HEALTH SCIENCES

General Policies

The following general policies apply to **all** Health Sciences programs. Requirements specific to a particular program are listed on the program page.

Technical Standards

Each program has developed technical standards to assist interested applicants and continuing students to understand the tasks that a person working in that job would typically be expected to perform. These standards provide a sense of the physical requirements, psychomotor skills and affective behaviors associated with a particular occupation. Standards are listed with each individual program. These are available on the department websites.

Academic Progress

For most programs, students must maintain a 2.0 GPA while in the program. Physical Therapy, Occupational Therapy and Therapeutic Massage students must achieve a grade of 75 percent in each course required by the program. Dental Hygiene students must achieve a grade of 75 percent in each didactic course required by the program. Nursing, Occupational Therapy Assistant, Physical Therapist Assistant and Opticianry students must maintain a 75 percent passing grade in each major course and maintain a 2.5 GPA to progress. Students who do not maintain the expected level of academic progress will be dismissed from the program.

Program faculty reserve the right to require withdrawal of any student from the program or to refuse reinstatement based on the student's academic, clinical, or professional performance.

Accommodation

Students in the health programs with a documented need for reasonable accommodation are encouraged to contact the Office of Disability Services for Students as early as possible. This will help ensure that reasonable accommodations are provided in a timely manner. An accommodation letter is required each semester.

Admission Requirements

Official high school or GED® transcript is a component of the Health Sciences application process. Anyone with a degree from a regionally accredited higher education institution may have this requirement waived following submission of the official college transcript. See individual programs.

Performance-Based Health Sciences (PBHS) Application Process

Health Sciences programs have a competitive application process and many have limited application windows. Students who want to earn Health Sciences degrees or certificates must first declare a General Studies major and take required classes. Once all admissions requirements are met, students can start the performance-based Health Sciences application process. Emergency Management/Homeland Security and Fire Science/Emergency Medical Technician are the only programs exempt from this performance-based application. Please visit the CCRI Health Sciences website (p. 1) for admission guidelines.

Advanced Placement/Challenge Examinations

Applicants with previous education or experience who wish to discuss advanced standing or challenge specific courses should contact the department chair or program director for information.

Background Check

Students are required to have a criminal background check in compliance with requirements of clinical agencies. Persons convicted of a crime, as defined by applicable state or federal law, cannot be offered admission to Health Sciences programs until they have served their sentence, and their criminal background check shows no evidence of criminal activity for at least seven years following the completion of their sentence, probation and/or parole. For more information, program department chair contacts can be found at the CCRI Health Sciences website (https://www.ccri.edu/healthsciences/).

CPR Certification [1]

All CCRI Health Sciences students must have current CPR certification, American Heart Association Basic Life Support (BLS), obtained through an AHA-recognized community training center. This course is also available at CCRI (CPR-Healthcare Providers (HEAL 0200)). Students must provide proof of AHA CPR certification to the department as part of health record documentation per program policies.

Health Insurance

Students are required to obtain health insurance. Health insurance is not provided by the college or clinical agencies. Students are responsible for their own health care expenses.

Health Records [1]

Students accepted into Health Sciences programs must submit complete health records to begin the clinical/technical courses. The health record requires a physical exam and specific documentation showing vaccination and immunity. See program policies for more detail on when health records are due. Students without complete health records, including titers, will not be allowed to start clinical rotations/field placements.

All students enrolled in CCRI Health Sciences programs are required to take the Hepatitis B series of three vaccinations, unless there are medical or religious reasons against it. Contact the department chair of your program for more information. Applicants are encouraged to begin the Hepatitis B series as soon as possible, and provide documentation of vaccinations as they are given, and show follow-up titers prior to entrance into one of the Health Sciences programs.

Individuals who disclose the presence of blood-borne infectious disease will be shown the same consideration as non-infected individuals and will be offered reasonable accommodations. Information regarding the health status of an individual is considered confidential and protected by the Family Education Rights and Privacy Act of 1974.

Occupational Titles

For more information about occupational titles, refer to the Dictionary of Occupational Titles at the Dictionary Of Occupational Titles website (https://occupationalinfo.org/).

Advanced Placement

Selected Health Sciences programs may have advanced placement options for eligible applicants. Additional documents may be required for verification and eligibility. Applicants deemed eligible enter a program

with a specific cohort. If you are eligible for an advanced level course you will be notified to register. Space availability is not automatic because of clinical/class space constraints.

Reinstatement

Reinstatement in CCRI Health Sciences programs is not automatic. Priority is given to students in good academic standing at the time of withdrawal. Students wishing to be readmitted must meet the following criteria.

- Submit a letter of intent to the department chair and program director at least one semester prior to the requested date of re-admittance.
- Nursing students must submit a letter requesting reinstatement via email to the Scholastic Standing Committee chairperson.
- See individual programs for GPA requirements.
- Meet with the department chair and program director.
- Students who have been dismissed from a health program may request reinstatement only once. Students who are dismissed from the program for academic reasons a second time may not return to the program. Students who do not follow the recommended sequence may delay their graduation date.
- Students returning to any Health Sciences program may be required to repeat previous coursework and be approved by the Scholastic Standing Committee. See program pages for specific reinstatement information.
- Upon notification, student will be permitted to register.

Transportation

Students are responsible for transportation to all clinical/technical experiences both on and off campus.

Uniforms and Equipment

Students are responsible for purchasing necessary equipment and/or uniforms, if applicable.

Program Graduation

Students are responsible for completion of **all program requirements** to be eligible for graduation. This includes general education and specialty course requirements.

[1] Emergency Management/Homeland Security students are exempt from CPR certification and health-record requirements.

Programs

Degrees

- Dental Hygiene - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/dental-hygiene-aas/)
- Diagnostic Medical Sonography - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/diagnostic-medical-sonography-aas/)
- Emergency Management/Homeland Security - Associate in Science (https://catalog.ccri.edu/programs-study/health-sciences/emergency-management-homeland-security-as/)
- Fire Science - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/fire-science-aas/)
- Histotechnician - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/histotechnician-aas/)
- Medical Laboratory Technology - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/medical-laboratory-technology-aas/)
- Nursing - Associate in Science (https://catalog.ccri.edu/programs-study/health-sciences/health-sciences-nursing-as/)
- Occupational Therapy Assistant - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/occupational-therapy-assistant-aas/)
- Opticianry - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/opticianry-aas/)
- Physical Therapist Assistant - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/physical-therapist-assistant-aas/)
- Practical Nursing - Diploma (https://catalog.ccri.edu/programs-study/health-sciences/practical-nursing-diploma/)
- Radiography - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/radiology-aas/)
- Respiratory Therapy - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/respiratory-therapy-aas/)
- Therapeutic Massage - Associate in Applied Science (https://catalog.ccri.edu/programs-study/health-sciences/therapeutic-massage-aas/)

Certificates

- Computed Tomography Imaging - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/computed-tomography-imaging-certificate/)
- Dental Assisting - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/dental-assisting-certificate/)
- Emergency/Disaster Management - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/emergency-disaster-management-certificate/)
- Health Care Interpreter - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/health-care-interpreter-certificate/)
- Homeland Security - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/homeland-security-certificate/)
- Magnetic Resonance Imaging - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/magnetic-resonance-imaging-certificate/)
- Phlebotomy - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/phlebotomy-certificate/)
- Renal Dialysis Technology - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/renal-dialysis-technology-certificate/)
- Therapeutic Massage - Certificate (https://catalog.ccri.edu/programs-study/health-sciences/therapeutic-massage-certificate/)

Note: The Therapeutic Massage program, Emergency Management/Homeland Security degree, Emergency/Disaster Management certificate, Homeland Security certificate and Health Care Interpreter certificate are currently under review and not accepting new students. Information will be made available at the CCRI Health and Rehabilitative Sciences website as these programs are updated and revised.

Courses

Computed Tomography Imaging

CTIC 1010 - Fundamentals of CT
(1 Credit)
This hybrid interactive, web-based course is designed to provide students with an overview of CT instrumentation, imaging applications, physics, data acquisition, and history. Students will learn to apply theory to different types of CT equipment, Module 1 describes the history and evolution of computed tomography and the most common uses of CT scanning in medical imaging. You will learn the location and function of major CT equipment components and the basic digital imaging process. Module 2 provides an in-depth description of major CT equipment components and the sequence of events from the application of electrical current to the radiographic tube to the image. You will learn how adjusting the operator console parameters can affect CT image data and the elements of a digital image. Module 3 describes the methods of acquiring computed tomography images, the process of data acquisition and the factors influence that process. You will learn the functions of the data acquisition system and the selectable scan factors used to acquire an image. Note: Students must be accepted into the CT certificate program. Course meets 4 hours a week for 5 weeks.
Other: 4 hours

Corequisite(s):CTIC 1020, CTIC 1030

CTIC 1020 - Procedures and Protocols in CT Imaging
(2 Credits)
This hybrid interactive, web-based course is designed to provide students with an overview of CT procedures. Students will match pathologic processes with the appropriate procedures; choose scan parameters; perform patient history assessments, preparation, filming, and archiving; and review CT images for anatomy, quality, and pathology and common diseases diagnosed via CT. Module 4 describes the steps for computed tomography image reconstruction and the post-processing techniques needed for image enhancement. Students will learn how certain tools are used to view a CT image and the methods used for recording and archiving CT data. Workstation applications for specialized CT scanning are also described in this module. Module 7 explains how to properly position a patient and select appropriate scan parameters for common CT examinations. Students will learn why different window widths and levels are selected and the imaging planes required for each procedure. Module 6 explains methods used to determine image quality in computed tomography and factors that affect image quality. You will learn how to identify CT image artifacts and the factors that influence artifacts. The tests associated with quality control programs are also discussed in this module. Note: Students must be accepted into the CT certificate program. Course meets 4 hours a week for 10 weeks.
Other: 4 hours

Corequisite(s):CTIC 1010, CTIC 1030

CTIC 1030 - Cross-sectional Anatomy I
(6 Credits)
This hybrid interactive, web-based course will focus on anatomy of the human body as it is viewed in the various axial, coronal, and sagittal planes. Radiologic anatomy will be viewed in the context of illustrations and pictures of gross anatomical sections. Module 8 identifies and describes the anatomical planes and structures of the head and neck. You will also learn how to describe the stages of human embryo development as it relates to this region of the body Module 9 describes the major structures of the chest, abdomen and pelvis and how these structures function. You will learn how to identify abdominal quadrants and how to locate organs or structures on a diagram or CT image. CT Clinical Practicum I course is designed to allow qualified technologist to complete the number of clinical procedures mandated by the American Registry of Radiologic Technologist (ARRT) to be considered eligible to apply to sit for certification in CT, while emphasizing the importance of patient care, radiation safety and the principles of radiation protection in the CT department The course is designed to allow the students hands-on experience documenting and performing CT exams within the clinical setting under the direct supervision of a registered technologist. This course is competency based, and students will be assessed through competency exams to document the achievement of clinical objectives. Note: Students must be accepted into the CT certificate program. Course meets 3.5 lecture hours and 16 clinical hours a week for 10 weeks.
Lecture: 3.5 hours, Lab: 16 hours

Corequisite(s):CTIC 1010, CTIC 1020

CTIC 2010 - Patient Care for CT
(1 Credit)
This hybrid interactive, web-based course is designed to provide the basic concepts of patient care as they relate to CT. Topics include emergency procedures, sterile and aseptic techniques, phlebotomy, body mechanics, infection control and standard precautions, patient assessment, cultural competence, contrast media, and basic pharmacology in imaging. Introduces Radiation Safety. Module 5 describes the methods used to measure patient dose and the role of the computed tomography technologist in reducing radiation exposure. You will learn shielding and positioning techniques designed to keep both you and the patient safe. Special considerations for pediatric patients are detailed in this module as well. Module 5a presents the basic principles, concepts, and procedures of radiation protection and radiobiology. Topics include radiation units; principles of radiation protection; absorbed dose calculations; health physics procedures; radiation exposure regulations; and reduction of radiation exposure to patients, personnel, and the environment. Note: Course meets for 4 hours a week for 5 weeks.
Other: 4 hours

Prerequisite(s): CTIC 1010 and CTIC 1020 and CTIC 1030

Corequisite(s):CTIC 2020, CTIC 2030

CTIC 2020 - Advanced Applications and Pathology for CT
(3 Credits)
This hybrid interactive, web-based course is designed to provide students with advanced applications involving other modalities such as Interventional Radiology. Students will be introduced to common pathology imaged using CT with its advantages. Module 10 describes the current trends and basic procedures in computed tomography and how modifications are used for trauma and pathology. You will learn the uses of virtual CT in medical imaging and how CT is used in radiation therapy treatment planning, nuclear medicine and mobile imaging. Module 11 explains how to identify selected pathology on CT images and how to distinguish between the CT appearance of normal organ tissues and tissues with pathological changes. You will also learn the causes for common pathologies and their processes. This is part one of a two-part series. Module 12 is a continuation of Module 11 and is part two of the two-part series. This module explains how to identify selected pathology on CT images and how to distinguish between the CT appearance of normal organ tissues and tissues with pathological changes. You will also learn the causes for common pathologies and their processes. Note: Course meets for 3.5 lecture hours and 16 clinical hours a week for 5 weeks.
Lecture: 3.5 hours, Other: 16 hours

Corequisite(s):CTIC 2010, CTIC 2030

CTIC 2030 - Cross-sectional Anatomy II
(6 Credits)
This hybrid interactive, web-based on-line course will focus on anatomy of the human body as it is viewed in the various axial, coronal, and sagittal planes. Radiologic anatomy will be viewed in the context of illustrations and pictures of gross anatomical sections. Module 2 presents sectional anatomy of the cranium and facial bones. This module is designed to enhance your study of your sectional anatomy course textbook. Sections 2 through 6 provide a detailed study of the anatomy of the cranium and facial bones divided into portions. Module 4 presents sectional anatomy of the vertebral column and spinal cord. This module is designed to enhance your study of your sectional anatomy course textbook. Sections 2 through 6 provide a detailed study of the spine. Module 6 presents sectional anatomy of the thorax. This module is designed to enhance your study of your sectional anatomy course textbook. Sections 2 through 8 provide a detailed study of thoracic anatomy. Module 9 presents sectional anatomy of the upper extremity, including the shoulder joint. This module is designed to enhance your study of your sectional anatomy course textbook. Sections 2 through 6 provide a detailed study of the anatomy of the upper extremity. Module 10 presents sectional anatomy of the lower extremity, including the hip joint. This module is designed to enhance your study of your sectional anatomy course textbook. Sections 2 through 5 provide a detailed study of the anatomy of the lower extremity, divided into portions. CT Clinical Practicum I course is designed to allow qualified technologist to complete the number of clinical procedures mandated by the American Registry of Radiologic Technologist (ARRT) to be considered eligible to apply to sit for certification in CT, while emphasizing the importance of patient care, radiation safety and the principles of radiation protection in the CT department. The course is designed to allow the students hands-on experience documenting and performing CT exams within the clinical setting under the direct supervision of a registered technologist. Note: Course meets for 3.5 lecture hours and 16 clinical hours per week for 10 weeks.
Lecture: 3.5 hours, Other: 16 hours

