater pieces, and folk songs. No previous vocal training is required, but students should be interested in singing as an art. Can be used to help students prepare for auditions into the applied music courses.

MUS.-236 Voice Class IV
2 Credits 2 Contact
Prerequisite: MUS.-235. Placement into RDNG-016 (ACSR-016) is required.
The fundamentals of vocal training through solo and class singing of art songs, musical theater pieces, and folk songs. No previous vocal training is required, but students should be interested in singing as an art. Can be used to help students prepare for auditions into the applied music courses.

MUS.-2410 Brass Chamber Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1420. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Brass Chamber Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2411 Chamber Singers III
1 Credits 2 Contact
Prerequisite: MUS.-1421. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Chamber Singers for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2412 Guitar Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1422. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Guitar Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2413 Jazz Combo III
1 Credits 2 Contact
Prerequisite: MUS.-1423. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Jazz Combo for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2414 Jazz Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1424. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Jazz Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2415 Percussion Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1425. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Percussion Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2416 Piano Chamber Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1426. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of Piano Chamber Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2417 String Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1427. Placement into RDNG-016 (ACSR-016) is required. Audition and music reading ability.
A continuation of String Ensemble for students in their third semester of music study. Students will perform in at least one public concert.
MUS.-2418 Woodwind Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-1428. Placement into RDNG-016 (ACSR-016) is required. A continuation of Woodwind Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2419 Steel Drum Ensemble III
1 Credits 2 Contact
Prerequisite: MUS.-2410. Placement into RDNG-016 (ACSR-016) is required. A continuation of Steel Drum Ensemble for students in their third semester of music study. Students will perform in at least one public concert.

MUS.-2420 Brass Chamber Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2410. Placement into RDNG-016 (ACSR-016) is required. A continuation of Brass Chamber Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2421 Chamber Singers IV
1 Credits 2 Contact
Prerequisite: MUS.-2421. Placement into RDNG-016 (ACSR-016) is required. A continuation of Chamber Singers for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2422 Guitar Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2412. Placement into RDNG-016 (ACSR-016) is required. A continuation of Guitar Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2423 Jazz Combo IV
1 Credits 2 Contact
Prerequisite: MUS.-2413. Placement into RDNG-016 (ACSR-016) is required. A continuation of Jazz Combo for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2424 Jazz Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2414. Placement into RDNG-016 (ACSR-016) is required. A continuation of Jazz Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2425 Percussion Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2415. Placement into RDNG-016 (ACSR-016) is required. A continuation of Percussion Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2426 Piano Chamber Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2416. Placement into RDNG-016 (ACSR-016) is required. A continuation of Piano Chamber Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2427 String Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2417. Placement into RDNG-016 (ACSR-016) is required. A continuation of String Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2428 Woodwind Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2418. Placement into RDNG-016 (ACSR-016) is required. A continuation of Woodwind Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-2429 Steel Drum Ensemble IV
1 Credits 2 Contact
Prerequisite: MUS.-2419. Placement into RDNG-016 (ACSR-016) is required. A continuation of Steel Drum Ensemble for students in their fourth semester of music study. Students will perform in at least one public concert.

MUS.-258 Piano III
2 Credits 4 Contact
Prerequisite: MUS.-159. Placement into RDNG-016 (ACSR-016) is required. A sequence of courses devoted to the development of piano playing skills and music reading. Includes a study of repertoire by classical, romantic, and modern composers as well as a section on chordal improvisation.

MUS.-259 Piano IV
2 Credits 4 Contact
Prerequisite: MUS.-258. Placement into RDNG-016 (ACSR-016) is required. A sequence of courses devoted to the development of piano playing skills and music reading. Includes a study of repertoire by classical, romantic, and modern composers as well as a section on chordal improvisation.

MUS.-260 Conducting
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Basic course for students who will be conducting vocal or instrumental groups in community organizations, public or private schools or churches.

MUS.-265 Piano Proficiency III
1 Credits 2 Contact
Prerequisite: MUS.-166, minimum grade 2.0. Placement into RDNG-016 (ACSR-016) is required. A continuation of MUS.-166. Emphasis on keyboard harmony, accompaniment, sight-reading, improvisation, piano literature and technique. Any break in the continuity of the piano proficiency sequence will require an audition before resumption of study.

For the most current information, always check www.mcc.edu
MUS.-266 Piano Proficiency IV
1 Credit  2 Contact
Prerequisite: MUS.-265, minimum grade 2.0. Placement into RDNG-016 (ACSR-016) is required. A continuation of MUS.-265. Additional accompaniment study, keyboard harmony, improvisation, piano literature and techniques. A piano proficiency exam will be taken during juries and must be passed with a minimum 2.0 in order to receive a passing grade in the class. Any break in the continuity of the piano proficiency sequence will require an audition before resumption of study.

MUS.-271 Music History I
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course traces the historical development of music from Greek civilization to modern times. Recordings and discussion are used to highlight various trends and styles through the ages.

MUS.-272 Music History II
3 Credits  3 Contact
Prerequisite: MUS.-271. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. A continuation course which traces the historical development of music from Greek civilization to modern times. Recordings and discussion are used to highlight various musical trends and styles through the ages.

MUS.-273 Jazz History & Literature
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course traces the historical development of Jazz from its roots in West African music and the slave culture in the United States through the blues, Dixieland, Swing, Bop, Mainstream, Free jazz and Fusion styles.

MUS.-291 Music Theory III
4 Credits  4 Contact
Prerequisite: Minimum grade of 2.0 in MUS.-192. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisite: MUS.-295. A course of study in more advanced musicianship. Continuing a review of music fundamentals, the course proceeds to a study of the principles underlying tonal relationships.

MUS.-292 Music Theory IV
4 Credits  4 Contact
Prerequisite: Minimum grade of 2.0 in MUS.-291. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisite: MUS.-296. A continuation course of study in basic musicianship. An advanced review of music fundamentals, the course proceeds to a study of the principles underlying tonal relationships.

MUS.-295 Aural Skills III
1 Credit  2 Contact
Prerequisite: MUS.-196 with a minimum grade of 2.0. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. A continuation of MUS.-196. Development of intermediate/advanced sight-singing techniques as well as skills in notating performed melodic and harmonic musical examples, including basic modulating.

MUS.-296 Aural Skills IV
1 Credit  2 Contact
Prerequisite: Minimum 2.0 in MUS.-295. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-Requisite: MUS.-292. A continuation of MUS.-295. Development of advanced sight-singing techniques as well as skills in notating performed melodic and harmonic musical examples, including; church modes, chromatic, whole-tone, pentatonic and blues scales.

MUS.-297 Jazz Arranging
3 Credits  3 Contact
Prerequisite: MUS.-192 and MUS.-194 and MUS.-196. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course introduces the basic musical language of the jazz and commercial genre and teaches arranging techniques for a variety of ensembles from combos to big band.

Nursing
Health Sciences

NAPP-123 Nurse Aide Principles and Procedures
4 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Provides basic nursing skills and knowledge in classroom and simulated lab. Supervised clinical experience in a health agency is included.

NAPP-123C Nurse Aide Principles and Procedures Clinical
0 Credits  4 Contact
Provides basic nursing skills and knowledge in classroom and simulated lab. Supervised clinical experience in a health agency is included.

Pharmacology and Therapeutics

NRSNG-100 Pharmacology and Therapeutics
2 Credits  2 Contact
Division signature required for registration. Prerequisite: Must place at college level reading on the MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Pre or co-requisite: BIOL-151; course must be completed before applying to the Nursing program, but no more than 2 years prior to application. A theory course which builds on previously learned basic principles and concepts of medication administration. Prototypes, major pharmaceutical classes and most widely used members of each class are covered. Therapeutic applications of medications and applicable nursing process are emphasized.

Foundations of Nursing

NRSNG-101 Foundations of Nursing
8 Credits  4 Contact
Prerequisite: Must place at college level reading on the MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Foundations of Nursing is the first course in the clinical sequence of the Nursing program. It is composed of three interrelated components: theory skills and medication labs and clinical. This is the theory component. This course will introduce the student to the essential elements of the practice of nursing. It provides the basic foundation upon which all areas of nursing are built. The nursing process will be introduced and applied to adult clients having functional health problems with safety, immobility,
elimination, oxygenation, nutrition, sleep, impaired skin integrity, sensory perception alteration, loss/grief, sexuality and spirituality. The concepts of wellness-illness, developmental stages of the adult client, and the roles of the nurse will be discussed. Normal cognitive and physiologic changes of aging and the care of the geriatric client will also be covered.

**NRSG-101C Foundations of Nursing - Clinical**
0 Credits  8 Contact
Division signature is required for registration. Prerequisites: The student must have completed all program eligibility requirements, AHLT-135, NRSG-100, & BIOL-152. Pre or Corequisite: AHLT-112. Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Corequisite: NRSG-101, NRSG-101L and NRSG-101M.

Foundations of Nursing is the first course in the clinical sequence of the Nursing program. It is composed of three interrelated components: theory, skills and medication labs and clinical. This course is the clinical component. This course will introduce the student to the essential elements of the practice of nursing. It provides the basic foundation upon which all areas of nursing are built in a clinical setting.

**NRSG-101L Foundations of Nursing - Lab**
0 Credits  2 Contact
Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Foundations of Nursing is the first course in the clinical sequence of the Nursing program. It is composed of three interrelated components: theory skills and medication labs and clinical. This course is the laboratory component. It provides the basic foundation upon which all areas of nursing are built in a lab setting.

**NRSG-101M Foundations of Nursing Medication Administration Lab**
0 Credits  2 Contact
Division signature is required for registration. Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisites: The student must have completed all program eligibility requirements, AHLT-135, NRSG-100, & BIOL-152. Pre or Corequisite: AHLT-112.

Corequisite: NRSG-101, NRSG-101C and NRSG-101L.

Foundations of Nursing is the first course in the clinical sequence of the Nursing program. It is composed of three interrelated components: theory, skills and medication labs and clinical. This course is the medication lab portion of the series. This course will introduce the student to essential elements of the practice of nursing in a lab setting.

**NRSG-102 Basic and Adult Nursing-Medical**
6 Credits  3 Contact
Division signature is required for registration. Prerequisite: AHLT-112, NRSG-101. Must place at college level reading on the MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Pre or Corequisite: AHLT-113. Corequisite: NRSG-102C, NRSG-102L.

This course introduces the student to the study of common medical conditions encountered in the adult client. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the lecture component of the Nursing 102 series.

**NRSG-102C Basic Adult Nursing Med Clinical**
0 Credits  8 Contact
Division signature is required for registration. Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: AHLT-112, NRSG-101. Pre or Corequisite: AHLT-113. Corequisite: NRSG-102, NRSG-102L.

This course introduces the student to the study of common medical conditions encountered in the adult client. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the clinical component of the Nursing 102 series.

**NRSG-102L Basic Adult Nursing Med Lab**
0 Credits  2 Contact
Division signature is required for registration. Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: AHLT-112, NRSG-101. Pre or Corequisite: AHLT-113. Corequisite: NRSG-102 and NRSG-102C.

This course introduces the student to the study of common medical conditions encountered in the adult client. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the lab component of the Nursing 102 series.

**NRSG-103 Basic Adult Nursing - Surgical**
6 Credits  3 Contact
Division signature is required for registration. Prerequisite: AHLT-112, NRSG-101. Must place at college level reading on the MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Pre or Corequisite: AHLT-113. Co-requisite: NRSG-103C and NRSG-103L.

This course introduces the student to the study of common surgical conditions encountered in the adult client. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the theory component of the Nursing 103 series.

**NRSG-103C Basic Adult Nursing - Surgical Clinic**
0 Credits  8 Contact
Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. This course introduces the student to the study of common surgical conditions encountered in the adult client. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the clinical component of the Nursing 103 series.

**NRSG-103L Basic Adult Nursing-Surgical Lab**
0 Credits  2 Contact
Division signature required for registration. Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: AHLT-112, NRSG-101. Pre or Co-requisite: AHLT-113. Co-requisite: NRSG-103 and NRSG-103C.

This course introduces the student to the study of common surgical conditions encountered in the adult client. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the lab component of the Nursing 103 series.
NRSG-104 Basic Family and Child Nursing
4 Credits 2 Contact
Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. This course covers the fundamental concepts of reproductive health, maternal and newborn care, and assisting children to attain an optimal state of wellness. The nursing process is utilized to enable the learner to acquire knowledge, skills, and values necessary for the care of the child bearing family and children. This course is the theory component of the Nursing 104 series.

NRSG-104C Basic Family/Child Nursing - Clinical
0 Credits 8 Contact
Must place at College level reading on the MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. This course covers the fundamental concepts of reproductive health, maternal and newborn care, and assisting children to attain an optimal state of wellness. The nursing process is utilized to enable the learner to acquire knowledge, skills and values necessary for the care of the child bearing family and children. This is the clinical component of the Nursing 104 series.

NRSG-105 Basic Health Assessment and Physical Examination
3 Credits 1 Contact
Division signature is required for registration. Prerequisite: BIOL-151, BIOL-152. Must place at College Level Reading on MCC Placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisite: NRSG-105L. This course will introduce the student to various health assessment techniques and skills used in routine client examinations. The focus will be to develop clinical decision making skills in regard to which assessment technique to use in a given situation. The student will be prepared to perform a complete head to toe assessment and document their findings appropriately.

NRSG-105L Basic Health Assessment and Physical Examination Lab
0 Credits 1.5 Contact
Division signature is required for registration. Prerequisite: BIOL-151 and BIOL-152. Co-requisite: NRSG-105. Student must supply stethoscope and penlight with pupil gauge. This course is the lab component for Basic Health Assessment & Physical Examination.