Corequisite(s):CTIC 2010, CTIC 2020

DMSD 2100 - Patient Care in Sonography
(3 Credits)
This course is designed to develop the knowledge and skills necessary to address the needs of the patient in the diagnostic imaging department. The success of the students in the clinical setting requires the ability to conduct themselves in a professional and ethical manner. The safety of the patient requires the student to have knowledge of the patient assessment, basic nursing skills and the ability to react to medical emergencies.
Lecture: 3 hours

DMSD 2210 - Sonographic Physics
(4 Credits)
This course provides students with theoretical and practical aspects of ultrasound physics and instrumentation. Wave form, propagation, velocity, wave length, acoustic impedance, reflection and rarefaction are discussed. Components of the ultrasound imager are examined as well as recording devices and basic Doppler principles.
Lecture: 3 hours, Lab: 2 hours

DMSD 2220 - Sonographic Imaging
(3 Credits)
This course provides students with general information that has application in all the ultrasonic imaging concentrations. It addresses standard protocols for patient care, as well as the management of data from other imaging modalities, laboratory findings and patient history. Pertinent legal principles are also covered. An overview of the categories in which disease occurs is included. The biological effects of ultrasound is discussed along with quality control procedures and their importance.
Lecture: 3 hours

DMSD 2230 - Abdominal Ultrasound
(4 Credits)
This course provides a foundation of physiology, pathology and pathophysiology as it related to the human abdomen specific to the performance of abdominal Sonography. Students begin to recognize normal and abnormal imaging as it relates to anatomy, pathology and pathophysiology of the abdomen. Bioeffects, ALARA principle, pertinent in-vitro and in-vivo studies, exposure display indices, and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Laboratory experience will include development of entry level scanning techniques and protocols on the human abdomen. Students will demonstrate the ability to perform entry level abdominal sonographic examinations using real-time sonographic equipment, Doppler and color Doppler equipment with various transducers.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2100 (may be taken concurrently)

DMSD 2235 - Ultrasound for Small Parts, Gynecology and Male Pelvis
(4 Credits)
This course provides a foundation of physiology, pathology and pathophysiology as they relate to the male and female pelvis, thyroid, breast and scrotum. The student will begin to recognize normal and abnormal imaging as they relate to anatomy, pathology and pathophysiology of these structures. Scanning techniques and protocols are discussed in normal and abnormal conditions. Bio-effects, ALARA principle, pertinent in-vitro and in-vivo studies, exposure display indices, and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Laboratory experience will include further development of entry to mid-level scanning techniques and protocol on the human male and female pelvis, thyroid, breast, and scrotum. Students will demonstrate the ability to perform entry to mid-level sonographic examinations using real-time sonographic equipment, Doppler and color Doppler equipment with various transducers.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2230

DMSD 2236 - Musculoskeletal Sonographic Imaging
(3 Credits)
This course provides a foundation of anatomy and pathology as they relate to the human musculoskeletal system specific to the performance of sonography. Students will recognize normal and abnormal sonographic imaging related to the shoulder, elbow, hand and wrist, hip, knee, and foot and ankle. Bioeffects, LARA, principles of sonography will be incorporated in the didactic and laboratory classes. Laboratory experience will include development of entry-level sonographic scanning techniques of the musculoskeletal system. Student will demonstrate the ability to perform entry-level musculoskeletal sonographic examinations using real-time sonographic equipment, Doppler, and color Doppler with appropriate transducers. Note: Prerequisite waived for Registered Sonographers with ARDMS or CCI.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): DMSD 2210

DMSD 2240 - Obstetrical Ultrasound
(4 Credits)
This course will focus on the embryology and fetal development in the first, second and third trimester. Recognition of normal and abnormal anatomy will be addressed in the obstetrical, embryonic and fetal patient. Abnormal patterns of pathology and pathophysiology including genetic malformations are discussed. Scanning techniques, protocols and sonographic findings are discussed in the normal and abnormal conditions. Bio-effects, ALARA principle, pertinent in-vitro and in-vivo studies, exposure display indices, and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Laboratory experience will include further development of entry to mid-level scanning techniques and protocol on the human female obstetrical, embryonic, and fetal patient. Students will demonstrate the ability to perform entry to midlevel level sonographic examinations using real-time sonographic equipment, Doppler and color Doppler equipment with various transducers.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2235

DMSD 2241 - General Ultrasound Practicum I
(3 Credits)
Initial clinical scanning experience of the abdomen is covered. This course focuses on clinical application of standard protocols of the abdomen. Normal and abnormal anatomy are emphasized. Students begin to develop the critical thinking skills needed to correlate the examination with clinical history. Students must be competent in aortic and renal examinations at the completion of this class. Clinical education and competency occurs under the supervision of a Registered Sonographer.
Other: 32 hours

Prerequisite(s): DMSD 2230

DMSD 2242 - General Ultrasound Practicum II
(3 Credits)
This practicum involves ongoing assessment of advanced clinical skills of the abdomen incorporating advanced identification of pathology and pathophysiology. Age specific scanning protocol are covered (infant to adult). Basic scanning protocol on male and female pelvis, thyroid, breast and scrotum is covered. Students must be competent on the complete scan of the abdomen at the completion of this class. Clinical education and student competency is under the supervision of a Registered Sonographer.
Other: 32 hours

Prerequisite(s): DMSD 2241

DMSD 2243 - General Ultrasound Practicum III
(3 Credits)
This practicum involves ongoing assessment of advanced clinical skills of the male and female pelvis, thyroid, breast and scrotum incorporating advanced identification of pathology and pathophysiology. Basic obstetrical scanning protocol begins with a focus on normal anatomy of the maternal, embryo and fetus. Students must demonstrate critical thinking and competency in all areas of abdominal ultrasound, male and female pelvis and small parts and basic obstetrical examinations. Students must be competent on the complete scan of the female and male pelvis, small parts and basic obstetrical scanning at the completion of this class. Clinical education and student competency and verification is under the supervision of a Registered Sonographer.
Other: 32 hours

Prerequisite(s): DMSD 2242

DMSD 2245 - Sonographic Anatomy
(3 Credits)
This course provides comprehensive coverage of the abdomen and superficial structures (small parts) and their sonographic appearance. Pertinent gross anatomy, sectional anatomy, physiology, pathology and pathophysiology are examined. Students relate specific anatomy to scanning plane and preferred scanning protocols.
Lecture: 3 hours

DMSD 2250 - Vascular Ultrasound I
(4 Credits)
This course provides students with the basic information specific to the performance of vascular Sonography. Anatomy, pathology and pathophysiology of the vascular system including arterial, cerebrovascular and venous systems are included. Scanning protocols for the upper and lower extremity are addressed. Bioeffects, ALARA principle, pertinent in-vitro and in-vivo studies, exposure display indices, and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Laboratory experience will include the use of plethysmography and real-time Sonography to evaluate and record the hemodynamics of arterial flow. The recognition of normal anatomy, basic pathology and pathophysiology are addressed. Students will demonstrate the use of plethysmography and real-time Sonography equipment with vascular transducers, Doppler and color Doppler to perform entry level vascular Sonography examinations.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2100

DMSD 2251 - Vascular Ultrasound II
(4 Credits)
This course provides an in-depth of vascular ultrasound including pathophysiology, etiology of disease clinical findings and related symptoms. Age-specific testing is discussed. Related testing for cerebrovascular, upper and lower extremity venous circulation is covered. Scanning techniques and protocols are discussed in normal and abnormal conditions. Bio-effects, ALARA principle, pertinent in-vitro studies, exposure display indices, and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Laboratory experience will include further development of entry to mid-level scanning techniques and protocol on the cerebrovascular, upper and lower extremity venous circulation. Students will demonstrate the ability to perform entry to mid-level sonographic examinations using real-time sonographic equipment, Doppler and color Doppler equipment with various transducers.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2250

DMSD 2252 - Advanced Vascular Ultrasound
(4 Credits)
This course will focus on the application of vascular ultrasound relating to abdominal vasculature and other specialty examinations such as aorta, renal transplant, TIPS procedure, transcranial Doppler, pseudoaneurysm, mapping and the use of ultrasound contrast agents. Interpretation skills on all testing in all disease states will be further developed. Scanning techniques, protocols and sonographic findings are discussed in the normal and abnormal conditions. Bioeffects, ALARA principle, pertinent in-vitro studies, exposure display indices, and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Laboratory experience will include advanced scanning techniques and protocol on aorta, renal transplant, TIPS procedure, transcranial Doppler, pseudoaneurysm and fistula. Students will demonstrate the ability to perform advanced level sonographic examinations using real-time sonographic equipment, Doppler and color Doppler equipment with various transducers.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2251

DMSD 2253 - Vascular Practicum I
(3 Credits)
This course provides students with initial clinical scanning experience for upper and lower extremity arterial examinations. Clinical application of standard protocols focuses on recognition of normal plethysmographic tracings, normal ultrasound vascular imaging and Doppler patterns. Students begin to develop the critical thinking skills required to correlate clinical history with exam requirements. Clinical education and clinical competency occurs under the supervision of a registered Vascular Sonographer.
Other: 32 hours

Prerequisite(s): DMSD 2250

DMSD 2254 - Vascular Practicum II
(3 Credits)
This course provides students with initial clinical scanning experience for cerebrovascular and venous examinations. Clinical application of standard protocols focuses on normal vascular ultrasound imaging for cerebrovascular and venous examinations. Recognition of normal and abnormal images and Doppler patterns are included. Students use critical thinking skills to integrate clinical history with abnormal findings. Clinical education and clinical competency occurs under the supervision of a registered Vascular Sonographer.
Other: 32 hours

Prerequisite(s): DMSD 2251

DMSD 2255 - Vascular Practicum III
(3 Credits)
This course provides students with advanced clinical scanning experience for upper and lower extremity arterial, venous, and cerebrovascular examinations. Final competency evaluation will occur along with the opportunity to perform abdominal vasculature and rare specialty examinations. Students use critical thinking skills to integrate clinical history to abnormal findings. Clinical education and clinical competency occurs under the supervision of a registered Vascular Sonographer.
Other: 32 hours

Prerequisite(s): DMSD 2252

DMSD 2260 - Echocardiography I
(4 Credits)
This course provides students with a basic information specific to the performance of echocardiography. An overview of basic normal and abnormal anatomy, cardiac measurements, pathology and pathophysiology will be covered. Bioeffects, ALARA principle, pertinent in-vitro and in-vivo studies, exposure display indices, and maximum safe exposure levels will be incorporated into didactic and laboratory classes. Laboratory will utilize sonographic equipment using two dimensional, M-Mode, Doppler and color Doppler for recognition of normal and abnormal anatomy, pathology and pathophysiology with basic scanning techniques, and specific protocols in echocardiography with related findings. Cardiac windows will include parasternal and apical views, recognizing cardiac chambers, valves, walls and other structures.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2100

DMSD 2261 - Echocardiography II
(4 Credits)
This course expands on the material presented in Echocardiography I and continues to provide students with the knowledge necessary to capably perform a complete and diagnostic echocardiographic examinations using M-mode, 2-dimensional Doppler and color Doppler modalities. More complex anatomy and abnormal pathology will be addressed. Scanning techniques, specific protocols and echocardiographic findings will be discussed in relation to these more complex abnormalities including PLAX, RVIT, RVOT, PSAX views. The development of the ability to perform examinations in these areas will occur with classroom experience. using real-time equipment with transthoracic transducers and Doppler and color Doppler display modes. Bioeffects, ALARA principle, pertinent in-vitro studies, exposure display indices and maximum safe levels will be incorporated into the didactic and laboratory classes.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2260

DMSD 2262 - Advanced Echocardiography
(4 Credits)
This course expands on the material presented in Echocardiography I and II, and continues to provide students with the knowledge necessary to capably perform a complete and diagnostic echocardiographic examination using M-mode, 2-dimensional Doppler and color Doppler modalities. More complex anatomy and abnormal pathology will be addressed including equation for aortic stenosis, mitral stenosis, pericardial effusion, hypertrophic cardiomyopathy, ischemic heart disease. Bioeffects, ALARA principle, pertinent in-vitro studies, exposure display indices and maximum safe exposure levels will be incorporated into the didactic and laboratory classes. Scanning techniques, specific protocols and echocardiographic findings will be discussed in relation to these more complex abnormalities. The development of the ability to perform examinations in these areas will occur with classroom experience using real-time equipment with transthoracic transducers and Doppler and color Doppler display modes.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): DMSD 2261

DMSD 2263 - Echocardiography Practicum I
(3 Credits)
This practicum involves the observation and initial scanning experience of transthoracic adult cardiac sonographic examinations with emphasis on normal Two-dimensional, M-Mode and Doppler pattern recognition. Students are under the supervision of a Registered Echocardiographer.
Other: 32 hours

Prerequisite(s): DMSD 2260

DMSD 2264 - Echocardiography Practicum II
(3 Credits)
This practicum involves the clinical performance of transthoracic adult cardiac sonographic examinations with emphasis on normal Two-dimensional, M-Mode and Doppler pattern recognition. Students are under the supervision of a Registered Echocardiographer.
Other: 32 hours

Prerequisite(s): DMSD 2263

DMSD 2265 - Echocardiography Practicum III
(3 Credits)
This practicum involves the clinical performance of transthoracic adult cardiac sonographic examinations with emphasis on normal Two-dimensional, M-Mode and Doppler pattern recognition. Focus is on performing complete exams on patients with complex disease states. Students are under the supervision of a Registered Echocardiographer.
Other: 32 hours

Prerequisite(s): DMSD 2264

DMSD 2500 - Diagnostic Medical Sonography Seminar
(3 Credits)
This is an interactive course combining General Abdominal Students, Echocardiography students and Vascular Students. This provides students with an opportunity to discuss their scanning experience and review skills necessary for professional practice. Students prepare a research project on a topic in their area of specialty. This includes patient history, clinical findings, anatomy, pathology, scanning protocols, image interpretation, differential diagnosis and patient care. Students prepare and deliver an oral presentation to the class based on their research using power point or other appropriate methods.
Lecture: 3 hours

Prerequisite(s): DMSD 2240 or DMSD 2252 or DMSD 2262

Dental Assisting

DAST 1010 - Oral Biology I
(2 Credits)
This is an introductory course in head and neck anatomy and physiology for the dental assistant. Particular attention is devoted to the oral cavity. Topics include the terminology and function of the teeth, occlusion, skull, nerve innervation and blood flow.
Lecture: 2 hours

DAST 1020 - Preventive Dentistry
(2 Credits)
This course offers students an introduction to the prevention and management of oral diseases.
Lecture: 2 hours

DAST 1030 - Chairside Dental Assisting I
(5 Credits)
This course introduces students to procedures and practices involved in assisting the dentist. Content includes the preparation, use and care of dental instruments and equipment; patient management; basic microbiology and infection control procedures.
Lecture: 3 hours, Lab: 4 hours

DAST 1040 - Oral Biology II
(3 Credits)
This course covers patient evaluation with medical histories, medical emergencies and oral conditions. Students are introduced to the fundamental concepts involving the development of oral tissues and the basic science of pharmacology as it relates to these specific conditions.
Lecture: 3 hours

Prerequisite(s): DAST 1010

DAST 1050 - Chairside Dental Assisting II
(5 Credits)
This course is a continuation of DAST 1030. Students develop basic skills for assisting the dentist with dental specialties, such as endodontics and oral and maxillofacial surgery. Students are assigned to dental treatment facilities for supervised practice of clinical skills. Includes a one-week intercession.
Lecture: 2 hours, Lab: 4 hours

Prerequisite(s): (BIOL 1070 or BIOL 1020) or BIOL 2202

DAST 1060 - Dental Office Procedures
(2 Credits)
This course covers principles and practices of the dental office. Topics include telephone, patient and appointment management; the preparation, use and care of office and treatment records; third party payment; supply and inventory control; use of computers to perform basic dental office procedures; and the legal and ethical standards required of professional dental personnel.
Lecture: 2 hours

Prerequisite(s): DAST 1050 (may be taken concurrently)

DAST 1225 - Dental Materials Lecture
(2 Credits)
This course introduces students to the materials used in dental practice, including their physical properties and uses and considerations for their selection.
Lecture: 2 hours

Prerequisite(s): DENT 2225 (may be taken concurrently)

Dental Assisting/Hygiene

DENT 1000 - Introduction to Dental Health Careers
(2 Credits)
This course provides an introduction to dental assisting and dental hygiene fields. Students gain an understanding of both professions, how to achieve success in dental assisting and dental hygiene programs and basic dental terminology. This course is a prerequisite for entering the dental hygiene program and optional for the dental assisting program.
Lecture: 2 hours

DENT 2010 - Oral Radiography
(4 Credits)
This is a foundation course for dental radiographers. Topics include fundamentals of radiation physics, generation and control of the radiation beam, basic radiation biology and methods of population protection, films and film processing, radiographic projection and basic radiographic anatomy and pathology. Supervised laboratory practice includes exposure, evaluation and interpretation of intraoral and panoramic radiographs.
Lecture: 3 hours, Lab: 2 hours

DENT 2220 - Dental Materials Lab for Dental Hygienists
(4 Credits)
This hybrid course has an online didactic component with hands-on laboratory experience for the dental hygiene student to learn and practice techniques that are performed in dental hygiene practice.
Lecture: 2 hours, Lab: 4 hours

DENT 2225 - Dental Materials Lab for Dental Assistants
(2 Credits)
This lab provides hands-on experience for dental assisting students to develop skills in the preparation and manipulation of materials commonly used in dental practice.
Lab: 4 hours

Prerequisite(s): DAST 1225 (may be taken concurrently)

Dental Hygiene

DHYG 1010 - Dental and Oral Anatomy
(3 Credits)
This course is a study of the structure and function of the mouth, teeth, head and neck.
Lecture: 3 hours, Lab: 0 hours

DHYG 1020 - Dental Hygiene I
(3 Credits)
This course introduces students to the fundamental skills and procedures in dental hygiene practice.
Lecture: 3 hours

DHYG 1030 - Clinical Dental Hygiene I
(2 Credits)
This course provides an opportunity for students to apply the principles studied in DHYG 1020 in the pre-clinical setting. Students work with mannequins and laboratory partners.
Lab: 6 hours

Prerequisite(s): DHYG 1020 (may be taken concurrently)

DHYG 1040 - Oral Embryology and Histology
(2 Credits)
This course involves the study of the development, microscopic structure and function of oral and facial tissues.
Lecture: 2 hours

DHYG 1050 - Dental Hygiene II
(3 Credits)
A continuation of the principles of DENT 1020, this course covers the philosophy of prevention, concepts of health and wellness, the dental hygiene treatment plan oral infection control, sealants and fluorides. Emphasis is on communication skills, patient management and development and implementation of educational strategies.
Lecture: 3 hours

Prerequisite(s): DHYG 1020 and DHYG 1030

DHYG 1060 - Clinical Dental Hygiene II
(3 Credits)
This course continues application of the principles and skills learned in DHYG 1020 and DHYG 1030 as well as new material learned in DHYG 1050 including patient education and management.
Other: 9 hours

Prerequisite(s): DHYG 1030

DHYG 2010 - Pathology
(2 Credits)
This course is an examination of general and oral diseases. Content includes etiologic agents, tissue response to injury, immunopathology, neoplasia, cardiovascular disease, general diseases with oral manifestations and oral pathology. Consideration is given to specific conditions of importance to oral assessment and care.
Lecture: 2 hours

Prerequisite(s): BIOL 1020 and DHYG 1040

DHYG 2020 - Dental Hygiene III
(3 Credits)
This course continues to expand on the principles of dental hygiene practice. Topics include service to patients with special needs and nutrition, including nutritional counseling.
Lecture: 3 hours

Prerequisite(s): DHYG 1050 and DHYG 1060

DHYG 2030 - Clinical Dental Hygiene III
(4 Credits)
This course continues the application of the principles and skills practiced in DHYG 1030, 1060 and 2020.
Lab: 12 hours

Prerequisite(s): DHYG 1030 and DHYG 1060

DHYG 2040 - Community Dental Health I
(2 Credits)
This course introduces students to the principles of dental hygiene practice in the community setting. Content includes financing and delivery of care, cultural diversity, education of groups, program planning and evaluation and management of the evidence base for dental hygiene practice.
Other: 2 hours

Prerequisite(s): PSYC 2010 and DHYG 1060

DHYG 2045 - Community Dental Health II
(1 Credit)
This course allows students to apply principles of dental hygiene practice through a supervised externship in a community dental health facility.
Other: 3 hours

Prerequisite(s): DHYG 1010 or DHYG 2020 or DHYG 2030

DHYG 2050 - Periodontics
(3 Credits)
This course involves an intensive study of the periodontium as it relates to dental hygiene practice. Content includes epidemiology and pathogens of periodontal disease, assessment of periodontal status, current therapeutic intervention and strategies for maintenance of the periodontal patient.
Lecture: 3 hours

Prerequisite(s): BIOL 1020 or BIOL 2210

DHYG 2060 - Dental Hygiene IV
(2 Credits)
This course continues to expand on principles of dental hygiene practice. Content includes legal and ethical issues, dental specialties and entering the professional work force.
Lecture: 2 hours

Prerequisite(s): DHYG 2020 and DHYG 2030

DHYG 2070 - Clinical Dental Hygiene IV
(5 Credits)
This course allows students to continue to apply the principles and skills practiced in DHYG 1030, 1060, 2030, and 2060. Integration of dental hygiene procedures into a complete dental hygiene service is covered.
Other: 16 hours

Prerequisite(s): DHYG 1030 and DHYG 1060 and DHYG 2030

DHYG 2090 - Pharmacology for the Dental Hygienist
(3 Credits)
This course is a study of the principles of pharmacology as they relate to oral health care. Content includes indications and contraindications for use, pharmacological effects, adverse reactions and interaction of drugs. Special consideration is given to drugs commonly used in dentistry, as well as oral implications of drugs.
Lecture: 3 hours

Prerequisite(s): BIOL 1020 and DHYG 1020

DHYG 2200 - Local Anesthesia for the Registered Dental Hygienist
(2 Credits)
This course is designed to enable practicing dental hygienists to gain the knowledge and skill needed to earn a permit to administer local anesthesia in Rhode Island. Topics include oral anatomy, neurophysiology, the pharmacology and pharmacokinetics of local anesthetic agents, legal issues related to local anesthesia and basic injection techniques. Students will serve as patients for each other.
Lecture: 16 hours, Lab: 16 hours

DHYG 2201 - Administration of Nitrous Oxide for the Registered Dental Hygienist
(1 Credit)
This course is designed to enable licensed dental hygienists to gain the knowledge and the skill indicated to earn a permit to administer nitrous oxide in Rhode Island. Topics will include: History of Nitrous Oxide, review of oral anatomy, the circulatory and respiratory system in pediatrics and adults, review of physiology and psychology of pain and anxiety, pain control modalities, pharmacology of Nitrous oxide and drug interactions, patient assessment and monitoring, preventing and managing complications, description and use of inhalation equipment, sedation and general anesthesia techniques and ethical and legal considerations. Students participating in the class will serve as patients for each other.
Lecture: 15 hours, Lab: 5 hours

DHYG 2202 - Management of Medical Emergencies for the Public Health Dental Hygienist
(1 Credit)
This course prepares Registered Dental Hygienists to meet the educational requirements to manage medical emergencies as a licensed Public Health Dental hygienist. Topics will include: Risk assessment through evaluation of clinical implications for potential emergencies related to specific items on a health history form. Recognition and management based on clinical signs and symptoms for emergency related medical conditions. Implementation of an emergency plan through simulation exercises.
Lab: 3 hours, Other: 1 hour

DHYG 2203 - Infection Control for the Public Health Dental Hygienist
(1 Credit)
This course is designed to prepare the Registered Dental Hygienist to meet the educational requirements for infection control in the dental setting alternative public health dental environments such as schools, mobile dental vans and long term care facilities.
Lecture: 3 hours, Lab: .6 hours

DHYG 2204 - Risk and Practice Management for the Public Health Dental Hygienist
(1 Credit)
This course will prepare Registered Dental Hygienists to meet the educational requirements on risk management as a licensed public health dental hygienist. Topics will include Risk management as a public health dental hygienist, practice management, dental billing and coding, dental equipment vendors, grant writing and resources. A dental externship at a community health center will be required. Guidelines for treating geriatric and pediatric patients will be discussed. Tool kit links through the Rhode Island Department of Health for public health dental hygiene practice will be addressed.
Lecture: 3 hours

Emergency Management

EMER 1000 - Fundamentals of Emergency Management
(3 Credits)
This course provides information that enables persons entering the profession or expanding their roles to function effectively with a broad array of emergency management issues. The primary purpose is to provide an overview of the characteristics, functions, resources and capabilities of an integrated system and various emergency management services (EMA, fire, police / security, EMS, health care providers, etc.) work together effectively. Emphasis is placed on how this system is applied to all government levels, across the four phases and all functions of emergency management. It includes the role of national, regional and local services in a variety of disasters. This course is intended for a broad audience including personnel in public safety, emergency management, health care facilities, and others having an interest in gaining a working knowledge of preparedness.
Lecture: 3 hours

EMER 1010 - Understanding and Responding to Terrorism
(3 Credits)
This course provides the students with an understanding of defining terrorism. Students will learn about its origins and the development of using terror to influence public policy decisions. The history and changing nature of terrorist organizations will also be presented. Terrorist groups and structure will be discussed. Individual and community awareness of, preparing and responding to terrorist acts are presented. This course is intended for anyone interested in learning more about terrorism.
Lecture: 3 hours

EMER 1020 - Bioterrorism and Public Health Emergencies
(3 Credits)
This course will focus on both naturally occurring disease outbreak and bioterrorist events of the past and the implications of these events for the future. Key elements of emergency disaster planning will include surveillance, mass immunization and public information campaigns. This course could be beneficial to any student in the health science programs.
Lecture: 3 hours

EMER 1030 - Disaster Response Operations and Management
(3 Credits)
This course focuses on the principles that promote effective disaster response operations and management. The nature of disasters, the context of U.S. response operations and the roles and responsibilities of various emergency management related organizations are examined. Myths and realities of human behavior in catastrophic events as well as divergent approaches to disaster response operations (e.g. command and control vs. networking / problem solving) are reviewed. The importance of providing an effective response for the affected population is discussed. This course also examines specific functions relating to flood, hazardous materials and terrorist incidents. Various problems associated with response operations are identified. Incident Command Systems and their interaction with emergency operations center are emphasized. The role of technology and mutual aid agreements are discussed.
Lecture: 3 hours

Prerequisite(s): EMER 1000

EMER 1040 - Managing the Psychological Impact of Terrorism and Disasters
(3 Credits)
This course provides a broad overview of the causes, interventions and treatments of psychological trauma in the civilian and emergency response population. The causes looked at include, natural disasters, terrorist attacks and mass casualty or mass fatality incidents. The interventions and treatments are illustrated for the student, for both the short and long-term recovery of the victims of this trauma, using real life incidents.
Lecture: 3 hours

Prerequisite(s): ENGL 2100 or ENGL 1010

EMER 1050 - Disaster Training and Exercise Management
(3 Credits)
This course is designed to provide the student with the understanding of the training and exercise requirements of Emergency Management. It will include how training and exercising plays a critical role in preparing a community or company for a disaster. Students will develop an Exercise Program and test part of that program with an actual exercise. The students will then develop an improvement plan from the lessons learned from that exercises. This course is intended for a person who would have an active role in emergency preparedness for an organization.
Lecture: 3 hours