NRSG-110 Foundations of Patient Care
8 Credits 4 Contact
Prerequisites: Division signature required; Must have completed all program eligibility and admissions requirements, and been approved for admission into the program; Successful completion of BIOL-151, BIOL-152, ENGL-103 (or ENGL-101), all with a 3.0 or higher grade; Successful completion of AHLT-112, AHLT-135, NRSG-100, all with a 2.0 or higher grade. Co-requisites: NRSG-110L, NRSG-110M, NRSG110C. Pre or Co-requisite: NRSG-105. Student must provide student uniform and stethoscope.

This is the first course in the clinical sequence of the Nursing Program. It is composed of four inter-related components: theory, skills lab, medication administration lab, and clinical. The course will introduce the student to the essential elements of the practice of nursing and patient care. It provides the basic foundation on which all areas of nursing and patient care are built. The nursing process will be introduced and applied to patients having basic health problems that put them at risk for major health issues. The clinical component of this course will take place in long-term care and acute care settings.

NRSG-110C Foundations of Patient Care - Clinical
0 Credits 8 Contact
Co-requisites: NRSG-110, NRSG-110M and NRSG-110L. This is the clinical component of Foundations of Patient Care and will take place in long-term care and acute care settings.

NRSG-110L Foundations of Patient Care - Lab
0 Credits 2 Contact
Co-requisites: NRSG-110, NRSG-110M and NRSG-110C. This course is the skills lab for the Foundations of Patient Care course which is the first course in the clinical sequence of the Nursing Program.

NRSG-110M Foundations of Patient Care Med Lab
0 Credits 2 Contact
Co-requisites: NRSG-110, NRSG-110L, and NRSG-110C. Foundations of Patient Care is the first course in the clinical sequence of the Nursing Program. This course is the medical administration lab for that course.

NRSG-120 Basic Care of the Adult Patient (A)
5.75 Credits 3 Contact
Division signature required; Successful completion of NRSG-105 and NRSG-110, both with a 2.0 or higher. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisites: NRSG-120L, NRSG-120C. Student must provide student uniform and stethoscope.

This course introduces the student to the study of common medical-surgical conditions encountered in the adult patient. Emphasis is placed on the understanding of pathophysiological concepts and care of patients with common health problems, including patients with diabetes, thyroid, respiratory, cardiovascular, peripheral vascular, hematologic, immune, renal, dermatologic disorders, as well as patients with cancer and fluid and electrolyte imbalances. The focus will be the application of the nursing process in the therapeutic management of the adult patient at varying levels of wellness and illness. The clinical component of this course will take place in acute care settings.

NRSG-120C Basic Care of Adult Patient (A) Clinic
0 Credits 8 Contact
Co-requisites: NRSG-120 and NRSG-120L. This course is the clinical component for Basic Care of the Adult Patient (A).

NRSG-120L Basic Care of Adult Patient (A) - Lab
0 Credits 1.5 Contact
Co-requisites: NRSG-120 and NRSG-120L. This course is the lab component for Basic Care of the Adult Patient (A).

NRSG-121 Basic Care of the Adult Patient (B)
5.75 Credits 3 Contact
Division signature required. Prerequisite: Successful completion of NRSG-105 and NRSG-110, both with a 2.0 or higher. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisites: NRSG-121C and NRSG-121L. Students must provide student uniform and stethoscope.

This course introduces the student to the study of common medical-surgical conditions encountered in the adult patient.
Emphasis is placed on the understanding of pathophysiological concepts and the care of patients with common health problems, including patients undergoing surgery, and those with gastrointestinal, liver, pancreatic and biliary, male and female breast and reproductive, musculoskeletal, neurological, rheumatologic, ocular, and auditory disorders. The focus will be the application of the nursing process in the therapeutic management of the adult patient at varying levels of wellness and illness. The clinical component of this course will take place in acute care settings.

**NURS-121C Basic Care of Adult Patient (B) Clinic**
- 0 Credits
- 8 Contact
- Co-requisite: NURS-121 and NURS-121L

This course is the clinical component for Basic Care of the Adult Patient (A).

**NURS-121L Basic Care of the Adult Patient (B) Lab**
- 0 Credits
- 1.5 Contact
- Co-requisite: NURS-121 and NURS-121C

This course is the lab component for the Basic Care of the Adult Patient (B).

**NURS-130 Care of the Childbearing Family**
- 3.5 Credits
- 1.5 Contact
- Division signature required; Prerequisite: Successful completion of NURS-120 with a 2.0 or higher; Successful completion of BIOL-101 or BIOL-156 with a 3.0 or higher. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisite: NRSNG-130C

Students must provide student uniform and stethoscope.

This course covers the diverse concepts of reproductive health, maternal and neonatal care, and the care of patients (maternal and neonatal) in high-risk situations. The focus will be the application of the nursing process in the therapeutic management of the childbearing family at varying levels of wellness and illness. The clinical component of this course will take place in in-patient and out-patient maternal health settings.

**NURS-130C Care of the Childbearing Family Clinical**
- 0 Credits
- 8 Contact
- Co-requisite: NURS-130

This course is the clinical component for Care of the Childbearing Family.

**NURS-150 Nursing Transition**
- 4 Credits
- 4 Contact

Division signature is required for registration. Prerequisite: All participants must hold current licensure to practice as a licensed practical nurse or registered nurse. Licensed practical nurses applying to the second year of the ADN track of the Nursing program must meet all eligibility requirements and all prerequisites to NURS-201 and NURS-202. Licensed practical nurses applying to the second year of the ADN program must meet all eligibility requirements and all pre-requisites to the entry point into the curriculum. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Provides the cognitive, affective and psychomotor skills needed for nurses who wish to make the transition from LPN into the second year of the ADN track of the Nursing program. The course is also appropriate for nurses (RN or LPN) who wish to return to active nursing practice. The competencies selected for course content are designed to review and update nurses in the basic and intermediate concepts and skills necessary for active clinical practice in an acute care setting. This course combines theory and discussion of clinical practice in the classroom setting. A clinical component (NURS-151) is available to apply theory to actual clinical practice in the care of adult clients. This course is not intended to replace a complete orientation to a clinical agency.

**NURS-151 Nursing Transition Clinical**
- 1.5 Credits
- 6 Contact

Division signature is required for registration. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: Current Michigan licensure to practice as a licensed practical nurse or registered nurse. Pre or Co-Requisite: NURS-150.

This course, taken in conjunction with NURS-150, is designed to assist nurses to review and update their clinical skills in the acute care of the adult patient. The clinical rotation will take place in an acute care setting that provides a variety of adult in-patient services. An experienced nursing faculty member will facilitate the clinical instruction. This course is not intended to replace a complete orientation to a clinical agency.

**NRSNG-201 Intermediate Adult Nursing**
- 5 Credits
- 3 Contact

Division signature is required for registration. Prerequisite: BIOL-101 or BIOL-156 and NURS-104. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisite: NRSNG-201C.

This course presents the study of increasingly complex medical-surgical conditions in a variety of health care settings. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the lecture component of the Nursing 201 series.

**NRSNG-201C Intermediate Adult Nursing Clinical**
- 0 Credits
- 8 Contact

Division signature is required for registration. Prerequisite: BIOL-101 or BIOL-156 and NURS-104. Co-requisite: NRSNG-201.

This course presents the study of increasingly complex medical-surgical conditions in a variety of health care settings. Emphasis is placed on the understanding of pathophysiological concepts and the application of the nursing process in meeting the client's needs. This course is the clinical component of the Nursing 201 series.

**NRSNG-202 Mental Health/Community Health Nursing**
- 4 Credits
- 2 Contact

Division signature is required for registration. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: PSYC-281 and NRSNG-104 Corequisite: NRSNG-202C.

This course explores the wellness-illness continuum as it relates to mental health and the care of the client in the community. The wellness-illness continuum is considered to be dynamic and a client may assume any position along it at any time. Content will include mental health alterations, therapeutic approaches, use of the nursing process and mental health restoration. In addition, the course will address concepts specific to community, including community health concerns. This course is the lecture component of the Nursing 202 series.
NRSG-202C Mental Health Community Health - Clinical
0 Credits 8 Contact
Division signature is required for registration. Prerequisite: PSYC-281 and NRSG-104 Co-requisite: NRSG-202
This course explores the wellness-illness continuum as it relates to mental health and the care of the client in the community. The wellness-illness continuum is considered to be dynamic and a client may assume any position along it at any time. Content will include mental health alterations, therapeutic approaches, use of the nursing process and mental health restoration. In addition, the course will address concepts specific to the community, including community health concerns. This course is the clinical component of the Nursing 202 series and will take place in acute and outpatient mental health facilities, as well as community health care settings.

NRSG-203 Advanced Adult Nursing
2.5 Credits 1.5 Contact
Division signature is required for registration. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: NRSG-201 and NRSG-202 Co-requisite: NRSG-203C
This course addresses the more complex medical and surgical conditions of adult clients in a variety of structured settings and pertinent nursing interventions. Utilizing the nursing process, it integrates previously learned concepts and skills. This course is the theory component of the Nursing 203 series.

NRSG-203C Advanced Adult Nursing Clinical
0 Credits 4 Contact
Division signature is required for registration. Prerequisite: NRSG-201 and NRSG-202 Co-requisite: NRSG-203
This course addresses the more complex medical and surgical conditions of adult clients in a variety of structured settings and pertinent nursing interventions. Utilizing the nursing process, it integrates previously learned concepts and skills. This course is the clinical component of the Nursing 203 series.

NRSG-204 Advanced Family and Child Nursing
2 Credits 1 Contact
Division signature is required for registration. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: NRSG-201 and NRSG-202 Co-requisite: NRSG-204C
This course is the study of high risk pregnancy, childbirth and advanced conditions of the newborn and pediatric clients. The focus will be the application of the nursing process in the therapeutic management of the complicated maternal, neonatal and pediatric client. This course is the theory component of the Nursing 204 series.

NRSG-204C Adv Family/Child Nursing Clinical
0 Credits 4 Contact
This course is the study of high risk pregnancy childbirth and advanced conditions of the newborn and pediatric clients. The focus will be the application of the nursing process in the therapeutic management of the complicated maternal neonatal and pediatric client. This course is the clinical component of the Nursing 204 series.

NRSG-205 Nursing Leadership/Management
3.5 Credits 1.5 Contact
Division signature is required for registration. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisite: NRSG-201 and NRSG-202 Co-requisite: NRSG-205C
This course is designed to focus on the role of the nurse as a manager of care. It integrates previously learned concepts and skills utilizing the nursing process, as well as coordination of client care at all levels of intervention. Leadership skills and nursing management are emphasized. This course is the theory component of the Nursing 205 series.

NRSG-205C Advanced Patient Care Mgmt. & Leadership
0 Credits 8 Contact
Division signature is required for registration. Prerequisite: NRSG-201 and NRSG-202 Co-requisite: NRSG-205
This course is the clinical component for Advanced Patient Care Management and Leadership.

NRSG-210 Care of the Pediatric Patient
3 Credits 1.5 Contact
Division signature required; Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisites: Successful completion of NRSG-120, NRSG-121 and NRSG-130 with a 2.0 or higher grade; Successful completion of BIOL-101 or BIOL-156 with a 3.0 or higher grade; Co-requisite: NRSG-210C. Students must provide student uniform and stethoscope.
This course will provide a general overview of fundamental pediatric concepts, with a focus on providing safe and age-appropriate nursing care to children and their families. Content will include growth and development of children, from infancy through adolescence, health promotion and illness prevention strategies, and provision of care to children with common acute and chronic health problems. The clinical component of this course will take place in in-patient and out-patient pediatric settings.

NRSG-210C Care of the Pediatric Patient Clinical
0 Credits 6 Contact
This course is the clinical component for Care of the Pediatric Patient.

NRSG-220 Care of Mental/Behavioral Health Patient
4 Credits 2 Contact
Division signature required; Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Prerequisites: Successful completion of NRSG-120, NRSG-121, NRSG-130 and PSYC-281; all with a 2.0 or higher grade; Co-requisite: NRSG-220C. Students must provide student uniform and stethoscope.
This course explores the wellness-illness continuum as it relates to mental and behavioral health. Emphasis will be placed on care of the patient with mental and behavioral health alterations, therapeutic approaches to care, and use of the nursing process in restoring mental and behavioral health. The clinical component of the course will take place in acute and community mental and behavioral health facilities.
NRSG-220C Mental/Behavioral Health Patient Clinical
0 Credits 8 Contact
Co-requisite: NRSG-220.
This course is the clinical component for Care of the Mental/Behavioral Health Patient.

NRSG-230 Intermediate Care of the Adult Patient
5 Credits 3 Contact
Division signature required; Prerequisites: Successful completion of NRSG-120, NRSG-121 and NRSG-130 with a 2.0 or higher. Successful completion of BIOL-101 or BIOL-156 with a 3.0 or higher. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisites: NRSG-230C. Students must provide student uniform and stethoscope.
This course is the clinical component for Intermediate Care of the Adult Patient.

NRSG-230C Inter. Care of the Adult Patient Clinical
0 Credits 8 Contact
Co-requisite: NRSG-230.
This is the clinical component of NRSG-230C and this course presents the study of increasingly complicated medical-surgical conditions encountered in the adult patient. Emphasis is placed on the understanding of pathophysiological concepts and the care of patients with complicated health problems, and the application of the nursing process in meeting patient needs. The clinical component of this course will take place in an acute care setting.