EMER 2010 - Disaster Resource Management
(3 Credits)
This course is designed to provide the student with an understanding of resource management in the context of emergency management. Coordinating of resources before, during and after a disaster is critical to alleviate pain and suffering of the victims of disaster. This course will provide the student with the skills needed to identify and manage those resources effectively. Students will examine the elements comprising incident logistics and how those elements integrate into the overall incident response and recovery process.
Lecture: 3 hours

Prerequisite(s): EMER 1000

EMER 2020 - Emergency Planning
(3 Credits)
This course is designed to provide the student with an understanding of emergency planning in the world of emergency management. The Emergency Manager is tasked with the responsibility of developing Emergency Plans for the community or organization they represent. These plans may make the difference in saving lives and alleviate pain and suffering from a disaster. This course will provide the student with the skills needed to develop those plans effectively. This course is intended for a student who may become actively involved in emergency planning or work within a plan in the emergency management setting.
Lecture: 3 hours

Prerequisite(s): EMER 1000

EMER 2030 - Professional Development in Emergency Management
(3 Credits)
This course is designed to allow the student in the emergency management program to take the skills that they have acquired in the program and mesh them with the skills they learn in this course; Emergency Communication, Problem Solving, Decision Making and Leadership. This course will prepare the student to enter into the emergency management field or pursue a higher degree.
Lecture: 3 hours

Prerequisite(s): EMER 1000

EMER 2500 - Practicum in Emergency Management
(3 Credits)
The practicum in Emergency Management provides the student with an opportunity to use the knowledge they have learned in the program and put it into practical use in the field of emergency management. By placing the student at in internship site that works in the various types of disaster preparedness and response, the student will be provided with real life experience.
Lecture: 1 hour, Lab: 6 hours

Prerequisite(s): EMER 1000 and EMER 1030 and EMER 2010 and EMER 2020

Fire Science

FIRE 1010 - Principles of Fire and Emergency Services Safety & Survival
(3 Credits)
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.
Lecture: 3 hours

FIRE 1020 - Fundamentals of Fire Prevention
(3 Credits)
This course provides personnel in the fire service with a basic knowledge of the field of fire prevention.
Lecture: 3 hours

Prerequisite(s): FIRE 1030

FIRE 1030 - Introduction to Fire Science and Officership
(3 Credits)
This course provides an introduction to fire science and covers, in detail, the fire officer and his/her relationship with the fire organization. The fire officer's responsibilities and duties, related to fire fighting and non-firefighting activities, are also covered in detail.
Lecture: 3 hours

FIRE 1040 - Fire Fighting Tactics and Strategy
(3 Credits)
The essential elements in analyzing the nature of fires and methods of control are discussed in detail in this course. A segment of this course includes field projects with practical experience, building inspection and problems relative to major conflagrations.
Lecture: 3 hours

Prerequisite(s): FIRE 1030

FIRE 1050 - Building Construction and Fire Codes
(3 Credits)
The elements of fundamental building construction, design and fire protection features are covered in this course. Attention is also given to special considerations related to national, state and local laws and ordinances directly related to the field of fire prevention.
Lecture: 3 hours

Prerequisite(s): FIRE 1020

FIRE 1060 - Fire Behavior and Combustion
(3 Credits)
This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.
Lecture: 3 hours

FIRE 1070 - Fire Protection Systems and Equipment
(3 Credits)
This course provides students with technical knowledge in the use of fire protection systems and equipment. Portable fire extinguishing equipment, sprinkler systems, protection systems for special hazards, and fire alarm and detection systems are covered.
Lecture: 3 hours

Prerequisite(s): FIRE 1020

FIRE 1090 - Fire Hydraulics and Equipment
(3 Credits)
This course provides a review of basic mathematics and hydraulic laws and formulas as applied to the fire service. Time is allotted for practical application of formulas and mental calculation to hydraulic problems as well as for consideration of the water supply problem and underwriters' requirements for pumps. A segment of this course includes practical field experience.
Lecture: 3 hours

Prerequisite(s): MATH 1420 or MATH 1700 or MATH 1025

FIRE 1100 - Municipal Fire Administration
(3 Credits)
This course provides an overview of the technical and administrative tasks associated with maintenance, custody and operation of a fire department.
Lecture: 3 hours

Prerequisite(s): FIRE 1030

FIRE 1120 - Investigations, Fire and Explosions
(3 Credits)
This course covers the history, development and philosophy of fire investigation and detection. Topics include inspection techniques, gathering evidence for the development of technical reports, fundamentals of arson investigations, processing of criminal evidence and criminal procedures related to the various states and local statutes. Considerable time is spent on examination of explosive and incendiary devices, methods of search and bomb-threat procedures.
Lecture: 3 hours

FIRE 1130 - Emergency Medical Technician Basic
(8 Credits)
This course trains emergency medical technicians and other allied health and safety personnel for emergency care of the sick and injured at the scene and during transport. Classroom experience and practical demonstration are used to familiarize students with the use of rescue equipment. Students are assigned 10 hours of clinical experience in the emergency room of an affiliated hospital.
Lecture: 8 hours, Lab: 2 hours

FIRE 1160 - Advanced EMT
(11 Credits)
The Advanced Emergency Medical Technician course prepares students to provide pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Area of study include; introduction to emergency medical services systems, roles and responsibilities of AEMTs, pharmacology, anatomy and physiology, medical emergencies, trauma, special considerations for working in the pre-hospital setting and providing patient transportation. This program is approved by the Rhode Island Department of Health, Division of Emergency Medical Services and adheres to the National Emergency Medical Services Education Standards, Rhode Island Curricula and Standards for EMT Training Programs. Successful completion of the course requirements, will allow students to apply for the National Registry of Emergency Medical Technicians (NREMT) AEMT certification exam and apply be eligible for licensure in Rhode Island for Emergency Medical Technician Cardiac.
Lecture: 8 hours, Lab: 2 hours, Other: 1 hour

Health

HEAL 0200 - CPR-Healthcare Providers
(0 Credits)
This course provides training in CPR skills and use of the automated external defibrillator (AED). It is a five-hour, noncredit course in which an American Heart Association course completion card is issued after satisfactory demonstration of CPR skills and a satisfactory score on a multiple-choice test. Course content includes risk factors, signs and symptoms of heart disease and stroke, and actions to take with an individual experiencing symptoms. CPR skills taught and practiced include relief of foreign body airway obstruction, rescue breathing, and cardiopulmonary resuscitation for infants, children and adults.
Note: Health care provider card is a requirement for all Health and Rehabilitative Sciences programs.

HEAL 1000 - Introduction to Health Careers
(3 Credits)
This course provides an overview of the health field including the characteristics of health care workers, ethical and legal considerations in health care and selected content common to all health programs.
Lecture: 3 hours

Prerequisite(s): Accuplacer Rdg Test Score or NG-Accuplacer Rdg Test Score or ENGL 0890 or Bachelor Degree or higher

HEAL 1015 - Health Issues in Aging
(3 Credits)
This three-credit course is designed for individuals who work in health care and other professions that deal with an aged population. It examines the unique issues related to the elderly with a particular emphasis on healthy aging in our society. An overview of the aging process will include specific aspects such as physiological and psychological changes, socialization, and chronic illness. The management of chronic health problems, disease prevention, and health promotion will be discussed. Attention to social, political, and cultural issues will be discussed including family, community, and health services resources. Discussions will focus on the interdisciplinary approach to elder care, emphasizing healthy aging and optimal wellness.
Lecture: 3 hours

HEAL 1055 - Focus on Nursing Pharmacology
(3 Credits)
The student nurse is in a unique position regarding drug therapy. Nursing responsibilities include administration of drugs, assessing drug side effects and adverse reactions, interventions to make the drug regimen more tolerable, providing patient teaching and monitoring the patient's care plan to prevent medication errors. This presents pharmacology as an understandable and learnable subject through the utilization of the nursing process. The course involves the study of drug classes, pharmacokinetics, pharmacodynamics, pathophysiological changes related to drug classes, and application of nursing fundamentals.
Lecture: 3 hours

Prerequisite(s): BIOL 1010 and BIOL 1020

HEAL 1060 - Dosage Calculations for Medication Administration
(3 Credits)
This course is designed to meet the needs of any current or potential practitioners of nursing whose responsibilities include the safe administration of medications to clients within diverse clinical settings. A working knowledge of dosage calculations is necessary within any given medication administration system today. Information related to systems of measurements and conversions within these systems is presented. This course helps health care professionals calculate dosages accurately, with increased confidence and decreased math anxiety to ensure the safe administration of medications, which is the primary responsibility of nurses.
Lecture: 3 hours

Prerequisite(s): MATH 0500 or MATH 0100 or MATH 0101 or MATH 8055 or MATH 0099 or Accu Arithmetic Test Score or NG-Accu Arithmetic Test Score or Bachelor Degree or higher

HEAL 1070 - Physical Assessment for Nurses
(4 Credits)
This course introduces students to examination techniques for adult physical assessment. Anatomy and physiology are reviewed to reinforce understanding of bodily processes necessary to understand the physical exam. Focus is on normal and abnormal findings. Consideration is also given to cultural, ethnic, and special populations.
Lecture: 4 hours

Prerequisite(s): BIOL 1010 and BIOL 1020

HEAL 1080 - Nursing Documentation
(3 Credits)
This BlackBoard course is designed to help nursing students or practicing nurses develop documentation skills within a variety of systems and methods. Legal and ethical implications of documentation are described. Strong emphasis is placed on documentation systems utilizing the nursing process framework. Students are encouraged to analyze and apply what they have learned through the use of case studies.
Lecture: 3 hours

Health Care Interpreter

INTC 1300 - Health Care Interpreter I
(7 Credits)
This course prepares students who are bilingual to develop awareness, knowledge, and skills necessary for effective language interpretation in health care settings. Emphasis includes the roles and responsibilities of a health care interpreter, basic knowledge of common medical conditions, treatments and procedures, insight in language and cultural nuances for specific communities necessary in the art of interpretation. Field work experiences will provide opportunities for students to observe a competent health care interpreter.
Lecture: 6 hours, Other: 3 hours

Prerequisite(s): RHAB 1010 (may be taken concurrently)

INTC 1310 - Interpreting in Health Care II
(8 Credits)
This course prepares individuals who are bilingual to become integral members of the health care team by bridging the language and cultural gap between clients and providers; this is a critical aspect of health care. Interpreting skills learned in INTC 1300 are further enhanced, covering specialized health care service areas such as genetics, mental health, and death and dying. Emphasis is also placed on the development of cultural competency in the community and workplace, and careers in interpretation. Field work experience is included to enable students the opportunity to demonstrate application of knowledge and technical interpreting skills to facilitate linguistic and cultural communication between client and health care providers.
Lecture: 6 hours, Other: 6 hours

Prerequisite(s): RHAB 1010

Histotechnician

HSTO 1310 - Introduction to Histology
(3 Credits)
Students are introduced to the procedures involved in the initial accessioning, evaluation, processing and slide preparation of various surgical and autopsy specimens. Additional topics such as safety/ infection control and instrumentation are included.
Lecture: 3 hours

HSTO 1320 - Histotechnology II
(6 Credits)
This course explores the principles and techniques associated with routine histological procedures as well as laboratory mathematics. The histology laboratory prepares tissues from surgical procedures and autopsies for microscopic examination by a pathologist. This course provides students with an opportunity to develop entry-level skills under the supervision of a licensed histotechnician, in a clinical setting. Skills are obtained through observation and performance of basic histological procedures. Students will also attend lecture to provide the opportunity to integrate theory and practice to various clinical scenarios.
Lecture: 3 hours, Other: 8 hours

Prerequisite(s): HSTO 1310

HSTO 2310 - Histotechnology III
(9 Credits)
This course provides practical application of principles and techniques of histological practice. The clinical setting provides realistic conditions under which a histotechnician functions and allows students to refine those skills acquired in Histology II. Students are introduced to the procedures involved in the embedding, cutting H&E staining and evaluation of various surgical and autopsy specimens. Students will also experience special stains for various tissue components including connective tissues, Amyloid and Carbohydrates.
Lecture: 3 hours, Other: 16 hours

Prerequisite(s): HSTO 1320

HSTO 2320 - Histotechnology IV
(14 Credits)
This course provides practical application of principles and techniques of advanced histological procedures. The clinical setting provides realistic conditions under which a histotechnician functions and allows students to refine skills acquired in Histology III. Students will refine skills in embedding, cutting tissue sections, H&E staining and evaluation of various surgical and autopsy specimens. Students experience special stains for pigments, minerals, microorganisms and Neuropathology. Students are introduced to the special procedures such as Immunohistochemistry, Enzyme Histochemistry and Electron Microscopy.
Lecture: 3 hours, Lab: 3 hours, Other: 24 hours

Prerequisite(s): HSTO 2310

Corequisite(s):HSTO 2330

HSTO 2330 - Histology Seminar
(2 Credits)
This course provides students with an extensive review, as well as assistance in the preparation of a portfolio. Guest lecturers discuss advanced topics in histology and professional issues.
Lecture: 2 hours

Prerequisite(s): HSTO 2310

Corequisite(s):HSTO 2320

Homeland Security

HMLS 1000 - Introduction to Homeland Security
(3 Credits)
This course is designed to provide the student with an understanding of the definition, origins, and development of Homeland Security in the United States. The terminology of the Department of Homeland Security will be discussed as well as the presidential directives that created this new department. This course will explore state, national, and international laws impacting homeland security. The course will examine the most critical threats and challenges confronting homeland security. This course will also discuss how DHS has changed over the past several years in reaction to different terrorist events and the future of protecting the homeland.
Lecture: 3 hours

HMLS 1010 - Intelligence Analysis and Risk Management
(3 Credits)
This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks, man-made disasters and natural disasters. It also explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues regarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates.
Lecture: 3 hours

Prerequisite(s): HMLS 1000 or EMER 8000

HMLS 1020 - Border and Transportation Security
(3 Credits)
Provides an in-depth view of modern border and transportation security. Specific topics include security for seaports, ships, aircraft, trains, trucks, pipelines, buses, etc. Focuses on the technology needed to detect terrorists and their weapons as well as includes discussion on legal, economic, political, and cultural aspects of the problem.
Lecture: 3 hours

Prerequisite(s): HMLS 1000 or EMER 8000

Magnetic Resonance Imaging

MRIC 2260 - Introduction to MRI
(6 Credits)
This course provides students with a knowledge of MRI image production, including image acquisition and reconstruction . The selection of scan protocols will be related to anatomical region, patient history and physical condition. Attention is given to patient education, screening and care. Clinical application is part of this course. Anatomical regions of the head and neck, spine, thorax and abdomen are considered. Note: Students must be a Registered Radiographer to enroll in this course.
Lecture: 3 hours, Other: 16 hours

MRIC 2270 - MRI Physics and Instrumentation
(3 Credits)
This course provides students with a basic understanding of the physics of magnetic resonance imaging and the instrumentation used to acquire MRI images. The basic principles of electricity and magnetism are addressed, as well as the characteristics of radio frequencies and the phenomenon of resonance. Application of these principles to data acquisition is discussed. Hazards associated with strong magnetic fields and radio frequencies is addressed, as well as the actual components of magnetic resonance equipment. Note: Student must be Registered radiographer to register for this course.
Lecture: 3 hours

MRIC 2280 - Procedures and Methods for MRI Imaging
(6 Credits)
This course addresses advanced imaging techniques, including MR angiography, cardiac imaging and spectroscopy. The nature and use of contrast agents is discussed. Factors related to image quality, artifacts and quality assurance is considered. Imaging of the pelvis, musculoskeletal and vascular system are discussed. Supervised clinical practice is included. Note: Course meets for 3 lecture hours and 16 clinical hours a week.
Lecture: 3 hours, Other: 16 hours

Prerequisite(s): MRIC 2270 and MRIC 2290 (may be taken concurrently)

MRIC 2290 - MRI Safety and Quality Assurance
(3 Credits)
This course addresses safety practices and quality assurance as they relate to magnetic resonance imaging. Factors related to image quality and optimal operation of imaging equipment are considered. Students evaluate MRI images for quality and learn to manipulate parameters when necessary. MRI screening procedures and safety considerations for all patients are addressed as well as special concerns for patients with biomedical implants and devices. Students apply knowledge from classroom instruction and activities as part of a supervised clinical experience.
Lecture: 3 hours

Prerequisite(s): MRIC 2280 (may be taken concurrently)

MLTC - Clinical Laboratory

MLTC 1110 - Bacteriology
(4 Credits)
The biological aspects of microbial structure, metabolism and growth are presented. Emphasis is on classification of microorganisms, mostly bacteria and identification of disease-producing organisms. Note: Students must be enrolled in the Medical Laboratory Technology program to register.
Lecture: 2 hours, Lab: 4 hours

MLTC 1120 - Clinical Immunology
(3 Credits)
This course covers basic theories of immunology, laboratory diagnosis of infectious diseases and diseases of the immune system. Students learn to perform basic serological techniques. Note: This course is a prerequisite for MLTC 1160.Students must be enrolled in the Medical Laboratory Technology program to register.
Lecture: 2 hours, Lab: 3 hours

MLTC 1130 - Phlebotomy for Medical Laboratory Technicians I
(1 Credit)
This course covers principles of phlebotomy and specimen handling. Students perform venipuncture on training arms, venipuncture on adults, capillary punctures, isolation techniques, blood culture site preparation and specimen processing. Note: This course is a prerequisite for MLTC 1930. Course meets for 2 lecture hours and 2 lab hours a week for 5 weeks.
Lecture: 10 hours, Lab: 10 hours

MLTC 1150 - Urinalysis
(3 Credits)
The formation of urine and the principles of the laboratory procedures used in the physical, chemical and microscopic examination of urines are discussed. Normal values are presented and the significance of abnormal results explained. Complete urinalysis is performed in the training laboratory. Quality control in the urinalysis laboratory is performed and stressed. Note: Students must be enrolled in the Medical Laboratory Technology program to register.
Lecture: 2 hours, Lab: 2 hours

MLTC 1160 - Immunohematology
(3 Credits)
This course covers red cell antigens and antibodies, antibody identification, crossmatching, donor processing and component therapy. Theory is presented in lecture and a laboratory experience enables students to apply these theories to routine laboratory procedures.
Lecture: 5 hours

Prerequisite(s): MLTC 1120

Corequisite(s):MLTC 1161

MLTC 1161 - Topics in Immunohematology
(1 Credit)
This course is designed to provide the student with the necessary skills for proficiency in Immunohematology techniques and procedures. Emphasis will be placed on laboratory skills, including decision making, interpretation, and quality assurance. Upon completion, the student will show 100% proficiency in type and screen, compatibility testing, antibody identification and other procedures.
Lab: 3 hours

Corequisite(s):MLTC 1160

MLTC 1170 - Quality Assurance for Point of Care Laboratory Testing
(1 Credit)
This course is designed for health care workers who perform clinical laboratory tests that are waived tests in a physician's office or medical care center. The course includes laboratory safety (OSHA regulations), quality control procedures to ensure quality assurance, a detailed discussion on CLIA '88 waived tests and instruction on the performance of these tests. Students are provided with the technical knowledge and skills required for competent performance of waived laboratory procedures with increased reproducibility accuracy and precision. Note: Students must be enrolled in the Phlebotomy or Renal Dialysis program or receive permission of department to register. Course meets for 2 lecture hours and 2 lab hours a week for 5 weeks.
Lecture: 2 hours, Lab: 2 hours

MLTC 1180 - Specimen Collection and Handling for Healthcare Professionals
(1 Credit)
This course covers the principles of specimen collection and handling. National standards are presented. Various specimen collection techniques are introduced to the health care professional, with emphasis on the importance of a properly collected specimen. Note: Students must be second-year students enrolled in RESP, XRAY, ADNU, LPNU, or RENL programs or receive permission of department to register. Course meets for 2 lecture hours and 2 lab hours a week for 5 weeks.
Lecture: 2 hours, Lab: 2 hours

MLTC 1190 - Fundamentals of Clinical Chemistry
(3 Credits)
This course introduces the analytical skills needed to correctly perform analytic procedures that yield accurate and precise information.
Basic principles and practices of clinical chemistry are emphasized. Laboratory safety, quality control and statistics, analytical techniques and instrumentation are stressed.
Lecture: 3 hours

MLTC 1210 - Introduction to Clinical Laboratory Science
(3 Credits)
This course offers a basic introduction to the clinical laboratory. Current concepts and general principles of all areas connected with the medical laboratory field are explored. Students are introduced to selected basic techniques used in the clinical laboratory. (Note: This course is open to any student interested in the field of Medical laboratory technology or can be used as a general studies elective).
Lecture: 2 hours, Lab: 2 hours

MLTC 1930 - Phlebotomy for Medical Laboratory Technicians II
(1 Credit)
This course provides Medical laboratory technology students with the opportunity to become proficient in phlebotomy in a clinical laboratory setting. In addition, use of laboratory information systems, accessioning and proper record-keeping are demonstrated. Note: Course meets for 40 clinical hours over 1 week.
Other: 40 hours

Prerequisite(s): MLTC 1130

MLTC 1940 - Clinical Immunohematology
(3 Credits)
This clinical internship provides the student with opportunity to implement skills learned in MLTC 1160 and MLTC 1161 in a clinical laboratory environment. Students attend for 40 hours per week for 2.5 weeks. There is ample opportunity for additional practice of blood bank principles and procedures and to gain experience with automated instruments. Note: Course meets 40 hours a week for 3 weeks.
Other: 40 hours

Prerequisite(s): MLTC 1160 and MLTC 1161

MLTC 1950 - Clinical Urinalysis
(1 Credit)
This clinical experience will provide the student with theory and practice in performing urinalysis, with the examination of the physical, chemical and microscopic components of urine. Analysis of other body fluid, including serous, amniotic, synovial, seminal and vaginal are included. Students attend for 40 hours per week for 1.5 weeks. Note: Course meets 40 hours over 1.5 weeks.
Other: 40 hours

Prerequisite(s): MLTC 1150

MLTC 1960 - Clinical Laboratory Information Systems
(1 Credit)
Workflow in the laboratory has been adjusted due to the introduction of the computer. This course is an introduction to data entry processing and retrieval of laboratory information. Specimen tracking is emphasized in this hands-on environment.
Lecture: 2 hours

Corequisite(s):PHLE 1010

MLTC 1970 - Information Technology for Medical Lab Technicians
(2 Credits)
This course provides students with the knowledge to perform laboratory procedures that require the use of a computer. Students learn to understand the basics of a system that delivers rapid and accurate reporting to caregivers and to understand the role that the regulatory agencies play in the laboratory information system. Note: Course meets for 2 Lecture and 2 Lab hours daily for 2 weeks.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): COMI 1100

MLTC 2110 - Clinical Microbiology I
(4 Credits)
Procedures for cultivation and identification of pathogenic microorganisms from clinical material are covered in this course. Additional topics such as antimicrobial susceptibility tests, quality control and automation in microbiology are also included.
Lecture: 2 hours, Lab: 4 hours

Prerequisite(s): MLTC 1110

MLTC 2120 - Hematology
(4 Credits)
The study of the structure and function of blood and its role in health and disease is presented. Red blood cells, white blood cells and coagulation factors including platelets are observed and discussed. The classification of leukemias, anemias and other hematological disorders is studied. Development of skills in manual and automated laboratory procedures is stressed. Laboratory procedures include coagulation studies, manual and automated red blood cell, white blood cell and platelet counting and enumeration of special cells. Films of normal and abnormal peripheral blood are examined. Note: Students must be enrolled in the Medical Laboratory Technology program to register for this course.
Lecture: 2 hours, Lab: 6 hours

MLTC 2190 - Clinical Chemistry I
(5 Credits)
The basic principles of spectrophotometry and the diagnostic methods of analysis are presented. The study of protein, fat and carbohydrate metabolism, electrolyte and acid-base balance PCR, molecular methods enzymes and renal function procedures as they relate to diagnostic testing is stressed. Laboratory mathematics and quality control are discussed. Selected laboratory procedures including manual and automated quantitative analysis of serum, plasma and urine are performed.
Lecture: 3 hours, Lab: 6 hours

Prerequisite(s): MLTC 1190

MLTC 2910 - Clinical Microbiology II
(4 Credits)
This course provides practical application of principles and techniques that have been previously learned. Students learn by doing actual testing at the bench with the same exposure to realistic conditions under which a technician works. Coursework involves skill development of clinical bacteriology, mycology and parasitology. Note: Course meets for 32 hours a week for 4 weeks.
Other: 32 hours

Prerequisite(s): MLTC 2110

MLTC 2920 - Clinical Hematology II
(4 Credits)
This course provides practical application of principles and techniques that have been previously learned. Students learn by doing actual testing at the bench with the same exposure to realistic conditions under which a technician works. Note: Course meets for 32 hours a week for 4 weeks.
Other: 32 hours

Prerequisite(s): MLTC 2120

MLTC 2930 - Clinical Laboratory Science Seminar
(2 Credits)
The course examines case studies as they relate to hematology, clinical chemistry, microbiology, urinalysis, immunohematology and immunology. Self-Assessments are used as a review to enhance the students' knowledge base. A capstone presentation is required as a culmination of the students' understanding of clinical laboratory diseases and disorders.
Lecture: 3 hours

Corequisite(s):MLTC 2910, MLTC 2920, MLTC 2990

MLTC 2990 - Clinical Chemistry II
(4 Credits)
This course provides practical application of principles and techniques that have been previously learned. Students learn by doing actual testing at the bench with the same exposure to realistic conditions under which a technician works. Note: Course meets for 32 hours a week for 4 weeks.
Other: 32 hours

Prerequisite(s): MLTC 2190

Nursing

NURS 1010 - Fundamentals of Nursing
(6 Credits)
This course introduces the student to the role of the professional nurse, including legal and ethical standards. Students will learn how to assess and provide safe, evidence-based interventions to meet basic patient needs using the nursing process, with an emphasis on the older adult. Application of foundational concepts and basic psychomotor skills occur in the nursing laboratory and a variety of clinical settings.
Lecture: 4 hours, Other: 6 hours

Prerequisite(s): (NURS 1015 (may be taken concurrently) and NURS 1061 (may be taken concurrently)) and (BIOL 1010 and BIOL 1020 or Biol 1010 >=B- for Nursing and Biol 1020 >=B- for Nursing) or (BIOL 2201 and BIOL 2202 (may be taken concurrently) or A & P I >= B- and A & P II >= B-)

NURS 1015 - Gerontological Nursing
(2 Credits)
This course introduces the student to the social, psychological, and physiological changes associated with the aging process with the intent of promoting safety and maintaining optimal levels of health. Nursing management of common health issues that often affect older adults are addressed.
Lecture: 2 hours

Prerequisite(s): NURS 1010 (may be taken concurrently) and (NURS 1061 (may be taken concurrently) or NURS 1061P) and BIOL 2202 (may be taken concurrently)

NURS 1015P - Gerontology
(2 Credits)
This course introduces the student to the social, psychological, and physiological changes associated with the aging process with the intent of promoting safety and maintaining optimal levels health. Nursing management of common health issues that often affect older adults is addressed.
Lecture: 2 hours

Prerequisite(s): NURP 1010 (may be taken concurrently) and (NURS 1061 (may be taken concurrently) or NURS 1061P (may be taken concurrently)) and (BIOL 1070 (may be taken concurrently) or BIOL 2201 (may be taken concurrently) and BIOL 2202 (may be taken concurrently))

NURS 1020 - Medical Surgical Nursing I
(6 Credits)
This introductory, concept-based nursing course focuses on the acquisition of knowledge and psychomotor skills necessary for delivering safe, evidence-based nursing care to adults in a variety of clinical settings. The emphasis of this course is on common acute and chronic health problems.
Lecture: 3 hours, Other: 9 hours

Prerequisite(s): NURS 1010 and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and NURS 1062 (may be taken concurrently) and NURS 1023 (may be taken concurrently) and PSYC 2030 (may be taken concurrently) and (BIOL 2202 or A & P II >= B-)

NURS 1023 - Mental Health Nursing
(3 Credits)
In this course, the student acquires a basic knowledge of the causes, treatment, prevention and patient-centered nursing care for common and severe mental health problems across the lifespan. Emphasis is placed on application of therapeutic communication techniques, psychosocial assessment skills, and the nursing process with an integration of ethical and legal concepts.
Lecture: 2 hours, Other: 3 hours

Prerequisite(s): NURS 1010 and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and (BIOL 2202 or A & P II >= B-) and NURS 1020 (may be taken concurrently) and NURS 1062 (may be taken concurrently) and PSYC 2030 (may be taken concurrently)