NRSG-240 Advanced Care of the Adult Patient
4.5 Credits 3 Contact
Division signature required; Prerequisites: Successful completion of NRSG-210, NRSG-220, and NRSG-230 with a 2.0 or higher grade. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Co-requisites: NRSG-240C and NRSG-240L. Students must provide student uniform and stethoscope.
This course addresses the more complex medical-surgical conditions of the adult patient. Emphasis is placed on the understanding the dynamics of advanced care concepts, including critical care, and the application of the nursing process in meeting patient needs. The component of this course will take place in an acute care setting, including critical care units.

NRSG-240C Adv. Care Adult Patient Clinical
0 Credits 4 Contact
Co-requisites: NRSG-240 and NRSG-240L.
This course is the clinical component of Advanced Care of the Adult Patient.

NRSG-240L Adv. Care of the Adult Patient Lab
0 Credits 1 Contact
Co-requisites: NRSG-240 and NRSG-240C.
This course is the lab component for Advanced Care of Adult Patient.

NRSG-250 Advanced Patient Care Mgmt. & Leadership
4 Credits 2 Contact
Division signature required; Prerequisites: Successful completion of NRSG-210, NRSG-220, and NRSG-230 with a grade of 2.0 or higher. Must place at College Level Reading on MCC placement test, or a minimum score of 20 on the reading portion of the ACT, or successfully complete RDNG-030 or ENGL-100. Co-requisites: NRSG-250C. Students must provide student uniform and stethoscope.
This course is designed for focus on the overall management of patient care in a variety of settings. In addition, concepts related to community health will be covered. The course integrates previously learned concepts and principles utilizing the nursing process, as well as coordination of patient care at all levels of intervention. Leadership skills and nursing management of patient care are emphasized. The clinical component of this course will take place in the acute care and community settings.

NRSG-250C Advanced Patient Care Clinical
0 Credits 8 Contact
This is the clinical component for NRSG-250 is designed to focus on the overall management of patient care in a variety of settings. In addition, concepts related to community health will be covered. The course integrates previously learned concepts and principles utilizing intervention. Leadership skills and nursing management of patient care are emphasized. The clinical component of this course will take place in the acute care and community settings.

Nursing Refresher
Health Sciences

NURF-210 NCLEX-RN Review Course
3 Credits 3 Contact
Division signature is required for registration. Prerequisite: Graduate from an RN nursing program (or projected graduation within one semester).
This courses prepares the graduate nurse for the registered nurse licensure exam. The course incorporates both content review and test-taking strategies. Content review and practice take place using and NCLEX-RN review series of tests and CD-ROMs. Test-taking and critical thinking skills are adapted from multiple sources. Students begin by assessing their strengths and weaknesses in testing and learning. They also become acquainted with tools to identify needs and with resources to improve areas of weakness. The course is based on learning by practice, so frequent test practice is included during class time and encouraged at home in the lab. This frequent practice provides learner-directed content review, as well as building test-taking skills and familiarity with the actual NCLEX-RN format.

Occupational Therapy Assistant
Health Sciences

OTA.-100 Introduction to Occupational Therapy Assistant
2 Credits 2 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. An introduction to the history, practice and trends of occupational therapy. The roles and responsibilities of the occupational therapy assistant as related to the ethical and legal issues in the practice of occupational therapy. Introduction to the occupational therapy process. Multicultural factors in relation to occupational therapy treatment are discussed.

OTA.-102 Pathophysiology for OTA
2 Credits 2 Contact
Division signature is required for registration. Prerequisites: ENGL-101, BIOL-152, PSYC-281. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Study of pathology, etiology, prognosis, clinical findings, precautions, and medical treatment for selected conditions and the potential impact on occupational performance.
OTA-126 Activity Analysis
3 Credits 3 Contact
Prerequisite: OTPT-100, OTA-100, OTPT-113. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Analysis of activities in terms of required performance components and relevance to client abilities, interest, and lifestyles. The student will be required to analyze and teach an activity to the class. The student will have hands-on experience with various craft media. Study of the significance of planned leisure as an occupational therapy performance area. Activity programming is discussed.

OTA-128 Therapeutic Skills and Practice I
4 Credits 4 Contact
Prerequisite: OTPT-100, OTA-100, OTPT-113. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Techniques and skills in the use of equipment, treatment media and methods appropriate to meet the needs of childhood through adolescence. Students experience hands-on practice of the above topics in the classroom.

OTA-129 Clinical Practice I
1 Credits 3 Contact
Prerequisite: OTPT-100, OTA-100, OTPT-113. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Assigned clinical practice experience in a pediatric setting enabling the student to apply techniques and skills learned in the classroom to actual patient care under the close supervision of qualified personnel. Experience scheduled for one day/week for seven (7) weeks.

OTA-220 Group Skills in Occupational Therapy
2 Credits 2 Contact
Prerequisite: OTPT-100, OTA-100. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Explores roles and group dynamics with a variety of impaired populations in various settings. Emphasis will be placed on the clinical aspect and occupational therapy intervention, treatment, and teaching strategies. Students will facilitate groups and participate in role playing.

OTA-222 Conditions of Psychosocial Dysfunction
3 Credits 3 Contact
Prerequisite: OTPT-100, OTA-100. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A review of psychiatric conditions most frequently treated in Occupational Therapy. Emphasis on occupational therapy intervention, including OT evaluations, treatment planning, implementation, and discharge planning. Community resources and documentation for psychiatric conditions are reviewed.

OTA-224 Occupational Therapy Exercise/Modalities
3 Credits 3 Contact
Prerequisite: OTPT-100, OTA-100, OTPT-113. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course teaches the skills to utilize therapeutic exercise in occupational therapy treatment for a variety of physical conditions. The following evaluations will be taught in the class: goniometry, muscle testing, balance and coordination. The students will receive an overview of physical agent modalities as they are used in occupational therapy.

OTA-226 Assistive Technology in OT
3 Credits 3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030
This course studies assistive technology devices (low and high tech) that assist disabled individuals in greater independence and accessibility. Computer access, mobility needs, environmental control units, and augmentative communications are discussed as well as adaptations for hearing, visual and cognitive impairments. The concept of Universal Design and ergonomics are studied. Students also learn about wheelchairs and basic splint fabrication.

OTA-228 Therapeutic Skills & Practice II
6 Credits 6 Contact
Prerequisite: OTPT-100, OTA-100, OTPT-113. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Study of pathology, etiology, prognosis, clinical findings, precautions, and medical treatment for selected medical conditions commonly seen in occupational therapy. Techniques and skills in the use of equipment, treatment media and methods appropriate to meet the needs of the adult client/patient. Students experience hands-on practice of the above in the classroom.

OTA-229 Clinical Practice II
2 Credits 6 Contact
Prerequisite: OTA-129. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Assigned clinical practice experience in an adult setting enabling the student to apply techniques and skills learned in classroom to actual client care under the close supervision of qualified personnel. Experience is scheduled for twelve days.

OTA-230 Therapeutic Skills III
3 Credits 3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Techniques and skills in the use of equipment, treatment media, and methods appropriate to meet the needs of the elderly population. Students experience hands-on practice of above techniques in the classroom.

OTA-232 Transitions in Occupational Therapy
3 Credits 3 Contact
Prerequisite: OTA-228. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Students in this course will learn about the supervisory styles they may encounter or utilize during their clinicals and future employment. Employment skills such as resume writing and interviewing techniques will be discussed. The COTA role in research and advocacy will be presented. Key elements for being successful in their clinicals will be reviewed. Important skills necessary for successful completion of clinicals will be reviewed and practiced including documentation.

OTA-240 OTA Internship I
4 Credits 12 Contact
Division signature required. Prerequisite: OTA-229; Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Eight week clinical assignment (40 hr. week) under supervision of occupational therapy practitioners in the community. Note: The type of setting will depend on student needs and availability. The setting will differ from OTA-250 (also a clinical course) setting to provide the student a variety of experiences.

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OTA-250 OTA Internship II
4 Credits  12 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
Eight week clinical assignment (40 hr. week) under supervision of occupational therapy practitioners in the community. Note: The type of setting will depend on student needs and availability. This setting will differ from OTA-240 (also a clinical course) setting to provide the student with a variety of experiences.

Occupational/Physical Therapy
Health Sciences

OTPT-100 Physical Medicine Terminology
1 Credits  1 Contact
Note: Division signature required. Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: OTPT-113L1 Prerequisite or corequisite: BIOL-151; Coordinator signature required for registration.
A study of the physical medicine terminology and abbreviations related to occupational and physical therapy, using a combination of Greek and Latin prefixes, suffixes, word roots and combining forms to build words. Also provides an introduction to documentation methods.

OTPT-113 Applied Anatomy
3 Credits  2 Contact
Prerequisite: ENGL-101, and PSYC-281. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: OTPT-113L1 Prerequisite or corequisite: BIOL-151; Coordinator signature required for registration.
The principles of human motion as they are influenced by individual and coordinated muscle function. Anatomy is studied extensively. Neuromuscular control and biomechanical principles of movement are presented. Activities of daily living are used for functional analysis. Application of the principles of human motion as they are influenced by individual and coordinated muscle function. Palpation/location of muscles and surface anatomy. Biomechanical principles of movement are practiced and applied.

OTPT-113L Applied Anatomy Lab
0 Credits  3 Contact
Prerequisite: ENGL-101, BIOL-151, PSYC-281; Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: OTPT-113 This is the lab component of OTPT-113 for PTA and OTA students. Biochemical principles of movement are practiced and applied.

OTPT-129 OTA Applications for Physical Dysfunction
1 Credits  1 Contact
Note: Division signature required. Prerequisite: Placement into ENGL-100 (ACSR-100) or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Prerequisite: OTPT-113; Corequisite: OTPT-128.
This course offers discussion, demonstration, presentation and exploration of occupational therapy evaluation and treatment protocols for selected physical conditions. The role of the Certified Occupational Therapy Assistant in evaluation and treatment is also discussed.

Office Information Systems
Business

OISY-101 Keyboarding I
2 Credits  2 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
An entry level typing course, introducing the computer console, finger position and stroke technique for letters of the alphabet, symbols and numbers on the keyboard and basic functions of the numeric keypad. Touch method builds stamina and reinforces technique. Practice stresses speed and accuracy demonstrable on three 3-minute timings, at a minimal speed of 25-words-per-minute with 3 or fewer errors.

OISY-102 Keyboarding II
2 Credits  2 Contact
Prerequisite: OISY-101 and/or 25 wpm for five minutes with a five-error limit. Placement into RDNG-016 (ACSR-016) is required. A skill building intensive, directed at minimal performance of 35 wpm with 5 or fewer errors on 5-minute timings. Prescriptive drills strengthen stroke and letter combinations. Exercises extend standards of quality production to documentation. Assessment measures speed and accuracy, style and specifications. Students must demonstrate the prerequisite on the first day of class.

OISY-120 Principles of Office Information Process
4 Credits  4 Contact
Prerequisite: Placement into RDNG-016 and completion of OISY-101 or minimum keyboarding speed of 25 wpm. Placement into RDNG-016 (ACSR-016) is required. This course covers the terminology, office environment, electronic equipment, selection of equipment, employee roles, careers, hardware and software appropriate for the modern office. Hands-on instruction in system and application software, including Windows, word processing, spreadsheets, graphics, and databases.

OISY-123 Records Systems
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. This course provides instruction in four main filing systems: alphabetic, numeric, subject and geographic filing procedures. Management of records systems are discussed which include paper documents, micrographics, magnetic media, the paperless office and types of equipment.

OISY-136 Notescript
3 Credits  3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Notescript combines letters of the alphabet and short strokes into an abbreviated script of phonetic spellings and longhand. Offers an easy practical approach to writing under the pressure of time and content constraints. Take lecture and research notes, message, minutes as well as dictation.

OISY-150 Business Transcription
3 Credits  3 Contact
Prerequisite: Keyboarding speed of 35wpm; knowledge of memo and business letter format; knowledge of basic word processing software. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course allows students to develop basic transcribing skills by listening to and transcribing a wide variety of documents. Students
apply correct spelling, punctuation, grammar and word usage to business communications. Purchase of headset to use with transcribing machine is recommended.

**OISY-156 Medical Transcription for General Medicine**  
3 Credits 3 Contact  
Prerequisite: BHSR-110. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.  
Entry level practice in transcribing general medical dictation; formatting and documenting guidelines for medical history and physicals, consultations, and discharge summaries.

**OISY-295 Office Procedures**  
3 Credits 3 Contact  
Prerequisite: Keyboarding speed of 45wpm or BUSN-190. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.  
This course provides the student discussion about the principles of administrative office management, work organizations, business ethics, delegation and division of responsibility, office equipment and supplies, office supervision, work simplification, human resources, hiring and firing procedures, stress management, training programs, motivation and incentive techniques, administrative services and systems, performance appraisal review, and office budgets. Students will complete projects, schedule appointments, arrange meetings, take minutes, make introductions, research and compile information from raw data into acceptable format.

**Paralegal Technology**  
Business

**PLTC-110 Introduction to American Law**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
An introduction to American law, the legal process and system, the language of the law, the Michigan court system, and the role and function of the para-legal/legal assistant.

**PLTC-111 Law Office Operations**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
An analysis of the normal operation of a general practice law office. Includes the study of law office procedures, times and money accounting, client handling, case and docket control, library requirements, office equipment, supplies and general organization of a law office.

**Philosophy**  
Humanities

**PHIL-101 Introduction to Philosophy**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
An introduction to some important and influential philosophers and the issues and arguments they discuss. Topics may include theories of knowledge and justified beliefs, the relationship between the mind and the body, free will and determinism, arguments for and against the existence of God, and the nature of morality. Works from both historical and contemporary philosophers are discussed.