NURS 1061 - Pharmacology 1
(1 Credit)
This course begins the nursing student's education in the basic principles of pharmacology, establishing a knowledge base that applies to the various routes of medication administration. An emphasis is placed on the nursing role in safe dosage calculation and medication administration.
Lecture: 1 hour

Prerequisite(s): NURS 1010 (may be taken concurrently) and (NURS 1015 (may be taken concurrently) or NURS 1015P) and (BIOL 2202 (may be taken concurrently) or A & P II >= B-)

Corequisite(s):NURS 9061

NURS 1061P - Pharmacology I
(1 Credit)
This course begins the nursing student's education in the basic principles of pharmacology, establishing a knowledge base that applies to the various routes of medication administration. There is an emphasis on the nurses' role in safe dosage calculation and medication administration.
Lecture: 1 hour

Prerequisite(s): NURS 1010 (may be taken concurrently) and (NURS 1015P (may be taken concurrently) or NURS 1015) and (BIOL 1070 (may be taken concurrently) or BIOL 2201 (may be taken concurrently) and BIOL 2202 (may be taken concurrently) or A & P I >= B- and A & P II >= B-)

NURS 1062 - Pharmacology II
(1 Credit)
This course builds on the basic principles of pharmacology, progressing to include major classes of drugs that are used in the nursing management of patients with commonly occurring physical and mental health problems.
Lecture: 1 hour

Prerequisite(s): (NURS 1010 or NURP 1010) and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and (NURS 1020 (may be taken concurrently) or NURP 1020 (may be taken concurrently)) and (BIOL 1070 or BIOL 2201 and BIOL 2202)

Corequisite(s):NURS 9062

NURS 1062P - Pharmacology II
(1 Credit)
This course builds on the basic principles of pharmacology, progressing to include major classes of drugs used in the nursing management of patients with commonly occurring physical and mental health problems.
Lecture: 1 hour

Prerequisite(s): (NURS 1010 (may be taken concurrently) or NURP 1010 (may be taken concurrently)) and (NURS 1015 (may be taken concurrently) or NURS 1015P (may be taken concurrently)) and (NURS 1061 (may be taken concurrently) or NURS 1061P (may be taken concurrently)) and NURP 1020 (may be taken concurrently) and (BIOL 1070 (may be taken concurrently) or BIOL 2201 (may be taken concurrently) and BIOL 2202 (may be taken concurrently))

NURS 1063 - Pharmacology III
(1 Credit)
This course focuses on the role of the professional nurse in the administration of medications used in the management of patients with complex multisystem health problems across the lifespan.
Lecture: 1 hour

Prerequisite(s): NURS 1010 and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and BIOL 2202 and NURS 1020 and NURS 1023 and (NURS 1062 or NURS 1062P) and PSYC 2030 and NURS 2040 (may be taken concurrently) and NURS 2050 (may be taken concurrently)

Corequisite(s):NURS 9063

NURS 2030 - Concepts in Nursing Practice
(4 Credits)
This 4 credit course is designed to facilitate successful entry of licensed practical nurses into LPN-to-RN option within the Associate Degree program. It provides theoretical and clinical content from the first two semesters of the registered nurse program. The course is designed to expand on the breadth and depth of the common content from practical nurse education programs, introduce the new concept based curriculum, expand on nursing processes utilizing case studies, and concept mapping, explore evidence based nursing practice, and reinforce skills specific to ADN programs through lab and simulated clinical experience.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): (NURS 1062 (may be taken concurrently) or NURS 1062P (may be taken concurrently)) and NURS 1023 (may be taken concurrently)

NURS 2040 - Medical/Surgical Nursing II
(5 Credits)
This intermediate-level medical/surgical course expands on concepts presented in the prior courses, with an emphasis on application of professional nursing judgment to care for patients with complex acute medical/surgical conditions. Students learn to prioritize and manage evidence-based care for 1-2 patients. Note: Course meets over 7.5 weeks.
Lecture: 6 hours, Other: 12 hours

Prerequisite(s): NURS 1010 and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and NURS 1020 and NURS 1023 and (NURS 1062 or NURS 1062P) and (BIOL 2202 or A & P II >= B-) and PSYC 2030 and NURS 2050 (may be taken concurrently) and NURS 1063 (may be taken concurrently)

NURS 2050 - Maternal and Child Health Nursing
(6 Credits)
Building on concepts learned in previous courses, the emphasis of this course is on utilizing evidence-based nursing judgment to assist the new family in a variety of clinical settings to obtain optimum levels of health during the childbearing and childrearing years. Note: Course meets over 7.5 weeks.
Lecture: 8 hours, Other: 12 hours

Prerequisite(s): NURS 1010 and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and NURS 1020 and NURS 1023 and (NURS 1062 or NURS 1062P) and (BIOL 2202 or A & P II >= B-) and PSYC 2030 and NURS 2040 (may be taken concurrently)

NURS 2060 - Medical-Surgical Nursing III
(6 Credits)
This advanced-level medical/surgical course builds on and emphasizes analysis and synthesis of theory from prior nursing courses. Students will learn to apply professional nursing judgment to the care of patients with emergent and/or multisystem health problems. Emphasis is placed on managing care and collaborating with an interprofessional team for multiple patient assignments. Note: Course meets over 7.5 weeks.
Lecture: 8 hours, Other: 12 hours

Prerequisite(s): NURS 1010 and (NURS 1015 or NURS 1015P) and (NURS 1061 or NURS 1061P) and NURS 1020 and NURS 1023 and (NURS 1062 or NURS 1062P) and BIOL 2202 and PSYC 2030 and NURS 2500 (may be taken concurrently) and BIOL 2210 (may be taken concurrently) and NURS 2040 and NURS 2050 and NURS 1063

Corequisite(s):NURS 9060

NURS 2500 - Nursing Capstone
(3 Credits)
In this course, students synthesize acquired knowledge and apply that knowledge in a clinical immersion experience. Students examine and apply an understanding of professional nursing standards, ethical problem-solving, evidence-based practice, and a commitment to lifelong learning. The clinical experience provides opportunities for teamwork and collaboration in managing care for groups of patients, development of leadership skills, and participation in quality improvement activities. Note: Clinical experience meets 12 hours per week over 7.5 weeks.
Lecture: 1 hour, Other: 12 hours

Prerequisite(s): NURS 1010 and NURS 1020 and (NURS 1015 or NURS 1015P) and NURS 1023 and (NURS 1061 or NURS 1061P) and (NURS 1062 or NURS 1062P) and NURS 1063 and NURS 2040 and NURS 2050 and NURS 2060 and PSYC 2030 and (BIOL 2202 or A & P II >= B-) and BIOL 2210 (may be taken concurrently)

Occupational Therapy Assistant

OCTA 1000 - Introduction to Occupational Therapy
(2 Credits)
This course provides an overview of occupational therapy that includes the history, philosophy and theoretical foundations of the profession, as well as current issues in the field. Topics include: treatment models; factors contributing to health, wellness and dysfunction; and the impact of multicultural factors in treatment. The relationship of the certified occupational therapy assistant to other health professionals is explored. Professional standards and ethics are addressed, including state regulations, credentialing requirements and membership in professional organizations.
Lecture: 2 hours

OCTA 1010 - Fundamentals of Treatment I
(4 Credits)
This course covers collaboration with the occupational therapist in data gathering, evaluation, treatment planning and treatment implementation designed to improve occupational performance. It offers experiential learning in the analysis, selection, use, adjustment, adaptation and fabrication of assistive devices, as well as appropriate documentation of all aspects of the therapy process.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): RHAB 1030 (may be taken concurrently)

Corequisite(s):OCTA 1070

OCTA 1030 - Fundamentals of Treatment II
(4 Credits)
This course approaches the concept of activity analysis through the definition of occupational performance areas, task components and occupational challenges. Individual and group activities are analyzed and graded in the context of relevant occupational environments.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): RHAB 1110 and OCTA 1010 and RHAB 1030 and OCTA 1070

Corequisite(s):OCTA 1040, OCTA 1050, OCTA 1060, OCTA 1080

OCTA 1040 - Gerontologic Occupational Therapy
(3 Credits)
This course examines the aging process and offers an overview of medical conditions and precautions associated with treatment of the elderly client. Therapeutic modalities of treatment are practiced in the laboratory setting.
Lecture: 2 hours, Lab: 2.5 hours

Prerequisite(s): RHAB 1110 and OCTA 1010 and RHAB 1030 and OCTA 1070

Corequisite(s):OCTA 1030, OCTA 1050, OCTA 1060, OCTA 1080

OCTA 1050 - Pediatric Occupational Therapy
(4 Credits)
This course examines the physical and social needs of the growing child and explores their impact on the learning and adaptation processes that accompany the development of performance skills. It includes an overview of diseases and disabilities that may affect children seen in school-based occupational therapy, accompanied by theory and practice as it relates to this population.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): RHAB 1110 and OCTA 1010 and RHAB 1030 and OCTA 1070

Corequisite(s):OCTA 1030, OCTA 1040, OCTA 1060, OCTA 1080

OCTA 1060 - Level I Fieldwork
(1 Credit)
This is the first clinical experience in which students participate. It consists of a combination of 40 hours of fieldwork in a variety of practice settings located within the Lifespan Health Care System.
Other: 35 hours

Prerequisite(s): RHAB 1110 and OCTA 1010 and RHAB 1030 and OCTA 1070

Corequisite(s):OCTA 1030, OCTA 1040, OCTA 1050, OCTA 1080

OCTA 1070 - Tests and Measurements for Occupational Therapy Assistants
(2 Credits)
This course focuses on the methodology for joint measurement and manual muscle testing. Emphasis is placed on the study of the upper extremities.
Lecture: 1 hour, Lab: 2 hours

Prerequisite(s): RHAB 1030 (may be taken concurrently)

Corequisite(s):OCTA 1010

OCTA 1080 - Therapeutic Activity Group Skills
(2 Credits)
Therapeutic activity groups are frequently used in physical rehabilitation facilities, nursing homes, mental health programs and wellness programs. This course provides students with an opportunity to explore the use of group activity for therapeutic effect. Students design their own group and conduct it in a community setting. There is an emphasis on occupational therapy framework and theory in designing groups.
Lecture: 2 hours

Prerequisite(s): OCTA 1010 and OCTA 1070 and RHAB 1030 and RHAB 1110

Corequisite(s):OCTA 1030, OCTA 1040, OCTA 1050, OCTA 1060

OCTA 2010 - Psychosocial Occupational Therapy
(4 Credits)
This course reviews psychiatric disorders and the interdisciplinary approach to the treatment of conditions commonly exhibited in clients referred to occupational therapy in a mental health setting. Topics of discussion include: clinical description and etiology of mental health diagnoses; use of the clinical team; legal issues; nomenclature; and alternatives to hospitalization, including outpatient programs; supervised living apartments; group homes and case management. Use of therapeutic groups and 1:1 interventions and treatment are practiced in lab.
Other: 6 hours

Prerequisite(s): OCTA 1030 and OCTA 1040 and OCTA 1050 and OCTA 1060 and OCTA 1080

Corequisite(s):OCTA 2020

OCTA 2020 - Physical Rehabilitation and Health
(4 Credits)
This course teaches techniques for management of physical dysfunction cases typically referred to occupational therapy. Topics include screening, evaluation, treatment planning and implementation, interventions and prevention techniques as utilized by occupational therapy assistants in a variety of clinical settings. Supervision concepts and reimbursement systems are discussed. Therapeutic intervention and treatment modalities are practiced in the laboratory setting.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): OCTA 1030 and OCTA 1040 and OCTA 1050 and OCTA 1060 and OCTA 1080

Corequisite(s):OCTA 2010

OCTA 2030 - Occupational Therapy Assistant Fieldwork IIA
(4 Credits)
This course is an eight week placement in a clinical site. Under the supervision of licensed occupational therapists, students apply clinical reasoning skills which they have learned in the Occupational Therapy Assistant Program to individuals and groups. This fulfills one half of the requirement for level II fieldwork as required for graduation from the Occupational Therapy Assistant Program and meets the accreditation standards set by the Accreditation Council for Occupational Therapy Education.
Other: 35 hours

Prerequisite(s): OCTA 2010 and OCTA 2020

Corequisite(s):OCTA 2035, OCTA 2040

OCTA 2035 - Occupational Therapy Assistant Fieldwork IIB
(4 Credits)
This course is an eight-week placement in a clinical site. Under the supervision of licensed occupational therapists, students apply clinical reasoning skills which they have learned in the Occupational Therapy Assistant Program to individuals and groups. This fulfills one half of the requirement for level II fieldwork as required for graduation from the Occupational Therapy Assistant Program and meets the accreditation standards set by the Accreditation Council for Occupational Therapy Education.
Other: 35 hours

Prerequisite(s): OCTA 2010 and OCTA 2020

Corequisite(s):OCTA 2030, OCTA 2040

OCTA 2040 - Occupational Therapy Assistant Fieldwork Seminar
(2 Credits)
This course consists of lecture, demonstration, group discussion, student presentation and fieldwork assignments that are designed to assist students with transitioning from the classroom to the clinic setting. It allows students to share their fieldwork experiences with peers, expanding the knowledge base that each student will take into employment.
Lecture: 2 hours

Prerequisite(s): OCTA 2010 and OCTA 2020

Corequisite(s):OCTA 2030, OCTA 2035

Opticianry

OPTI 1010 - Optical Theory I
(3 Credits)
This course examines the nature of light and details the behavior of light when it encounters various refractive surfaces. In addition, the course examines lens power, indices, and prisms. This course establishes the foundation for advanced ophthalmic applications.
Lecture: 3 hours

Prerequisite(s): (MATH 1200 or MATH 1700 or MATH 1179)

Corequisite(s):OPTI 1020, OPTI 1030, OPTI 1040

OPTI 1020 - Ophthalmic Laboratory I
(3 Credits)
This course introduces students to terms, instruments, calculations, lenses, frames, materials, and processes to be used in the surfacing and finishing of ophthalmic prescription eyewear.
Lecture: 3 hours, Lab: 1 hour

Prerequisite(s): (MATH 1200 or MATH 1179 or MATH 1700)