**PHIL-103 Critical Thinking**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Methods for evaluating claims and arguments with special emphasis on arguments in everyday life, such as those found in newspaper articles, political speeches, and advertisements. Students will learn to determine whether there are good reasons for accepting a claim, even when those reasons have not been set forth explicitly. The course will cover induction, deduction, informal fallacies, and other aspects of critical thinking and reasoning.

**PHIL-165 Philosophy of Religion**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, ACLT-075, or ACLT-076 is required.  
An examination of central philosophical issues concerning religion and religious beliefs. Topics may include traditional and contemporary arguments for the existence of God; the problem of evil; religious experience; faith; and the immortality of the soul. Works from both historical and contemporary philosophers are discussed.

**PHIL-190 Introduction to Logic**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
A study of the tools and methods of modern symbolic logic to analyze and evaluate arguments. Two different methods are introduced to distinguish valid from invalid arguments. Symbolic representation of statements and proof procedures for the validity of arguments are emphasized.

**PHIL-251 Religious Worldviews**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
An examination and comparison of the histories, beliefs, and practices of the major world religions. Both Western religions (e.g. Judaism, Christianity, Islam) and Eastern religions (e.g. Hinduism, Buddhism) will be studied. Readings will be selected from scriptures and holy works (for example, the Bible, the Koran, the Upanishads) as well as from commentaries on those works.

**PHIL-295 Ethics**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
A study of the fundamental philosophical issues and problems concerning morality and moral reasoning. Emphasis will be placed on the examination of traditional and contemporary attempts to distinguish morally good from morally bad actions. Other topics may include issues in political philosophy, ethical relativism and objectivity, the nature of the good, and contemporary moral issues such as abortion, affirmative action, and capital punishment. Works from both historical and contemporary philosophers are discussed.

**PHIL-297 Political Philosophy**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
A survey and analysis of the theories, arguments, and concepts used in answering the basic normative questions of political philosophy: Why should people live in any society? Is there such a thing as legitimate power? If so, to whom or what does it belong? What, if any, are the limits of power? What, if any, are the limits of freedom? The student will undertake an analysis of answers given by both traditional and contemporary philosophers.
Photography
Fine Arts & Social Sciences

PHOT-101 Digital Photography for Non-Majors
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must provide their own digital camera capable of controlling functions including flash, focus control and exposure options. A camera with a zoom lens is highly recommended. A limited number of cameras are available to rent through the Photography Program on a first-come, first-served basis. PHOT-101 is an introductory course on basic digital photography. This course covers camera controls, composition, lighting, exposure, focus, sharpness, and local printing. Content includes information on file sharing, digital archiving, digital file formats, third party print resources, and emerging camera and software applications.

PHOT-180 Basic Photography
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must have full-time access to an adjustable camera capable of controlling shutter speeds, apertures and focus. Cameras fitting this description include advanced compact, bridge or digital single lens reflex cameras (DSLR). This course focuses on camera controls, composition, aesthetics, lighting and image control. The student will gain experience in digital photography through lectures, demonstrations, assignments, practice, and critiques. Course content emphasizes craft, photographic vision, and visual problem solving. Students must have a camera capable of controlling shutter speed, aperture and focus. Cameras fitting this description include advanced compact, bridge, or digital single reflex (DSLR) cameras.

PHOT-182 Introduction to Light and Color
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre or Corequisite: PHOT-180
This course is an introduction to the aesthetics of light. Students will examine light quality, direction and color as it illuminates a subject. Several semester-long photographic projects and weekly studio assignments are included. The course continues to emphasize photographic craft and visual problem solving.

PHOT-183 Intro to Commercial Studio Photography
4 Credits 4 Contact
Prerequisite: PHOT-180, and either ART.-131 or ART.-141. Placement into RDNG-016 (ACSR-016) is required. Students will learn to utilize umbrellas, box light, mixed lighting, filtration, flags and other light modulating tools. Students will also use professional electronic strobe and tungsten lighting equipment and apply professional metering techniques. Commercial subjects include products, people and architecture.

PHOT-186 Careers in Photography
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This class offers the student an opportunity to explore various careers and business practices in the photographic field. Students will gain insight from guest speakers, field trips, in class discussions and assignments. Students strengths, personality preferences and career goals will also be examined.

PHOT-187 Photojournalism
3 Credits 3 Contact
Prerequisite: PHOT-190. Placement into RDNG-016 (ACSR-016) is required. The course will provide an introduction to photojournalism. Students will explore the role and responsibility of the photojournalist including considerations of press law and ethics. Assignments include documentary, news, sports and human interest stories utilizing both still photography and video, prepared for print and web delivery.

PHOT-188 History of Photography
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. The course is a survey of photography’s origins and development as a scientific tool as well as a medium of communication, documentation and personal expression. It considers the technical evolution, historical context and social contribution of photography and includes hands-on exercises in historical photographic techniques.

PHOT-190 Introduction to Digital Imaging
3 Credits 3 Contact
Co-requisite: PHOT-180. Placement into RDNG-016 (ACSR-016) is required. This course introduces the fundamentals of photo computer management and manipulation using industry-standard software. Students will learn digital workflow process, including cataloging, processing, digital manipulation and the outputting of photographic images. Manipulation topics include scanning, color corrections, masking, layers, retouching, printing and file management and workflow practices.

PHOT-192 Advanced Digital Imaging
3 Credits 3 Contact
Prerequisite: PHOT-190. Placement into RDNG-016 (ACSR-016) is required. This class will investigate more deeply issues introduced in PHOT-190. It includes substantial retouching and restoration, advanced layers and collage assignments. "Content Aware" technology is applied to high-end masking and retouching techniques.

PHOT-205 Photography Internship
1 Credit 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is a variable credit/contact hour course. Depending on the assignment to be completed, the student can earn 1-3 credits and 1-3 contact hours. This internship allows students who have completed, or have nearly completed, the requirements for an AAS degree in Photography to gain real work experience with employers in the community, practice their skills and have the opportunity to learn from experienced photographers. Students will gain insight into working conditions, business practices, and the practical application of skills learned in class. Students will choose an internship according to their area of interest and are expected to work a minimum of 50 hours per credit in the semester for which the course is offered.
PHOT-208 Introduction to Fine Art Photography
3 Credits 4 Contact
Pre-requisite: PHOT-183 and PHOT-190 with a minimum grade of 2.0. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Student must provide a DSLR camera with RAW digital file format capability. Students will gain an increased understanding of the conceptual interpretation of photographic subjects. Students will practice capturing ultimate image quality, refining digital files beyond the camera, creating gallery-quality prints, and preparing work to gallery standards. Marketing and business practices will also be covered.

PHOT-210 Advanced Studio Lighting Techniques
3 Credits 4 Contact
Prerequisite: PHOT-183 and PHOT-190. Placement into RDNG-016 (ACSR-016) is required. Students apply scientific and aesthetic principles of light to solve commercial product imaging challenges. Special subjects include metal, glassware and cylindrical objects. Techniques applied include reflection, transmission, refraction and painting with light. The course concludes with a significant capstone team-based project.

PHOT-211 Commercial Portraiture
3 Credits 4 Contact
Prerequisite: PHOT-182 and PHOT-183 and PHOT-190. Placement into RDNG-016 (ACSR-016) is required. Course content includes an exploration into the art of portraiture by studying the works of past and current professionals. Students will learn to analyze the facial structure, complexion, hair and attire of subjects to create compelling, professional portraits in a variety of settings using professional studio equipment.

PHOT-282 Photographic Principles
3 Credits 3 Contact
Prerequisites: PHOT-190 and PHOT-183. Placement into RDNG-016 (ACSR-016) is required. This course provides students with the opportunity to complete their photographic portfolio using the College studio facilities. Students seeking the Associate degree are required to complete this course in their final semester. Students will be expected to purchase some materials and have access to an adjustable camera.

PHOT-290 Portfolio
2 Credits 3 Contact
Prerequisite: Completion of minimum 51 credits of photography program. Placement into RDNG-016 (ACSR-016) is required. This course provides students with the opportunity to complete their photographic portfolio using the College studio facilities. Students seeking the Associate degree are required to complete this course in their final semester. Students will be expected to purchase some materials and have access to an adjustable camera.

PHOT-295 Supervised Photography Project
3 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Permission of instructor is also required. An individualized course providing the opportunity for in-depth study or work in an approved photography project. Content will vary based on the project pursued by the individual students.

Physical Education Activity
Health Sciences

PEAC-106 Physical Conditioning
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The basic knowledge of exercise and its application to human anatomy. An understanding of the values of physical conditioning as it relates to optimal physical efficiency.

PEAC-123 Basketball
2 Credits 2 Contact
Note: Students must sign a health condition disclaimer form at the first class meeting. Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Demonstrates skills and drills necessary to play the game. Team play and theory of team play are emphasized.

PEAC-130 Circuit Training
1 Credits 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Circuit training is designed to give students the opportunity to enjoy the benefits of aerobic conditioning and strength training. Students will actively participate in high levels of physical activity, utilizing multiple types of health related fitness equipment.

PEAC-132 Advanced Circuit Training
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Advanced circuit training is designed to give students the opportunity to enjoy the benefits of a semester long aerobic conditioning and strength training program. This course will encourage students interested in making high levels of physical activity a part of their lifestyle, by providing a prolonged fitness training experience. Students will actively participate in high levels of physical activity, utilizing multiple types of health related fitness equipment.

PEAC-139 Indoor Rock Climbing
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Demonstrates skills and drills necessary to play the game. Team play and theory of team play are emphasized.

Note: Students must sign a health condition disclaimer form at the first class meeting. Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Circuit training is designed to give students the opportunity to enjoy the benefits of aerobic conditioning and strength training. Students will actively participate in high levels of physical activity, utilizing multiple types of health related fitness equipment.

PEAC-194 Advanced Indoor Rock Climbing
2 Credits 2 Contact
Student must sign a health condition disclaimer form at the first class meeting. Prerequisite: PEAC-139; Placement into RDNG-016 (ACSR-016) is required. This course will focus on increasing climbing skills and techniques, and address similarities and differences in indoor and outdoor rock climbing. Increasing performance in self-management skills involved in climbing and everyday life situations will be integrated within the course.
PEAC-141 Ice Climbing
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Cold weather clothing is needed. Students must sign ice climbing release form and a health condition disclaimer form at first class meeting.
This class will focus on developing skills and techniques to safely pursue the sport of Ice Climbing. Proficiency, attention to safety, control, and good judgement in ever changing conditions will challenge students as they actively engage in climbing. Physical and mental aspects involved in climbing will be related to skills critical to success in school, the workplace, and life.

PEAC-142 Running
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Note: Students must sign a health condition disclaimer form at the first class meeting. They need to wear appropriate running attire and running shoes.
Designed to provide the opportunity for increased and improved running ability, understanding the fundamental nutritional factors associated with the type of activity, understanding of running form and foot orientation types and safety practices.

PEAC-143 Figure Control
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Note: Students must sign a health condition disclaimer form at the first class meeting.
Fundamentals of weight and figure control through the use of diet and exercise to gain and/or maintain the figure and posture.

PEAC-144 Weight Training: Theory and Practice
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Note: Students must sign a health condition disclaimer form at the first class meeting.
Practical and theoretical knowledge and skills associated with weight training for physical fitness. Course topics will also address methods to improve overall health and wellness. Information presented during class will assist each student in the development of a personalized fitness and weight training program.

PEAC-145 Social Dance
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Social dance is designed to allow students an opportunity to learn multiple contemporary social dances while participating in moderate intensity physical activity. Students will actively participate in various contemporary social dances. Students will develop fundamental knowledge and skills to the intermediate level through participation in a variety of developmentally appropriate teaching progressions (e.g., part/whole method) relating to contemporary social dance.

PEAC-147 Pilates: Beginning
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Note: Students must sign a health condition disclaimer form at the first class meeting.
This course will introduce you to the anatomically-based approach to exercise pioneered in the 1920's by Joseph Pilates and currently used by fitness and health professionals. You will learn the philosophy, basic principles and exercises associated with Pilates. The progression of exercises will show you how to strengthen and tone muscles, improve posture, flexibility and balance. The course will help you build a personal fitness program.

PEAC-148 Pilates: Intermediate
2 Credits  2 Contact
Prerequisite: PEAC-147; Placement into RDNG-016 (ACSR-016) is required.
This course builds upon the principles and exercises learned in PEAC-147 Pilates: Beginning. Pilates is an anatomically based approach to exercise pioneered in the 1920's by Joseph Pilates and currently used by fitness and health professionals. You will learn complex movements that involve more choreography as well as adding physically challenging modifications to those learned in Beginning Pilates. You will further strengthen and tone muscles, improve posture, flexibility and balance. The course helps you create a personal fitness program.

PEAC-175 Scuba Diving
2 Credits  1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Student must be able to swim Note: students must provide their own diving mask, fins, snorkel, bathing suit, towel and lock, and students must sign a health condition disclaimer form at the first class meeting. Co-requisite: PEAC-175L
This course is designed to teach students the skills required for scuba diving. Class includes classroom and pool use. Students seeking optional open-water certification also must attend an open water class.

PEAC-175L Scuba Diving Lab
0 Credits  1 Contact
Prerequisite: Student must be able to swim; students must provide their own diving mask, fins, snorkel, bathing suit, towel and lock, and students must sign a health condition disclaimer form at the first class meeting. Student must requisister for the lecture section and one lab section. Note: Co-requisite: PEAC-175
This course is designed to teach students the skills required for scuba diving and includes pool use at a location outside of the MCC campus. Students seeking optional open-water certification also must attend an open water class.