Corequisite(s):OPTI 1010, OPTI 1030, OPTI 1040

OPTI 1030 - Ophthalmic Dispensing I
(3 Credits)
This course introduces students to Opticianry and the procedures necessary for becoming a dispensing optician. Topics include the history of the profession, patient/client measurements, prescription analysis, ophthalmic frame and lens materials, and selection and adjustment techniques.
Lecture: 3 hours

Prerequisite(s): (MATH 1200 or MATH 1179 or MATH 1700)

Corequisite(s):OPTI 1010, OPTI 1020, OPTI 1040

OPTI 1040 - Anatomy and Physiology of the Eye
(3 Credits)
This course gives opticianry students an insight into the anatomical structure of the eye and its adnexa. Students learn the function of the parts of the eye as they relate to vision and fitting of contact lenses. Learners are presented with common pathologies of the eye and ocular pharmacology.
Lecture: 3 hours

Prerequisite(s): (MATH 1200 or MATH 1179 or MATH 1700)

Corequisite(s):OPTI 1010, OPTI 1020, OPTI 1030

OPTI 1050 - Optical Theory II
(3 Credits)
This continues the study of optical theory. Topics include: prism notation, and vertical imbalance. It also presents methods of correction such as vertex power, illuminance, reflection and absorption, diffraction, third order aberrations, lens tilt, anisometropia, and spectacle magnification.
Lecture: 3 hours

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s):OPTI 1060, OPTI 1070, OPTI 1080

OPTI 1060 - Ophthalmic Laboratory II
(3 Credits)
This course continues the study of prescription eyewear fabrication processes. Students learn to calibrate and maintain equipment, layout and edge multi-focal lenses, tint and coat lenses, perform advanced neutralization of lenses for verification or duplication purposes. Instruction is provided in techniques for special surfacing processes such as bicentric grinding and prism thinning.
Lecture: 3 hours, Lab: 1 hour

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s):OPTI 1050, OPTI 1070, OPTI 1080

OPTI 1070 - Ophthalmic Dispensing II
(3 Credits)
This course continues an examination of lens materials, types, and fitting with a particular focus on multi-focals, progressive addition lenses, absorptive lenses, and special lens designs. Focus is on understanding and using ophthalmic instruments and devices to take patient measurements, read prescriptions, and perform frame adjustments. Governing agencies of the optical profession and legal and ethical issues are introduced.
Lecture: 3 hours

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s):OPTI 1050, OPTI 1060, OPTI 1080

OPTI 1080 - Ophthalmic Dispensing Clinical I
(3 Credits)
This course is part of a three semester Dispensing Laboratory. During the three semesters, the student should learn and demonstrate competencies from the competency lists. By the end of the three experiences, students must demonstrate all listed competencies. Students may be required to demonstrate some competencies in more than one course.
Other: 90 hours

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s):OPTI 1050, OPTI 1060, OPTI 1070

OPTI 2010 - Ophthalmic Dispensing Clinical II
(3 Credits)
This course is part of a three (3) semester Dispensing Laboratory. During the three semesters, students should learn and demonstrate competencies from the competency lists. By the end of the three experiences, students must demonstrate all listed competencies. Students may be required to demonstrate some competencies in more than one course.
Other: 90 hours

Prerequisite(s): OPTI 1050 and OPTI 1060 and OPTI 1070 and OPTI 1080 and OPTI 2020

Corequisite(s):OPTI 2040, OPTI 2060

OPTI 2020 - Ophthalmic Laboratory Skills I
(3 Credits)
This course is the skills component of OPTI 1020: Ophthalmic Laboratory I. Students will develop competencies in performing clinical laboratory skills at the introductory level under the direction and supervision of the faculty. Emphasis is placed on accuracy and attaining skills that meet acceptable professional level.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): OPTI 1020

OPTI 2030 - Optical Business Management
(3 Credits)
This course presents basic management and leadership skills necessary for a successful eye care office. The course teaches analysis, creative thinking, judgment, planning strategy, and implementation skills necessary for optical business challenges.
Lecture: 3 hours

Prerequisite(s): OPTI 2010 and OPTI 2040 and OPTI 2020 and OPTI 2060

Corequisite(s):OPTI 2050, OPTI 2070

OPTI 2040 - Introduction to Contact Lenses
(3 Credits)
This course includes a historical review of contact lenses as well as theory; design and optical principles. Indications and contraindications for contact lenses wear, patient evaluation, lens types and availability, and fundamental techniques and fitting philosophies are covered. The uses of the biomicroscope, keratometer, and radioscope are presented as well as patient education on care, cleaning, insertion, and removal of contact lenses.
Lecture: 3 hours

Prerequisite(s): OPTI 1050 and OPTI 1060 and OPTI 1070 and OPTI 1080 and OPTI 2020

Corequisite(s):OPTI 2010, OPTI 2060

OPTI 2050 - Ophthalmic Dispensing Clinical III
(3 Credits)
This course is part of a three (3) semester Dispensing Laboratory. During the three semesters, students should learn and demonstrate listed competencies. By the end of the three experiences, students must demonstrate all competencies listed. Students may be required to demonstrate some competencies in more than one course.
Other: 90 hours

Prerequisite(s): OPTI 2010 and OPTI 2020 and OPTI 2060 and OPTI 2040

Corequisite(s):OPTI 2030, OPTI 2070

OPTI 2060 - Ophthalmic Laboratory Skills II
(3 Credits)
This course is the clinical component of OPTI 1060: Ophthalmic Laboratory II. Students will develop competencies in performing clinical laboratory skills at the advanced level under the direction and supervision of the faculty. Emphasis is placed on accuracy and attaining skills that meet acceptable professional level.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): OPTI 1060 and OPTI 2020

Corequisite(s):OPTI 2010, OPTI 2040

OPTI 2070 - Contact Lens Clinical I
(3 Credits)
This course includes a historical review of contact lenses as well as theory; design and optical principles. Indications and contraindications for contact lens wear, patient evaluation, lens types and availability, and fundamental techniques and fitting philosophies are covered. The uses of the biomicroscope, keratometer, and radioscope are presented as well as patient education on care, cleaning, insertion, and removal of contact lenses.
Other: 90 hours

Prerequisite(s): OPTI 2010 and OPTI 2020 and OPTI 2040 and OPTI 2060

Corequisite(s):OPTI 2030, OPTI 2050

Phlebotomy

PHLE 1010 - Phlebotomy I
(6 Credits)
This course presents the theory and practice of phlebotomy that includes such topics as: phlebotomists in health care delivery systems; medical terminology; infection control and safety; anatomy and physiology of body systems; collection equipment, reagents and interfering factors in blood collection; venipuncture and capillary puncture blood collection procedures and requisitioning. Laboratory experiences include venipuncture practice by evacuated tube system, syringe and winged collection set on adult and pediatric training arms. Skin puncture collection procedures using a variety of lancets to collect capillary tubes and micro collection containers, are performed. Blood smear preparation, specimen processing and quality control are also practiced.
Lecture: 5 hours, Lab: 2 hours

PHLE 1020 - Phlebotomy II
(6 Credits)
This course includes collection and handling of non-blood specimens, quality assurance, specimen handling, specimen processing, communications techniques, legal issues, professionalism and arterial puncture. A review of CLSI Standards for skin puncture and venipuncture is included. In the college laboratory, students perform specimen processing, blood smear preparation, blood culture collection, skin puncture and venipuncture collection. Students spend a total of 120 hours of clinical training in phlebotomy techniques at an affiliated site. Note: students must be available to train weekdays (8 hrs x 5 days/week) for three (3) consecutive weeks.
Lecture: 5 hours, Lab: 2 hours, Other: 8 hours

Physical Therapist Assistant

PHTA 1000 - Introduction to the Physical Therapist Assistant
(2 Credits)
This course is open to students who are considering admission into the Physical Therapist Assistant Program. An overview of the field of physical therapy and the roles of the physical therapist and physical therapist assistant within the health care delivery system are presented. Topics such as licensure, reimbursement, education and employment opportunities and professional organizations are covered. Ethical issues facing health care workers, the Code of Ethics for the Physical Therapist Assistant and the attitudes of health care workers toward illness and injury are discussed.
Lecture: 2 hours

PHTA 1010 - Physical Therapist Assistant I
(6 Credits)
This course will introduce students to fundamental patient care procedures used in physical therapy. Students become proficient in instructing and assisting patients to perform functional mobility activities in a manner that is safe for the patient and practitioner. They learn to perform techniques for wound and edema management while avoiding transmission of infection. Techniques for ambulation training including the measurement and use of assistive devices (crutches, canes, walkers) and wheelchair measurement and mobility are taught and practiced in class and lab settings. Students are introduced to basic principles and learn to perform simple therapeutic exercises.
Lecture: 4 hours, Lab: 4 hours

PHTA 1020 - Physical Therapist Assistant II
(4 Credits)
This course includes an introduction to physical agents and modalities used for pain relief and improvement of tissue healing and function. Content includes the theory and utilization of massage and the theory and application of physical agents as they reduce inflammation and pain and aid metabolic processes. Direct treatment includes mechanical traction, thermo-, hydro-, photo, sound and electrotherapies. These techniques are taught as they relate to practice in a problem-solving, case study format. Students learn to document treatment parameters and patient responses to treatment.
Lecture: 2 hours, Lab: 5 hours

Prerequisite(s): (RHAB 1110 or PHTA 1110) and PHTA 1010 and PHTA 1120

PHTA 1120 - Tests and Measurements for Physical Therapist Assistants
(2 Credits)
This course instructs PTA students in testing and measurement techniques, specifically manual muscle testing and goniometry for the head, spine and extremities.
Lecture: 1 hour, Lab: 2 hours

PHTA 1220 - Basic Therapeutic Exercise
(1 Credit)
This is an optional course to instruct PTA students to correctly perform therapeutic exercises for musculoskeletal conditions of the upper extremity, lower extremity, and trunk. This course will prepare students to instruct and perform basic exercise in preparation for their first clinical experience. This course will have 5 sessions that are 3 hours each.
Lecture: 3 hours

Prerequisite(s): PHTA 1110 or RHAB 1110

PHTA 2010 - Physical Therapist Assistant III
(7 Credits)
This course focuses on interventions for the pulmonary, cardiovascular and musculoskeletal systems with a broad overview of the other body systems. Lecture and laboratory presentations instruct cardiovascular training for risk assessment and rehabilitation; chest physical therapy procedures; therapeutic exercise, particularly as it pertains to orthopedic physical therapy and movement dysfunction; and the management of lower extremity prosthetics. Techniques and concepts from the previous semester courses are integrated with the more advanced treatment interventions. This course runs the first 10 weeks of the semester.
Lecture: 9 hours, Lab: 6 hours

Prerequisite(s): (RHAB 1110 or PHTA 1110) and (RHAB 1030 or PHTA 1030) and PHTA 1010 and PHTA 1120 and PHTA 1020

PHTA 2020 - Physical Therapist Assistant IV
(7 Credits)
This course includes a review of neuroanatomy, the study of pathologies and physical therapy intervention for conditions of the central and peripheral nervous systems. Treatment approaches such as PNF, NDT, Bobath, Rood and Brunnstrom, together with training techniques for balance and coordination are included. The role of the physical therapist assistant in discharge planning is also covered. Emphasis is on application of therapy in the rehabilitation units. Students are exposed to specialty areas of physical therapy practice such as geriatrics and pediatrics. Techniques and concepts from previous semester courses are integrated with the more advanced treatment interventions. This course runs for the first 10 weeks of the semester.
Lecture: 9 hours, Lab: 6 hours

Prerequisite(s): (RHAB 1110 or PHTA 1110) and (RHAB 1030 or PHTA 1030) and PHTA 1010 and PHTA 1020 and PHTA 1120 and PHTA 2010 and PHTA 2910

PHTA 2030 - Physical Therapy for Impaired Neuro Function
(1 Credit)
This course is designed to support PHTA 2020 Physical Therapist Assistant IV. This course reviews the structure and function of the nervous system and neuropathology as it affects structures of the nervous system. The course offers additional laboratory time for students to practice treatment interventions as they relate to abnormal movement and function caused by neuropathology. The course runs concurrently with PHTA 2020 and is scheduled at intervals that will help students with theoretical information and practical skills presented in PHTA 2020.
Lecture: 9 hours, Lab: 6 hours

Prerequisite(s): PHTA 2010

Corequisite(s):PHTA 2020

PHTA 2040 - Career Development Seminar
(1 Credit)
This course is designed to support the students as they prepare for graduation, licensure and employment. Topics such as resume development, interviewing skills, preparation for licensure, negotiation, and professionalism will be presented. Appropriate resources for professionalism will be referenced, including the RI Rules and Regulations for Physical Therapists and Physical Therapist Assistants, Physical Therapy Code of Ethics and Professionalism in PT: Core Values document.
Lecture: 15 hours

Prerequisite(s): PHTA 2020 and PHTA 2930

PHTA 2910 - Clinical Education I
(3 Credits)
This course is the first of three full time clinical experiences in the PTA program, and runs for a period of six weeks during the summer semester. Students are assigned to clinical sites for 35-40 hours per week of supervised clinical practice. Students observe and assist with Physical Therapy treatment under direct supervision and guidance of Physical Therapists and Physical Therapist Assistants. Students will participate in an online seminar in which relevant clinical issues will be discussed.
Other: 40 hours

Prerequisite(s): PHTA 1020 and RHAB 1030

PHTA 2920 - Clinical Education II
(3 Credits)
This course is the second of three full time clinical experiences in the PTA program, and runs for the last six weeks of the fall semester. Students are assigned to clinical sites for 35-40 hours per week of supervised clinical practice. Students will have the opportunity to grow more independent in performing physical therapy treatment under the supervision and guidance of Physical Therapists and Physical Therapist Assistants. Participation in ancillary components of Physical Therapy practice will foster the development of a responsible professional identity. Students will participate in an online seminar in which relevant clinical issues will be discussed.
Other: 40 hours

Prerequisite(s): PHTA 2010 and RHAB 1030

PHTA 2930 - Clinical Education III
(3 Credits)
This course is the final of three full time clinical experiences in the PTA program, and runs for the last six weeks of the spring semester. Students are assigned to clinical sites for 35-40 hours per week of clinical practice under the supervision of a licensed Physical Therapist or Physical Therapist Assistant. Students will be exposed to more complex patients, and will be allowed to partake in fulfilling a broad array of practice responsibilities, with increasing degrees of independence. This clinical experience should maximize the integration of all aspects of practice and will render the student prepared to function as a responsible entry level Physical Therapist Assistant. Students will participate in an online seminar in which relevant clinical issues will be discussed.
Other: 40 hours