PEAC-180 Volleyball
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Volleyball is designed to allow students the opportunity to actively participate in student centered learning activities focusing on fundamental skill development, offensive and defensive strategies and basic rules and regulations governing game play. Students will participate in various activities including skill development experiences, peer assessments, and traditional game experiences throughout the course.

PEAC-183 Golf
2 Credits  2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.
Note: Students must sign a health condition disclaimer form at the first class meeting.
An overview of various strokes, rules and etiquette of the game; active play at a local course. Students are encouraged to furnish their own equipment; however, some clubs can be furnished by the college. A nominal fee is charged for the use of the course and driving range.
PEAC-193 Self-Defense  
2 Credits  2 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Note: Students must sign a health condition disclaimer form at the first class meeting.  
Assists in developing confidence and skills in the art of self-defense through the use of martial arts techniques.  
Development of an awareness of and avoidance of potentially dangerous situations.

PEAC-199 Advanced Self-Defense  
2 Credits  2 Contact  
Prerequisite: Placement into ENGL-100 (ACSR-100) or completion of RDNG-030, ACLT-075, or ACLT-076 is required.  
Prerequisite: PEAC-193;  
Development and application of advanced skills, including familiarization with the laws involving the ownership and use of firearms in self defense situations.

Physical Science  
Science & Math

PHSC-191 Physical Science  
4 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Co-requisite: PHSC-191L.  
This course provides a general overview of the physical cosmos.  
Focused topics include chemistry and physics.

PHSC-191L Physical Science I Lab  
0 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Co-requisite: PHSC-191.  
This is the lab section of the course which provides a general overview of the physical cosmos.  
Focused topics include chemistry and physics.

PHSC-192 Earth Systems  
4 Credits  3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Co-requisite: PHSC-192L.  
This course provides an advanced overview of the physical cosmos.  
Focused topics include geology, astronomy, meteorology and oceanography.

PHSC-192L Physical Science II Lab  
0 Credits  2 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
Co-requisite: PHSC-192.  
The lab section of the course which provides an advanced overview of the physical cosmos.  
Focused topics include geology, astronomy, meteorology and oceanography.

Physical Science & Mathematics  
Science & Math

PHSM-222 Mechanics  
3 Credits  4 Contact  
Prerequisite: MATT-128.  Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
Physics as related to unit conversion, vectors, parallel forces, linear motion, compound motion-projectiles, Newton's laws of motion, rotary motion, energy, simple machines, mechanical advantage and mechanical properties of materials.

For the most current information, always check www.mcc.edu
PTA.-114 PTA Data Collection
1 Credit  3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Skill in performance of manual muscle testing, goniometric measurements, neurological and other basic data collection activities.

PTA.-202 Musculoskeletal Interventions I
5 Credits  3.5 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. The study of pathology, medical treatment and therapeutic interventions associated with musculoskeletal injuries/conditions. Practical application of interventions for spine and upper extremity musculoskeletal conditions.

PTA.-202L Musculoskeletal Interventions I Lab
0 Credits  4.5 Contact
Coordinator's signature required to register in this course. Prerequisite: PTA.-104 Corequisite: PTA.-202 Pathology, medical treatment and therapeutic interventions associated with musculoskeletal injuries/conditions. Practical application of interventions for spine and upper extremity musculoskeletal conditions.

PTA.-204 Musculoskeletal Conditions II
3 Credits  1.5 Contact
Division signature required. Prerequisite: PTA.-202. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: PTA.-204L Pathology, medical treatment, and therapeutic interventions associated with musculoskeletal injuries/conditions. Practical application of interventions for lower extremity musculoskeletal conditions.

PTA.-204L Musculoskeletal Conditions II Lab
0 Credits  4.5 Contact
Division signature required. Prerequisite: PTA.-202 Corequisite: PTA.-204 Pathology, medical treatment, and therapeutic interventions associated with musculoskeletal injuries/conditions. Practical application of interventions for lower extremity musculoskeletal conditions.

PTA.-205 Life Span
1 Credit  5 Contact
Division signature required. Prerequisite: PTA.-202, PTA.-210, and PTA.-270; Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: PTA.-212, PTA.-280, PTA.-205L The study of human motor development, including aging, developmental reflexes, and common pediatric and geriatric pathologies, clinical findings, data collection and intervention.

PTA.-205L Life Span Lab
0 Credits  1.5 Contact
The lab section of the course to study human motor development, including aging, developmental reflexes, and common pediatric and geriatric pathologies, clinical findings, data collection and intervention.

PTA.-208 Physical Agents
3 Credits  2 Contact
Division signature required. Prerequisite: PTA.-202, Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Co-Requisite: PTA.-204 and PTA.-208L Physical and physiological principles underlying the application of pelvic traction, intermittent pneumatic compression, therapeutic electricity and biofeedback. Problem solving and application.

PTA.-208L Physical Agents Lab
0 Credits  3 Contact
Division signature required. Prerequisite: PTA.-202 Corequisite: PTA.-204 amd PTA.-208L Physical and physiological principles underlying the application of pelvic traction, intermittent pneumatic compression, therapeutic electricity and biofeedback. Problem solving and application.

PTA.-210 Rehabilitation Procedures I
5 Credits  3.5 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Principles and techniques of wheelchair fitting and management; safety and training in the use of orthotics and prosthetics; use of standardized questionnaires/scales; self-care and home/community management. Ventilation, respiration and circulation data collection. Aerobic capacity endurance conditioning/reconditioning. Gait locomotion/balance data collection, safety and progression. Study and application of pathology, clinical findings, medical treatment and physical therapy interventions for selected neurological, cardiovascular and pulmonary conditions. Review of normal neuroanatomy/neurophysiology.

PTA.-210L Rehabilitation Procedures I Lab
0 Credits  4.5 Contact

PTA.-212 Rehabilitation Procedures II
3 Credits  2.5 Contact
Division signature required. Prerequisite: PTA.-210, PTA.-270; Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: PTA.-205, PTA.-280, PTA.-212L Pathology, medical treatment and therapeutic interventions, including practical application of interventions, for selected neurological conditions including CVA, TBI, MS Parkinson's and Diabetes. Treatment approaches to include PNF, NDT and other techniques to improve balance, coordination, strength and function. Abnormal tone, motor control and motor learning theories.
PTA.-212L Rehabilitation Procedures II
0 Credits 1.5 Contact
Note: Division signature required. Prerequisite: PTA.-210, PTA.-270, Corequisite: PTA.-205, PTA.-280, PTA.-212.
Pathology, medical treatment and therapeutic interventions, including practical application of interventions, for selected neurological conditions including CVA, TBI, MS Parkinson's and Diabetes. Treatment approaches to include PNF, NDT and other techniques to improve balance, coordination, strength and function. Abnormal tone, motor control and motor learning theories.

PTA.-255 PTA Internship
5 Credits 15 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Coordinator's signature required to register in this course. Clinical practice of 35-40 hours per week for six weeks applying previously learned skills and knowledge in the performance of all treatment modalities and procedures.

PTA.-270 Clinical Practice I
2 Credits 6 Contact
Division signature required. Prerequisite: PTA.-104. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: PTA.-271, PTA.-202 and/or PTA.-210.
Clinical application of professional behaviors, therapeutic interventions and data collection techniques.

PTA.-271 Health Care Management
1 Credits 1 Contact
Division signature required. Prerequisite: PTA.-104. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: PTA.-202, PTA.-210, PTA.-270.
Clinical administration issues including organizational structure, management, fiscal responsibilities, insurance, and legal issues.

PTA.-280 Clinical Practice II
2 Credits 6 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Clinical application of professional behaviors, therapeutic interventions and data collection techniques.

PTA.-290 Clinical Practice III
4 Credits 10.8 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Prerequisite: PTA.-280 Corequisite: PTA.-290L
The study of the comprehensive practice of professional behaviors, data collection and intervention techniques using a case study format of diagnostic categories including musculoskeletal, neurological, cardio-vascular and pulmonary. The laboratory component will be followed by an eight-week physical therapist assistant internship at an assigned clinical facility. The internship includes application of professional behaviors, data collection and therapeutic interventions.

PTA.-290L Clinical Practice
0 Credits 1.2 Contact
Division signature required. Prerequisite: PTA.-280 Corequisite: PTA.-290.
Comprehensive practice of professional behaviors, data collection and intervention techniques using a case study format of diagnostic categories including musculoskeletal, neurological, cardio-vascular and pulmonary. The laboratory component will be followed by an eight-week physical therapist assistant internship at an assigned clinical facility. The internship includes application of professional behaviors, data collection and therapeutic interventions.

Physics
Science & Math

PHYS-281 General College Physics I
4 Credits 4 Contact
Prerequisite: MATH-140. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: PHYS-281L
This course covers the topics of basic physical properties of mechanics, sound and heat.

PHYS-281L General College Physics I Lab
0 Credits 2 Contact
Corequisite: PHYS-281
This is the lab section of the course which covers the topics of basic physical properties of mechanics, sound and heat.

PHYS-282 General College Physics II
4 Credits 4 Contact
Prerequisite: PHYS-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: PHYS-282L
This course provides advanced discussion of the physical principles of electricity, light and other physics topics.

PHYS-282L General College Physics II Lab
0 Credits 2 Contact
Corequisite: PHYS-281, PHYS-282
This is the lab section of the course which provides advanced discussion of the physical principles of electricity, light and other physics topics.

PHYS-287 General Physics I
5 Credits 5 Contact
Prerequisite: MATH-170. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Corequisite: PHYS-287L
This course is designed to provide students who are planning majors in engineering or physical science programs with a basic understanding of the physical principles of mechanics, sound and heat.

PHYS-287L General Physics I Lab
0 Credits 2 Contact
Corequisite: PHYS-287
This is the lab section of the course which is designed to provide students who are planning majors in engineering or physical science programs with a basic understanding of the physical principles of mechanics, sound and heat.
**Course Descriptions**

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**PHYS-288 General Physics II**  
5 Credits 5 Contact  
Prerequisite: PHYS-287. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Co-requisite: PHYS-288L. This course provides an advanced understanding of the physical principles of electricity, light and other physical principles. It is designed for students who are planning majors in engineering or physical science.

**PHYS-288L General Physics II Lab**  
0 Credits 2 Contact  
Prerequisite: PHYS-287. Co-requisite: PHYS-288. This is the lab section of the course which provides an advanced understanding of the physical principles of electricity, light and other physical principles. It is designed for students who are planning majors in engineering or physical science.

**Political Science**  
Fine Arts & Social Sciences

**PSCN-150 Introduction to Political Science**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Introduction to Political Science will introduce students to the major issues, questions and theories that define the field of political science. The course will examine political behaviors such as war, riots, revolutions and voting and the impact of political ideologies. In addition students will explore the origins and durability of democratic and non-democratic regimes and political institutions and identify enduring political questions and issues.

**PSCN-170 Introduction to American Government**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is an introduction to the fucntion and form of the US government and the contemporary political life in the US. Topics include political ideologies, the role of interest groups and the media, federalism, civil rights, parties and elections, and the responsibility of citizenship.

**PSCN-173 State and Local Government**  
3 Credits 3 Contact  
Prerequisite: PSCN-171. Placement into RDNG-016 (ACSR-016) is required. This course is a survey of the origins, development and functions of state and local government with special attention to Michigan and to metropolitan areas.

**PSCN-175 Civil Liberties**  
3 Credits 3 Contact  
Prerequisite: PSCN-171. Placement into RDNG-016 (ACSR-016) is required. This course is a survey of the courts, the Constitution and politics that affect civil liberties. Topics include freedom of speech, press, religion, criminal rights and civil rights laws.

**PSCN-177 Introduction to Public Administration**  
3 Credits 3 Contact  
Prerequisite: PSCN-171. Placement into RDNG-016 (ACSR-016) is required. This course is a survey of the concepts, organization, functions and political environment of the administration of government agencies.

**PSCN-275 Comparative Government**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A comparative study of the structures, functions, issues and performance of governments today. Topics include: methods and concepts of comparative analysis; the nation-state; structures, institutions and processes of contemporary governments; political ideologies; and political performance.

**Psychology**  
Fine Arts & Social Sciences

**PSYC-181 Applied Psychology**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course addresses the psychological principles of human behavior and their application to home, community, civic responsibilities, and working relationships with others on the job.

**PSYC-184 Exceptional People**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. The focus of this course is on four major areas of exceptionality: mentally retarded, emotionally impaired, learning disabled and gifted. The course looks at diagnosis, assessment, educational environment and living/work services, for special-needs children and adults.

**PSYC-280 General Psychology Laboratory**  
1 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Co-requisite: PSYC-281. This course provides an optional laboratory component to the PSYC-281 course. Students will study the scientific method, the brain and nervous system, sensation and perception, learning, cognition, motivation, human development, personality, mental health, social behavior, and animal behavior. The class will focus on the use of computer simulations and exploration of Internet resources.

**PSYC-280 General Psychology**  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. Suggested co-requisite: PSYC-280. The scientific study of behavior and mental processes with special emphasis on research methods, biological basis of behavior, human development, learning and cognition, personality theories, cultural, environmental and interpersonal influences on behaviors, abnormal development, psychological disorders and therapeutic interventions.

**PSYC-282 Social Psychology**  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required. The study of the individual in group settings. Major areas of study include methodology, socialization, attitudes and beliefs, social perception, attribution theory, interpersonal relationships, aggression, stereotyping, prosocial behavior, group dynamics and organizational effectiveness.
PSYC-283 Theories of Personality  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
This course provides a systematic survey of fundamental theories of human personality and adjustment. Research methods and findings on personality including discussion on the abnormal and adjusted personality.

PSYC-285 Child Psychology  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
The study of human development from the prenatal stages through adolescence, stressing socialization factors leading to personality development in infancy and childhood and the effect of environmental factors on cognitive development.

PSYC-286 Abnormal Psychology  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
The study of human emotional and mental problems and issues.  
The cause, description and classification of personality and behavioral disorders are discussed, including a review of therapeutic approaches.

PSYC-287 Educational Psychology  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
The study of the principles of learning and teaching designed to meet the requirements of students preparing for teaching at either the elementary or secondary school level. Extensive reading, class discussion and activities are combined to clarify learning theory, the conditions of learning, and the art of teaching.

PSYC-289 Psychology of Late Adulthood  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
The study of adult development and aging. Developmental changes affecting sensation, perception, memory, intelligence, personality, interpersonal relationships and social involvements will be studied. Psychopathology, contemporary intervention techniques, bereavement, coping strategies, death and dying within the context of the aging process.

PSYC-290 Psychology of Adolescence  
3 Credits 3 Contact  
Prerequisite: PSYC-281. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.  
The study of the problems and issues that face teenagers and their parents. Emphasis is on the psychological impact of being a teenager in a rapidly changing world.

PSYC-291 Psychology of Human Development  
4 Credits 4 Contact  
Prerequisite: PSYC-281. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.  
The study of changes that occur across the life span of human beings from conception to death. Investigation of the processes of physical, social, and moral development; study of the development of language, identity, cognition, emotion and personality.

Quality Assurance  
Technology

QUAL-101 Introduction to Quality Assurance  
3 Credits 3 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course introduces the basic concepts of quality and quality assurance as an integral part of the larger organization. It provides a basic knowledge of graphing techniques, terminology and definitions used in the business or service fields.

QUAL-103 Metrology  
3 Credits 4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course introduces a variety of measuring tools and techniques used in business today. This includes a basic overview of calibration, storage, maintenance and management of tools including, but not limited to, basic hand tools, optical comparators, color evaluation, and a brief exposure to the coordinate measuring machine.

QUAL-103A Basic Measuring Tools  
1 Credits 1.5 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This module is extrated from the QUAL-103 Metrology class and covers the introductory hand measuring tools including Calipers, Micrometers, Scales, Depth Gages and Height Gages.

Radio Frequency Id  
Technology

RFID-180 Radio Frequency ID Fundamentals  
3 Credits 4 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-016) is required.  
This course covers radio frequency identification (RFID) concepts and fundamentals, and how emerging electronic product code (EPCglobal) standards are influencing adoption. Content includes RFID capabilities, current applications of RFID in business, and practical ways to articulate "use cases" for this new technology to potential employers and peers.

RFID-181 TagNet Middleware  
3 Credits 4 Contact  
Pre-requisite: RFID-180. Placement into RDNG-016 (ACSR-016) is required.  
This course covers TagNet middleware, specifically how to install, configure, and implement various use cases found in the supply chain. Topics include capabilities of TagNet and how various use case factors influence read rates and reliability.

Reading  
Humanities

RDNG-016 Essential Reading Skills  
3 Credits 3 Contact  
Corequisite: ENGL-098 or ENGL-099  
Placement into this course determined by testing. This course exposes students to a collaborative reading activity, which provides students with an opportunity to construct meaning from print. The student will engage in developing tools to direct their own learning experience through self-assessment strategies that enhance interpretation of print.
Respiratory Therapy
Health Sciences

RTAD-120 Respiratory Assessment
3 Credits 3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. An introduction to the fundamental skills of patient assessment and communication. Additional topics include interpretation of clinical laboratory data, legal and ethical responsibilities, charting, professionalism and death/dying.

RTAD-121 Respiratory Principles
3 Credits 3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. An introduction to the field of respiratory therapy with emphasis on laws of physics relating to respiratory procedures. Topics include: gas physics, medical gas therapy, and humidity and aerosol therapy.

RTAD-122 Respiratory Physiology
3 Credits 3 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. A review of anatomy and physiology of the cardio-pulmonary system. Normal structure and function of the human body will be emphasized to establish a basis for understanding illness and disease.

RTAD-124 Respiratory Pharmacology
1 Credits 1 Contact
Division signature required. Prerequisite: Program eligibility requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-120, RTAD-121, RTAD-122 and RTAD-125. An introduction to pharmacology with a focus on the application of drugs for the treatment of pulmonary disorders. A broad description of pharmacology used in critical care and emergency care will be discussed as well as methods of drug calculation.

RTAD-125 Respiratory Lab I
1 Credits 3 Contact
Division signature required. Prerequisite: Program eligibility requirements. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-120, RTAD-121, RTAD-122, RTAD-124. Provides supervised laboratory practice in fundamental skills and procedures in respiratory care. Includes equipment function and related therapeutic application in basic patient assessment, infection control, medical records management, medical gas therapy, humidity and aerosol therapy and medication administration.

RTAD-130 Respiratory Techniques
3 Credits 3 Contact
Division signature required. Prerequisite: RTAD-120 and RTAD-121 and RTAD-122 and RTAD-124 and RTAD-125. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-132, RTAD-134 and RTAD-135. Provides concepts of therapeutic procedures and equipment used in fundamental respiratory care. Includes incentive spirometry, intermittent positive pressure breathing, non-invasive ventilating, chest physical therapy, bronchial hygiene techniques, airway care and an introduction to mechanical ventilation.

RTAD-132 Respiratory Pathophysiology
3 Credits 3 Contact
Division signature required. Prerequisite: RTAD-120, RTAD-121, RTAD-122, RTAD-124 and RTAD-125. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-130, RTAD-134 and RTAD-135. An introduction to the concept of pathophysiology as it relates to diseases affecting the cardiopulmonary system. The etiology, anatomical alterations, clinical manifestations and treatment of the disease will be discussed.

RTAD-134 Respiratory Clinical Practice I
5 Credits 15 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. An introduction to the policies and procedures of a respiratory care department and the equipment used in basic respiratory care of patients. Directed clinical practice includes cardiopulmonary resuscitation, medical gas therapy, aerosol and humidity therapy, hyperinflation therapy, chest physical therapy, and airway care.

RTAD-135 Respiratory Lab II
1 Credits 3 Contact
Division signature required. Prerequisite: RTAD-120, RTAD-121, RTAD-122, RTAD-124 and RTAD-125. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-130, RTAD-132 and RTAD-134. Supervised laboratory practice in fundamental skills and more advanced therapeutic procedures. Equipment function and related therapeutic application in incentive spirometry, intermittent positive pressure breathing, non-invasive ventilation, chest physical therapy, airway care and an introduction to mechanical ventilation.

RTAD-150 Respiratory Procedures
1 Credits 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Provides continued instruction in the concepts of mechanical ventilation with respect to initiation of patient ventilation monitoring and management, and ventilator weaning and discontinuance.

RTAD-154 Respiratory Clinical Practice II
4 Credits 12 Contact
Note: Division signature required. Prerequisite: RTAD-130, RTAD-132, RTAD-134 and RTAD-135. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-150 and RTAD-155. Provides an introduction to the intensive care unit and practice of critical care. Directed clinical practice includes airway care procedures and the initiation management and discontinuation of mechanical ventilation.

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RTAD-155 Respiratory Lab III
1 Credit 3 Contact
Division signature required. Prerequisite: RTAD-130, RTAD-132, RTAD-134 and RTAD-135. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-150 and RTAD-154. Supervised laboratory practice in more advanced skills and critical care procedures in respiratory care. Equipment function and related therapeutic application in initiation of mechanical ventilation, patient management and monitoring, ventilator weaning and discontinuance, and arterial blood gas sampling.

RTAD-221 Critical Respiratory Care
3 Credits 3 Contact
Division signature required. Prerequisite: RTAD-150, RTAD-154 and RTAD-155. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-222, RTAD-224 and RTAD-225. Provides advanced concepts related to critical care. Topics include EKG interpretation, hemodynamic monitoring, advanced modes of mechanical ventilation, and related critical care monitoring.

RTAD-222 Respiratory Neonatal/Pediatric Care
1.25 Credits 1.75 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. This course is designed to introduce the respiratory therapy student to the principles and techniques associated with neonatal and pediatric respiratory care patients. The principles of neonatal and pediatric resuscitation will be covered.

RTAD-223 Respiratory Clinical Practice III
4 Credits 12 Contact
Division signature required. Prerequisite: RTAD-150, RTAD-154 and RTAD-155. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-221, RTAD-222, RTAD-224 and RTAD-225. Provides a more in-depth exposure to the practice of critical care and specialty care. Directed clinical practice includes adult, pediatric and neonatal intensive care, home care, pulmonary rehabilitation, and diagnostic testing.

RTAD-224 Respiratory Clinical/Critical Care
1 Credit 3 Contact
Division signature required. Prerequisite: RTAD-150, RTD-154 and RTAD-155. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-221, RTAD-222 and RTAD-225. This is a clinical course designed to reacclimate the returning respiratory therapy student with the clinical setting, especially the critical care area.

RTAD-225 Respiratory Diagnostics/Sub Acute Care
1 Credit 1 Contact
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required. The emphasis of this course will focus on diagnostic procedures and sub-acute respiratory care. The areas to be covered include: advanced pulmonary function testing, bronchoscopy, home care, sleep studies, extended care and pulmonary rehabilitation. This course will help prepare the student for related clinical practice.

RTAD-231 Respiratory Seminar
3 Credits 3 Contact
Division signature required. Prerequisite: RTAD-221, RTAD-222, RTAD-223, RTAD-224, RTAD-225. Placement into ENGL-100 (ACSR-100) or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-232, RTAD-233. A discussion of more sophisticated and advanced areas of respiratory care. Computerized clinical simulations will provide a basis for developing information gathering and decision making skills. Evaluation of current respiratory care research.

RTAD-232 Respiratory Exam Preparation
1 Credit 1 Contact
Division signature required. Prerequisite: RTAD-221 and RTAD-222 and RTAD-223 and RTAD-224 and RTAD-225. Placement into ENGL-100 (ACSR-100) or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Co-require: RTAD-231 and RTAD-233. This course is designed to prepare a student to pass the credentialing respiratory therapy examinations which are administered by the National Board for Respiratory Care (NBRC). The course will prepare individuals for the entry-level examination (CRT), the advanced practitioner examination (WRRT), and the clinical simulation examination (CSE). On-line testing and computerized simulations will enhance the student understanding and provide realistic preparation for these exams.

RTAD-233 Respiratory Clinical Practice IV
5 Credits 15 Contact
Division signature required. Prerequisite: RTAD-221, RTAD-222, RTAD-223 and RTAD-224 and RTAD-225. Placement into ENGL-100 (ACSR-100) or completion of RDNG-030, ACLT-075, or ACLT-076 is required. Corequisite: RTAD-231 and RTAD-232. A continuation of Respiratory Clinical Practice III with the integration of concepts learned in the seminar class. Clinical practice is directed at making the transition from student to respiratory care practitioner.

Russian

RUSN-111 Beginning Russian
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Basic structure of the Russian language and Cyrillic alphabet. Oral and written components with readings based on Russian life and culture.

RUSN-112 Beginning Russian II
4 Credits 4 Contact
Prerequisite: RUSN-111. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Continued study of the Russian language through readings based on Russian life and culture.

RUSN-185 Conversational Russian
4 Credits 4 Contact
Prerequisite: RUSN-112. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course is designed to help the student develop a high level of verbal ability in Russian by increasing vocabulary and expanding communications skills in Russian. This course places more emphasis on speaking skills.

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RUSN-211 Intermediate Russian I  
4 Credits  4 Contact  
Prerequisite: RUSN-112. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course is a continuation of the basic structure and patterns needed to understand written and spoken Russian. Readings with emphasis on life and culture of Russia. Emphasis is given on building vocabulary and understanding advanced grammatical structures of the language.

RUSN-212 Intermediate Russian II  
4 Credits  4 Contact  
Prerequisite: RUSN-211. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
This course is a continuation of the basic structure and patterns needed to understand written and spoken Russian. The goal of this course is to develop writing and speaking skills to a point where a student would be comfortable carrying a conversation about everyday life. Longer readings (both fiction and non-fiction) with emphasis on life and culture. Emphasis is given on building vocabulary and understanding more advanced grammatical structures of Russian.

Scientific Inquiry  
Science & Math  

SCI-101 Scientific Inquiry  
4 Credits  6 Contact  
Prerequisite: Placement into RDNG-016 (ACSR-030) is required.  
A discovery-based integrated science course providing a macroscopic examination of the natural world. Scientific inquiry will examine key concepts from biology, chemistry, earth sciences and physics. This course is designed for education and other non-science majors.

Sign Language Interpreter Ed  
Humanities  

SLIE-103 American Sign Language III  
4 Credits  4 Contact  
Prerequisite: ASL-102. Placement into RDNG-016 (ACSR-016).  
Course designed to mentally and physically prepare students contemplating careers in the field of interpreting. Intense exposure to the field of interpreting. Intense exposure to ASL, building upon the vocabulary and linguistics learned in ASL I and II. Class relies on student participation and interaction to increase sign production skills.

SLIE-104 Selected Features of ASL  
2 Credits  2 Contact  
Prerequisite: 3.0 or higher in ASL-102. Placement into RDNG-016 (ACSR-016).  
This course provides students with advanced instruction and practice in producing and comprehending fingerspelling, numbers, multiple meaning words and non-manual markers. This course is designed for students intending to become interpreters. Suggested co-requisite SLIE-103.

SLIE-203 ASL Discourse  
2 Credits  2 Contact  
Prerequisite: 3.0 or higher in SLIE-103 and SLIE-104. Placement into RDNG-016 (ACSR-016) is required.  
Students in this course will do feature analysis and application of ASL discourse. Students will study ASL and English expansion and compression techniques, ASL prosody, eye gaze, discourse pauses, advanced use of classifiers, idiomatic language and ASL semantics. Suggested co-requisite SLIE-204.

SLIE-204 American Sign Language IV  
4 Credits  4 Contact  
Prerequisite: SLIE-103 or placement by competency testing. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
Course designed to concentrate on applying skills learned in ASL III, while increasing usage of vocabulary, idioms, gestures, facial expressions, visual reception, and body language. Skills in expressing and receiving signs will be refined, while subtleties and distinction are cultivated. Students will also study ASL Literature.

SLIE-205 American Sign Language V  
4 Credits  4 Contact  
Prerequisite: SLIE-204. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
Course concentrates on applying skills learned in ASL IV while again increasing usage of vocabulary, idioms, facial expressions, visual reception, and body language.

SLIE-206 Intro to ASL Linguistics  
4 Credits  4 Contact  
Prerequisite: SLIE-205. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.  
Course focuses on the fundamentals of phonology, morphology, syntax, semantics, and the use of language as related to ASL. Study the evolutionary nature of all languages, including ASL.

SLIE-215 Professional Responsibility  
3 Credits  3 Contact  
Prerequisite: Minimum 3.0 in ASL-102. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required.  
Introduction to the interpreting process, code of ethics, history of interpreting, terminology, roles and etiquette of the professional interpreter. Different aspects of interpreting in the educational setting will be investigated, including the roles and responsibilities of the educational interpreter, working conditions, and certification criteria.

SLIE-220 Processing Skills Development  
3 Credits  3 Contact  
Prerequisite: SLIE-103. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required.  
Course focuses on various processing skills interpreters must master in order to become a competent interpreter. Most of the drills will work on processing information from English to English. Some of the drills will include visualization, listening, shadowing, abstracting, dual tasked, paraphrasing, and sight translation.

SLIE-230 ASL to English I  
3 Credits  4 Contact  
Prerequisite: SLIE-204 with a minimum grade of 3.0, SLIE-215 with a minimum grade of 3.0, SLIE-220 with a minimum grade of 3.0 and a SCPI Score of at least 2.75. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required.  
Information and knowledge gathered in prerequisite classes will be utilized to begin interpreting sign to voice. Role play situations assist in rehearsing the ethics, interpersonal skills, and proper protocol of the interpreter.
SLIE-231 ASL to English II  
3 Credits  4 Contact  
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. Prerequisite: Minimum 3.0 in SLIE-230 and SLIE-204. 
Course continues to develop interpreting skills in the area of sign to voice. Intensified instruction is provided on style, vocabulary usage, and adapting to the variety of communication needs. The skill level required for a variety of settings will be analyzed as students develop an increased ability to receive complex information through sign language.

SLIE-240 Interpreting and Transliterating I  
3 Credits  4 Contact  
Prerequisite: SLIE-204 with a minimum grade 3.0, SLIE-215 with a minimum grade 3.0, SLIE-220 with a minimum grade 3.0. SCPI Score of at least 2.75. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. 
Information and knowledge gathered in prerequisite classes will be utilized to begin interpreting and transliterating voice to sign. Role play situations assist in rehearsing the ethics, interpersonal skills, and proper protocol of the interpreter.

SLIE-241 Interpreting and Transliterating II  
3 Credits  4 Contact  
Prerequisite: Minimum 3.0 in SLIE-240 and SLIE-204. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. 
Continues to develop interpreting skills in the area of voice to sign. Intensified instruction is provided on style, vocabulary usage, and adapting to a variety of communication needs. The skill level required for a variety of settings will be analyzed as students develop an increased ability to utilize consumer-appropriate facial expressions, eye gaze, body position, and sign space when interpreting.

SLIE-242 Advanced Skill Development Interpreting  
3 Credits  4 Contact  
Prerequisite: SLIE-231 with a minimum grade 3.0 and SLIE-241 with a minimum grade 3.0. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. 
Focus will be placed on interactive interpreting settings including but not limited to: parent teacher conferences, meetings with loan officers, doctor and mental health counseling sessions and sales pitches. Intensified instruction is provided on increasing English and ASL technical vocabulary for situations listed above and adapting to a variety of situations.

SLIE-245 Intro to Deaf Blind Interpreting  
3 Credits  3 Contact  
Prerequisites: Minimum 3.0 in SLIE-103 and SLIE-215. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. 
Course focuses on the interpreting needs of the Deaf-Blind Community. Various eye conditions related to deaf-blindness will be explored. An overview of the hearing process will be discussed. Practical hands-on experiences will be used to develop awareness of the special needs of the Deaf-Blind.

SLIE-250 Educational Interpreting  
3 Credits  3 Contact  
Prerequisites: Minimum 3.0 in SLIE-103 and SLIE-215. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. 
Course covers different aspects of educational interpreting. Students will identify and demonstrate other sign language modalities typically used in the educational system; explain and demonstrate appropriate professional behavior in the educational system; learn how to adapt modalities to fit the age group level of the student; demonstrate increase in ASL and spoken English academic related technical terms; demonstrate knowledge of the IEP process; demonstrate knowledge of typical child development stages.

SLIE-255 Interpreters Certification Prep.  
2 Credits  2 Contact  
Prerequisite: 3.0 or higher in SLIE-231 and SLIE-241. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. 
This course provides students with simulated interpretation, transliteration and sight translation practice, with the purpose of developing skills and knowledge necessary for interpreter certification. Designed for students intending to become interpreters, this course will provide information and practice in preparation for current state of Michigan interpreting certification, current K-12 state required certification, and current national level certification, with an emphasis on the current state of Michigan certification exam.

SLIE-290 Practicum I  
3 Credits  3 Contact  
Prerequisite: Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. 
Introduces students to observation of interpreters in authentic interpreting situations and allows the student hands-on interpreting experience while being observed by a practical interpreter.

SLIE-291 Practicum II  
3 Credits  3 Contact  
Prerequisite: SLIE-290. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075 or ACLT-076 is required. 
Class meets every week unless otherwise indicated. Additional hours to be completed in the field. Provides students the opportunity to interpret, under supervision, in various interpreting settings.

SLIE-298 Colloquialisms in English & ASL  
2 Credits  2 Contact  
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. 
This course provides students with intense instruction of slang, catch phrases and metaphors present in both English and American Sign Language by focusing on analyzing what they mean, when to use them and how they are used. Students will explore various colloquialisms used in both English and ASL and how to translate them both from one language to another.

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Social Work
Fine Arts & Social Sciences

SOCW-131 Introduction to Social Work
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. A basic overview and introduction to the profession of Social Work. Topics include basic concepts, historical overview of social welfare, and the primary areas in which social workers concentrate to prevent or reduce social dysfunction.

SOCW-132 Programs of Community Welfare
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Introduces students to agencies and services in our community. Students learn to assess client problems and make accurate referrals to organized services to meet individual, group and community needs. Provides historical overview and current issues of social work as a profession. Ethnic and cultural issues are stressed.

SOCW-133 Child Welfare
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The study of historic and current programs and laws which aim to protect children. Services geared to children, and neglect and abuse are examined.

SOCW-134 Social Work Practicum
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Student will learn basic casework skills and how to interview clients with an array of personal and social problems in various settings. Students use role playing and video recording to develop professional techniques. Students learn how to prepare case records.

SOCW-135 Agency Experience-Social Work
1 Credit 1 Contact
Prerequisite: SOCW-131. Placement into RDNG-016 (ACSR-016) is required. Entry level experience in a social agency prior to field work placement. Students will be placed in an agency as a volunteer for fifty hours. Placements are selected by the instructor. Students will be expected to be available during daytime hours to complete this placement.

SOCW-136 An Introduction to the Study of Substance Abuse
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course surveys the issues surrounding substance abuse, i.e., alcohol, drugs, etc. Explores usage, consequences of abuse, and agency response to substance abuse. This course may apply to State certification in substance abuse.

SOCW-137 Substance Abuse Services and Policy
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course addresses the paraprofessional and professional activities in the treatment of substance abuse. Substance abuse legislation and its impact on local and state programs in Michigan substance abuse treatment delivery systems are compared with those of other states.

SOCW-138 Social Work With the Aged
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This is a general overview course of aging looking at numbers in the population, at biological and psychosocial changes of aging, socioemotional problems, neglect/abuse and financial exploitation, social work interventions with the elderly and their support system, and the course addresses end of life issues.

SOCW-236 Introduction to Social Welfare
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The study of the history and development of social welfare policies from the earlier stages to the present. Topics include the roles of broad-based federal and state programs and their impact on society.

SOCW-238 Introduction to Community Development
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to study community organization as a method of social development. The role of groups of concerned citizens seeking to make social changes will be explored. The focus will be on making changes to benefit large segments of the community.

SOCW-240 Field Work in Social Work I
3 Credits 3 Contact
Signature of program coordinator is required. Prerequisites: ENGL-101, ENGL-102, SOCW-131, SOCW-132, SOCW-135 with a grade of 2.0 or better in each class. Placement into RDNG-016 (ACSR-016) is required. Pre- or Co-requisite: SOCW-134. Instructor will select placement and arrange hours. Provide practical experiences in social agencies in the community. Students will apply academic concepts and acquired skills to a work situation under supervision of a qualified agency representative. Students can expect placements during daytime hours. Only the placement site selected by the coordinator will be honored. The agency has the final right to screen accept, reject, and/or terminate student participants. Students are expected to follow the accepted code of ethics of the profession and adhere to policies of the placement agency.

SOCW-250 Field Work in Social Work II
3 Credits 3 Contact
Prerequisites: SOCW-134 and SOCW-240. Placement into RDNG-016 (ACSR-016) is required. Continuing in the field placement agency from SOCW-240, this course will provide practical experiences in social agencies in the community. Students will apply academic concepts and acquired skills to a work situation under supervision of a qualified agency representative. Students can expect placements during daytime hours. Only the placement site selected by the coordinator will be honored. The agency has the final right to screen accept, reject, and/or terminate student participants. Students are expected to follow the accepted code of ethics of the profession and adhere to policies of the placement agency.
Sociology
Fine Arts & Social Sciences

SOCY-191 Introductory Sociology
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
A systematic study of human behavior in groups; the socialization of individuals into their culture; the formation and functioning of different kinds of social groups; and the processes of stability, deviance, and change in society.

SOCY-193 Marriage and the Family
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course addresses the relationships of partners through courtships, marriage and parenthood, with emphasis on attitudes and social adjustments which make for successful marriage.

SOCY-194 Fundamentals of Human Sexuality
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
This course teaches the understanding of accurate cognitive information and understanding of human sexuality. An integrated view of sex which includes in its scope the biological, psychological and socio-cultural, as well as existential aspects of sex. Draws information from various life sciences and social sciences, even though the majority of the content has sociological orientation.

SOCY-292 Social Problems
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
A sociological analysis of major social problems with some cross-cultural and global perspective. Crime and juvenile delinquency, population and ecology, terrorism and war and race relations, an aging population, and physical and mental health; potential programs for the prevention and amelioration of these problems.

SOCY-294 Race and Ethnic Relations
3 Credits 3 Contact
Prerequisite: SOCY-191. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
A study of racial and ethnic minorities and their subcultures and specific problems. Concentration on the United States as a cultural unit. Emphasis on the different effects of socializations as related to personality development within minorities.

SOCY-296 Urban Sociology
3 Credits 3 Contact
Prerequisite: SOCY-191. Placement into ENGL-100 (ACSR-100), or completion of RDNG-030, ACLT-075, or ACLT-076 is required.
This course provides a survey of the development of the urban community with emphasis on its form, demographic character and organizational life, and the relationship of urban societies to the larger society.

SOCY-297 Introduction to Criminology Correction
3 Credits 3 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016, is required.
An analysis of the history and contemporary causes of crime. A review of a broad spectrum of subjects involving the criminal justice system through lectures and current readings and research.

Spanish
Humanities

SPAN-160 Intro to Spanish for Business
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
This introductory course is designed for students and professionals with no prior knowledge of Spanish who wish to learn and use business Spanish. The amount of material presented has been limited to the most common business situations. This course has a practical approach that will help students develop communicative competence by involving them in real-life situations.

SPAN-181 Elementary Spanish
4 Credits 4 Contact
Prerequisite: Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Study the basic structure of the Spanish language with constant oral and written practice. Readings emphasize the life and culture of Spain and Latin America.

SPAN-182 Intermediate Spanish I
4 Credits 4 Contact
Prerequisite: SPAN-181 or equivalent proficiency. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Continuation of the basic structure of the Spanish language with constant oral and written practice. Reading emphasize the life and culture of Spain and Spanish America.

SPAN-281 Intermediate Spanish II
4 Credits 4 Contact
Prerequisite: SPAN-182, two years of high school Spanish or equivalent proficiency. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Grammar review with oral and written drills. Conversation and composition. Readings emphasize the history, culture, and literature of Spain and Spanish America.

SPAN-282 Intermediate Spanish II
4 Credits 4 Contact
Prerequisite: SPAN-281 or equivalent proficiency. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
A continuation of SPAN-182. Includes practice in conversation and composition. Introduction to Spanish poetry. Readings emphasize history, culture, and literature of Spain and Spanish America.

SPAN-295 Spanish for Business Communication
3 Credits 3 Contact
Prerequisite: Two years of college Spanish with a 2.0 or better each semester. A study abroad program in Spain. Student must contact instructor before enrolling. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required.
Enables students to acquire the adequate terminology and the language structures appropriate to a field in constant evolution. Students develop oral and written skills to communicate effectively in situations where accuracy is essential, and to understand the
functions.

This course covers logarithms, trigonometric functions, vectors, triangles and circles. It will cover applications in angular measure, Pythagorean theorem, similarity, triangle areas, right triangle trigonometry, laws of sines and cosines, trigonometric formulas, identities, equations and graphing, functional variation, simultaneous quadratics, and calculator operations involving logarithmic and trigonometric functions.

**MATT-094D Technical Geometry**  
1 Credits  
1 Contact  
Prerequisite: MATT-094C or equivalent placement test score. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. Note: This class is taught in the third quarter of the semester. A course for technical students in developmental mathematics with a focus on measurement. Topics covered are precision, accuracy, metric-English conversions, area, volume and surface area.

**MATT-121 Technical Mathematics II**  
4 Credits  
4 Contact  
Prerequisite: MATT-128. Placement into RDNG-030 (ACSR-030), or completion of RDNG-016 is required. This course covers logarithms, trigonometric functions, vectors, rectangular and polar coordinates, oblique triangles, law of sines and cosines, trigonometric formulas, identities, equations and graphing, functional variation, simultaneous quadratics, and calculator operations involving logarithmic and trigonometric functions.

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residential applications. This course will aid students in all disciplines including automotive, electrical, building construction, computer-aided drafting and design, heating and air conditioning and general sciences.

### TECH-120 Introduction to Fab Lab
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must provide: Safety Glasses, USB Drive (aka: "Jump" Drive), 3-Ring Binder.

This is an introduction to "personal fabrication" and is modeled on Neil Gershenfeld's "fab labs" concept at MIT and around the world. Students will learn to use commercially available technologies to "conceptualize, design, develop, fabricate and test" objects. This course will cover the computer software and contemporary tools needed for cutting, milling, engraving, electrical and rapid prototype development. The fab lab is designed to explore interests in graphic design, visual arts, business, computer-assisted design, physical and natural science, and mathematics, as well as engineering and other advanced technologies.

### TECH-121A Intro to STEM Applications - Guitar
2 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Student must provide a Travel Drive.

This course will focus on STEM topics embedded in the guitar design and highlight critical elements related to the production of a quality instrument. Elements will include math concepts used to design the fret board and position components, sustainability and reliability principles, introduction to computer aided design and electronics and design for assembly and manufacturability to ensure the guitar can be accurately tuned and played. Each student will demonstrate understanding of these concepts by producing a custom solid body electric guitar.

### Theater

#### Fine Arts & Social Sciences

#### THTR-110 Introduction to Theatre
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. The major theater periods of Europe and America; the arts and crafts of theatrical production.

#### THTR-120 Acting I - Fundamentals of Acting
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pantomime, stage movement, characterization, and motivation. Presentation of scenes from plays used as classroom exercises.

#### THTR-151 Theatre Practice
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Numerous evening rehearsals will also be required. Training and experience in many aspects of theatrical productions. Additional hours may be necessary for rehearsal periods.

#### THTR-152 Theatre Practice
2 Credits 2 Contact
Prerequisite: THTR-151. Placement into RDNG-016 (ACSR-016) is required. Numerous evening rehearsals will also be required. Training and experience in many aspects of theatrical productions. Additional hours may be necessary for rehearsal periods.

#### THTR-220 Acting II
3 Credits 3 Contact
Prerequisites: THTR-120 with a minimum grade of 2.0. Placement into RDNG-016 (ACSR-016) is required. This course will build on the foundational aspects of theatrical performance explored in Fundamentals of Acting. Focus will be placed on text analysis, character development and scene study for acting on stage.

#### THTR-251 Theatre Practice
2 Credits 2 Contact
Prerequisite: THTR-152. Placement into RDNG-016 (ACSR-016) is required. Numerous evening rehearsals will also be required. Training and experience in many aspects of theatrical productions. Additional hours may be necessary for rehearsal periods.

#### THTR-252 Theatre Practice
2 Credits 2 Contact
Prerequisite: THTR-251. Placement into RDNG-016 (ACSR-016) is required. Numerous evening rehearsals will also be required. Training and experience in many aspects of theatrical productions. Additional hours may be necessary for rehearsal periods.

### Transport., Dist. & Logistics

#### Technology

#### TDL.-101 Introduction to Logistics
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed as an introduction to the activities associated with transportation, warehousing/distribution/material handling, and inventory management. Additional information includes industry history, legal and regulatory issues, documentation requirements, safety and security concerns. Students will be eligible to test for the nationally recognized certification as a Certified Logistics Associate (CLA).

#### TDL.-111 Fundamentals of Warehousing and Distribution
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to provide students with an understanding of the activities in a Warehouse or Distribution Center. Information includes product receiving, storage, order processing, packaging, shipping, inventory control, hazardous materials handling, dispatch, tracking, and mobile equipment operations. Students will be eligible to test for the nationally recognized certification as a Certified Logistics Technician (CLT).

#### TDL.-121 Domestic and International Freight Oper.
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course is designed to provide students with a background of current issues and best practices used in domestic and international freight operations. Topics include transportation modes and providers, regulation and policy, carrier strategies, dispatching and tracking, costing and pricing, information systems, negotiating, and bidding.
TDL-131 Supply Chain Logistics
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course offers instruction to prepare students with an understanding of the information, product, service, and knowledge flow in the integrated supply chain. Topics include supply chain global relationships, forecasting, production, and quantity planning, inventory management, information systems, and total landed cost evaluation.

TDL-141 Commercial Drivers License (cdl) Basics
1 Credits 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course prepares students to transport cargo and hazardous materials safely. Students will learn various vehicle combinations and basic maneuvers required by the State of Michigan. These maneuvers include Straight Line Backing, Forward Pull Up, 90 Degree Aly Docking and the Precision Right Hand Turn. This course will provide a framework for on the job training using methods and skills learned throughout the course by gaining experience with potential employers. The course instructor and a specific cooperating employer will define the specific learning activities and work responsibilities to be carried out by the student. (Students must meet State requirements for CDL.)

TDL-142 Commercial Drivers License - Truck
2 Credits 2 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. This course introduces students to special issues in web page creation. Specific topics will vary as new developments arise in the computer field.

TDL-144 Commercial Drivers License - Internship
3 Credits 3 Contact
Prerequisite: Must have instructor permission. Placement into RDNG-016 (ACSR-016) is required. This course prepares students to transport cargo and hazardous materials safely. Students will learn various vehicle combinations and basic maneuvers required by the State of Michigan. These maneuvers include Straight Line Backing, Forward Pull Up, 90 Degree Aly Docking and the Precision Right Hand Turn. This course will also have instructional on the road training in which students will learn to navigate city streets and expressways. (Students must meet State requirements for CDL.)

TDL-145 Motor Carrier Advanced Responder Educ.
1 Credit 1 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. In this course, students will learn first aid basics and CPR/AED for adults, children, and infants. This course provides a framework for learning basic skills that may save a life or prevent further injury. This course will introduce students to the concepts of safety providing assistance and advanced care to sick or injured persons that professional commercial vehicle operators may encounter during their career on the nation's roadways. Students will learn from scenarios of actual emergencies that are common in the commercial vehicle industry.

Video Production
Technology

COMV-141 Digital Video Production
4 Credits 6 Contact
Prerequisite: COMG-153 or PHOT-180. Placement into RDNG-016 (ACSR-016) is required. This course will introduce the student to the digital video/audio production process and digital video/audio non-linear editing. The course will explore all aspects of video production in both lecture and lab based hands-on learning emphasizing real world projects. (Note: COMV-141 is equivalent to MAET-100. Students who have taken MAET-100 should not take COMV-141)

Web Development
Technology

COMW-100 Intro to Web Page Creation
3 Credits 3 Contact
Prerequisite: COMG-150 or COMG-153. Placement into RDNG-016 (ACSR-016) is required. This course offers instruction to prepare students for the Commercial Drivers License exam and obtain a Temporary Instruction Permit. Instruction in breakdown procedures, hazard driving conditions, basic knowledge of the vehicle systems and various endorsements will be provided, as well as drivers wellness. Department of Transportation rules and regulations will be thoroughly covered as well as the Commercial Motor Vehicle entry level requirements under the Federal Motor Carrier Safety Code. (Students must meet State requirements for CDL.)

COMW-131 Supply Chain Logistics
3 Credits 3 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre or Co-requisite(s): TDL-141. This course offers instruction to prepare students for the Commercial Drivers License exam and obtain a Temporary Instruction Permit. Instruction in breakdown procedures, hazard driving conditions, basic knowledge of the vehicle systems and various endorsements will be provided, as well as drivers wellness. Department of Transportation rules and regulations will be thoroughly covered as well as the Commercial Motor Vehicle entry level requirements under the Federal Motor Carrier Safety Code. (Students must meet State requirements for CDL.)

COMW-141 Design Concepts for the Web
2 Credits 2 Contact
Prerequisite: Instructor permission required. Placement into RDNG-016 (ACSR-016) is required. This course introduces students how to develop appealing websites by using elements of good design. Topics covered include website layouts, typography, color theory, web accessibility and multimedia design. Students will become familiar with design theories as well as application.

COMW-176 Web Page Creation: Topics & Issues
1 Credit 1 Contact
Prerequisite: Instructor permission required. Placement into RDNG-016 (ACSR-016) is required. This course introduces students to special issues in web page creation. Specific topics will vary as new developments arise in the computer field.

COM&W-210 Web Scripting Technologies
4 Credits 4 Contact
Prerequisites: COMW-100 and COMS-170. Placement into RDNG-016 (ACSR-016) is required. This course introduces students to the world of web page design using HTML, JavaScript, and other Internet development tools. Emphasis will be placed on understanding of formatting of pages, establishing links, HTML, and inclusion of JavaScript with images, graphics and sound. Students will use an editing program as well as create pages from HTML code. Web pages will be uploaded to the Internet and available on the World Wide Web.

COM&W-241 Interactive Web Page Design
4 Credits 4 Contact
Prerequisite: COMW-100 or COMI-277. Placement into RDNG-016 (ACSR-016) is required. This course introduces students to the world of web page design using HTML, JavaScript, and other Internet development tools. Emphasis will be placed on understanding of formatting of pages, establishing links, HTML, and inclusion of JavaScript with images, graphics and sound. Students will use an editing program as well as create pages from HTML code. Web pages will be uploaded to the Internet and available on the World Wide Web.
introductions to each of: HTML, Cascading Style Sheets, JavaScript, DHTML and XML.

**COMW-283 Database Driven Websites**
4 Credits 4 Contact
Prerequisite: COMW-100 and COMS-172. Placement into RDNG-016 (ACSR-016) is required. Pre or Co-requisite: COMI-261.
This course enables students to create database driven dynamic web pages using web programming languages and accessible database systems. The topics of arrays, functions, external files, content management systems, XML, and programming objects are addressed.

**Welding Technology**

**WELD-143 Welding Processes**
3 Credits 4 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Students must provide their own safety glasses, gloves, boots, welding jacket, and welding beanie for lab activities.
This course includes arc, oxy-acetylene, soldering, brazing, resistance welding, MIG welding, TIG welding, production welding techniques and cutting techniques. Emphasizes welding technology, along with techniques. Laboratory includes safety and set-up procedures, oxy-acetylene and arc welding, MIG and TIG welding, flame and plasma cutting.

**WELD-164 Base Metal Preparation**
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Prerequisite and/or Co-requisite: WELD-143. Students must provide their own safety glasses, gloves, boots, welding jacket, and welding beanie for lab activities.
In this course students perform minor external repairs to cutting equipment and accessories. Students will set up and perform layout and cutting activities with oxy-fuel and plasma equipment in all positions within a limited thickness range on carbon steel. In addition, (plasma) cutting in limited positions within a limited thickness range of austenitic stainless steel and aluminum.

**WELD-166 Shielded Metal Arc Welding I**
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre-requisite and/or Co-requisite: WELD-143. Students must provide their own safety glasses, gloves, boots, welding jacket, and welding beanie for lab activities.
Shielded Metal Arc Welding I students perform minor external repairs to SMAW equipment and accessories. Students will set up and perform SMAW operations, making fillet and groove welds in all positions within a limited thickness range on carbon steel.

**WELD-168 Gas Tungsten Arc Welding I**
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre-requisite or Co-requisite: WELD-143. Students must provide their own safety glasses, gloves, boots, welding jacket, and welding beanie for lab activities.
Students perform minor external repairs to GTAW equipment and accessories. Students will set up and perform Gas Tungsten Arc Welding 1 operations, making fillet and groove welds in all positions within a limited thickness range on carbon steel, and in limited positions within a limited thickness range of austenitic stainless steel and aluminum.

**WELD-170 Gas Metal Arc Welding I**
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre-requisite or Co-requisite: WELD-143. Students must provide their own safety glasses, gloves, boots, welding jacket, and welding beanie for lab activities.
Gas Metal Arc Welding I students perform minor external repairs to equipment and accessories. Set up and perform (short circuit transfer) operations, making fillet and groove welds in all positions within a limited thickness range on carbon steel. Also (spray transfer) operations, making fillet and groove welds in limited positions within a limited thickness range on carbon steel.

**WELD-174 Flux Cored Arc Welding I**
4 Credits 6 Contact
Prerequisite: Placement into RDNG-016 (ACSR-016) is required. Pre-requisite or corequisite: WELD-143. Students must provide their own safety glasses, gloves, boots, welding jacket, and welding beanie for lab activities.
Flux Cored Arc Welding I students perform minor external repairs to equipment and accessories. Set up and perform (self-shielding) operations, making fillet and groove welds in all positions within a limited thickness range on carbon steel. In addition, (gas-shielded) operations, making fillet and groove weld in limited positions within a limited thickness range on carbon steel.