Prerequisite(s): PHTA 2020

Practical Nursing

NURP 1010 - Practical Nursing I
(7 Credits)
This course introduces the nursing student to the role of the licensed practical nurse, including legal and ethical standards. Nursing concepts are examined along with evidence-based interventions to meet basic patient needs. This conceptually organized content provides opportunity to achieve a broad understanding of individuals and their health issues that impact the health care system, both institutionally and in the community. Students apply theory in clinical practice, a major focus of which is care of the elderly in subacute care facilities.
Lecture: 3 hours, Other: 12 hours

Prerequisite(s): BIOL 1070 (may be taken concurrently) or (BIOL 1010 and BIOL 1020) or (BIOL 2201 and BIOL 2202 (may be taken concurrently)) and (NURS 1015P (may be taken concurrently) or NURS 1015 (may be taken concurrently)) and (NURS 1061P (may be taken concurrently) or NURS 1061 (may be taken concurrently))

NURP 1015P - Gerontology
(2 Credits)
This course introduces the student to the social, psychological, and physiological changes associated with the aging process with the intent of promoting safety and maintaining optimal levels of health. Nursing management of common health care issues that often affect older adults will be addressed.
Lecture: 2 hours

NURP 1020 - Practical Nursing 2
(9 Credits)
Building upon the basic concepts and skills taught in NURP 1010, this course expands that conceptual foundation for the student caring for adult patients with common, less complex medical and surgical disorders. Physiological, psychosocial, spiritual, cultural, legal, and ethical aspects of routine patient care are addressed. Attention is also directed toward the practical nurse's role in all phases of health promotion. A variety of medical- surgical facilities are utilized for clinical learning experiences.
Lecture: 5 hours, Other: 12 hours

Prerequisite(s): (NURP 1010 and PSYC 2010 (may be taken concurrently)) and (NURS 1061P or NURS 1061) and (NURS 1015P or NURS 1015) and (NURS 1062P (may be taken concurrently) or NURS 1062) and (BIOL 1070 or BIOL 2201 and BIOL 2202)

NURP 1030 - Practical Nursing 3
(10 Credits)
Building upon the concepts, skills, and routine patient care taught in NURP 1010 and NURP 1020, this course rounds out the practical nursing student's education with an introduction to issues related to care of maternity, pediatric, and mental health patients. Content includes care of the mother during a normal pregnancy, care of the normal newborn, care of the developing child, and care to persons with mental health disorders. Basic knowledge of the leadership role for the practical nurse is presented. Conceptual foundations for the care of patients with routine medical issues is continued. Students have clinical experience with maternity, pediatric, psychiatric, and adult/geriatric patients. This is the completion course for students who wish to graduate as practical nurse candidates. Note: This course meets over 10 weeks with 9 lecture hours and 18 clinical hours.
Lecture: 6 hours, Other: 12 hours

Prerequisite(s): BIOL 1070 or (BIOL 1010 and BIOL 1020) or (BIOL 2201 and BIOL 2202) and NURP 1010 and NURP 1020 and (NURS 1015P or NURS 1015) and (NURS 1061 or NURS 1061P) and (NURS 1062 or NURS 1062P) and NURP 2500 (may be taken concurrently)

NURP 2500 - PN Capstone
(1 Credit)
This 15 hour course prepares soon-to-be-graduates of the Practical Nursing Program to pass the national examination for licensure as a Licensed Practical Nurse. Curriculum content is organized and reviewed. Test-taking skills for application of nursing knowledge to practice are emphasized. This course is meant to boost the confidence level of test candidates by increasing their preparedness and decreasing test anxiety.
Lecture: 15 hours

Prerequisite(s): NURP 1010 and NURP 1020 and (NURS 1015 or NURS 1015P) and (NURS 1062P or NURS 1062) and (NURS 1061 or NURS 1061P) and (BIOL 1070 or BIOL 2201 and BIOL 2202) and NURP 1030 (may be taken concurrently)

Rehabilitative Health

RHAB 1010 - Medical Terminology for Rehabilitative Health
(1 Credit)
This course includes an introduction to word parts building medical terms, instruction in organization of the body, directional terms, abbreviations and an overview of the different systems in the body. Students are expected to complete the course via progression through course modules. The course is offered both on-site and on the Web.
Lecture: 1 hour

RHAB 1020 - Fundamentals of Palpation and Body Movement Skills
(3 Credits)
This course is designed to focus on the concepts and principles of palpatory anatomy and kinesiology. The purpose of this course is to emphasize the development of skilled palpation as a fundamental component of effective manual therapy technique. A solid knowledge base and understanding of how muscles and joints interact based upon their structure and function will be created and enhanced through a Functional Skills Model. This Functional Skills Model combines palpatory anatomy and kinesiology, which help ingrain the accurate location of various anatomical structures through kinesthetic experience, quality of touch, and effective client communication. This model incorporates a unique, experimental, online activities, and participatory class environment, where students are able to retain information while learning to use critical and creative-thinking processes. In the Functional Skills model students will palpate the targeted muscle, which will help students gain a better understanding of the designated muscle's location, size, texture, role in posture, and dynamic movement.
Lecture: 3 hours

RHAB 1030 - Pathophysiology for Rehabilitative Health Practitioners
(3 Credits)
This course includes a systems study of pathological conditions. The structure and function of each organ system is presented. Discussion will involve the etiology, signs, symptoms, diagnostic procedures, common medical/surgical management and the prevention of pathological processes as they affect each system. Students will understand the implications of pathological processes on physical function and contraindications and precautions for treatment.
Lecture: 3 hours

Prerequisite(s): BIOL 1020 or BIOL 1070 or BIOL 2202

RHAB 1100 - Foundational Kinesiology
(3 Credits)
This online course uses a regional approach to studying the anatomical structures that create both stability and movement in the human body. With a strong focus on musculoskeletal anatomy, the student will be guided through a basic analysis of how functional movement occurs and how the body interacts functionally with the environment. Each student will complete a muscle mapping project where the attachment points of the skeletal muscles are drawn on a real miniature skeletal model.
Lecture: 3 hours

RHAB 1110 - Kinesiology
(4 Credits)
This course covers the study of human movement and locomotion by combining human anatomy with aspects of biomechanics, muscle physiology, physical laws of gravity, leverage, and motion. This course deals with specific kinesiological functions of the musculoskeletal system with application to patient-related activities for the physical therapist assistant and the occupational therapy assistant. Note: Restricted to OCTA, PHTA, TMSG and TMSC students.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): BIOL 1070 or BIOL 1010

Renal Dialysis

RENL 1010 - Renal Dialysis Technology I
(4 Credits)
This course is designed to provide students with information concerning the principles of renal dialysis; the normal operation of dialysis equipment and the procedure for performance of renal dialysis. Emphasis is placed on the procedure for the performance of renal dialysis. Content includes the technical aspects of preparing, operating, monitoring and maintaining dialysis equipment. Attention is given to medications routinely used in renal dialysis and the role of the dialysis technician. Patients' needs and safety are addressed throughout. Theoretical information is supplemented with clinical observation. Privacy issues, HIPAA requirements, standard precautions for protection of patients and personnel are emphasized. Note: Students must be accepted into the Renal Dialysis program to register for this course.
Lecture: 4 hours

RENL 1020 - Patient Care and Assessment for Renal Dialysis Technicians
(3 Credits)
This course is designed to provide students with the information necessary to provide care appropriate to the renal dialysis patient. End-stage renal disease is discussed as well as methods of treatment and associated conditions. Psychosocial and dietary needs specific to patients with renal disease are discussed as is methods for patient assessment and documentation. The control of infection and measures for patient comfort and transfer are also considered.
Lecture: 3 hours

Prerequisite(s): RENL 1030 (may be taken concurrently)

RENL 1030 - Renal Dialysis Technology II
(6 Credits)
This course is designed to provide students with information concerning the principles of renal dialysis. The skills critical to the recognition of complications or abnormal situations as well as the appropriate responses are stressed. An examination of previously discussed patient care skills and monitoring procedures relative to emergency situation is reviewed. Emphasis is placed on standards and regulations pertinent to water treatment, quality control issues and workplace safety. Theoretical information is supplemented with clinical observation. Written case presentations, as they relate to the dialysis patient, is required.
Lecture: 2 hours, Lab: 4 hours, Other: 24 hours

Prerequisite(s): RENL 1020 (may be taken concurrently)

Respiratory Therapy

RESP 1000 - Introduction to Respiratory Therapy
(3 Credits)
In this course, students explore current concepts in health care including patient/client care issues such as effective communication, cultural and age-specific concerns and disease management models. Health care provider topics such as professionalism, ethical and legal considerations, including credentialing and licensure are addressed. A brief overview of the U.S. health care system is discussed, addressing past and present payment structure, care settings and delivery models. An introduction to medical terminology is also included.
Lecture: 3 hours

RESP 1010 - Respiratory Care I
(4 Credits)
This course introduces students to the hospital and patient environment in the classroom and the laboratory. Students learn an array of respiratory therapy procedures. An overview of the structure and function of the cardio-respiratory system is examined as well as physical principles of gas flow and lung mechanics. Principles of breathing and gas exchange, including oxygen and carbon dioxide transport and arterial blood gas values and interpretation are addressed. Laboratory practice is included. (Admission to the Respiratory Therapy program)
Lecture: 3 hours, Lab: 3 hours

RESP 1012 - Pre-Clinical Practice
(2 Credits)
This course is designed to prepare students for the initial clinical experience in the program. It will emphasize students' ability to identify and follow protocols in order to carry out commonly ordered respiratory therapy procedures. Students will recognize and interpret basic findings in patient assessment, including vital signs, chest assessment, and values for blood chemistry testing. Students will be introduced to the electronic medical record and tracking system, and will participate in case simulations.
Lecture: 2 hours

RESP 1100 - Respiratory Care II
(4 Credits)
This course offers a detailed review of therapeutic and diagnostic techniques in respiratory care. It includes the study of both invasive and noninvasive diagnostic techniques for assessing oxygenation, ventilation, pulmonary function and electrocardiography. Students interpret graphics from these techniques, and are able to classify specific findings. Management of airway emergencies and artificial airways is included. Laboratory practice is provided
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): RESP 1010

RESP 1800 - Clinical Practicum I
(1 Credit)
This clinical experience introduces students to the hospital environment. Emphasis is on orientation, becoming familiar with respiratory therapy department structure and procedures and use of the medical record. Medical gas therapy and incentive spirometry are applied with direct bedside teaching.
Other: 8 hours

Prerequisite(s): RESP 1010

RESP 2020 - Cardiopulmonary Diseases I
(3 Credits)
This course emphasizes the study of microorganisms and control of pathogens related to cardiopulmonary disorders, the study of common cardiopulmonary disorders with emphasis on characteristics, application of diagnostics and determining appropriate therapeutic regimens.
Lecture: 4 hours

RESP 2030 - Cardiopulmonary Diseases II
(3 Credits)
This course continues the study of the pathophysiology of cardiopulmonary disorders and their treatment. A portion of this course emphasizes the study of cardiopulmonary disorders in pediatric patients and in the neonate.
Lecture: 4 hours

Prerequisite(s): RESP 2020

RESP 2110 - Respiratory Critical Care
(3 Credits)
This course offers an introduction to critical care concepts and application of physiologic measures to patient care in the acute care setting.
Lecture: 3 hours

RESP 2120 - Respiratory Care III
(4 Credits)
Students continue their study of critical care modalities including the principles of positive pressure breathing devices, their clinical applications and alternatives with emphasis on artificial airway management, ACLS protocols, mechanical ventilation principles of operation, management and terminology. Critical care monitoring, including hemodynamic monitoring and pharmacological control, are discussed. Laboratory practice is part of this course.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): RESP 1100

RESP 2130 - Respiratory Care IV
(4 Credits)
Specialized respiratory therapy is studied in-depth with emphasis on nonconventional mechanical ventilation including indications, equipment, procedures and precautions. A portion of this course focuses on pediatric and neonatal critical care modalities. Advanced cardiopulmonary diagnostics, including arrhythmia interpretation and ACLS support, rehabilitation practices, medical ethics and laws pertaining to the care of patients with cardiopulmonary disorders, are discussed. Laboratory practice is included.
Lecture: 3 hours, Lab: 3 hours

Prerequisite(s): RESP 2120

RESP 2140 - Basics of Electrocardiography
(1 Credit)
This course is designed to provide the health care practitioner with the knowledge and skills needed to accurately identify basic cardiac arrhythmias. A review of cardiac terminology, cardiac physiology and patient interaction before, during and after testing is included. Laboratory instruction provides hands-on practice of electrode placement, equipment set-up and troubleshooting of the electrocardiograph and practice reading ECG rhythm strips for arrhythmias. Note: Phlebotomy students - see prerequisites under program requirements
Lecture: 2 hours, Lab: 2 hours

Corequisite(s):PHLE 1020

RESP 2800 - Clinical Practicum II
(2 Credits)
This clinical experience allows students to apply knowledge developed through previous and current study. Students are guided and evaluated through bedside teaching. They are exposed to the diagnostic procedure of respiratory therapy and perform specific diagnostic procedures under direct supervision by the clinical director and affiliate staff. Experience in all areas of the hospital with emphasis on respiratory therapeutics, as well as home care are provided. Interpersonal skills are practiced and assessed.
Other: 24 hours

RESP 2810 - Clinical Practicum III
(4 Credits)
This clinical experience allows students to apply the techniques and skills of previous and current study to hospitalized patients under direct supervision. Students are introduced to the clinical application of mechanical ventilation as well as to specialized areas of patient care through bedside teaching. In addition, students prepare a case presentation of patients in these areas. Pulmonary function training is also provided.
Other: 24 hours

RESP 2820 - Clinical Practicum IV
(3 Credits)
In this clinical experience, students will apply all the techniques and skills of the respiratory therapist to hospitalized patients under direct and indirect supervision by the clinical director and affiliate staff. Clinical study of mechanical ventilation is completed. Students also examine neonatal and pediatric procedures.
Other: 24 hours

Therapeutic Massage

TMSG 1000 - Introduction to Therapeutic Massage
(2 Credits)
This course presents an overview of the field of massage therapy and the evolving roles and opportunities of the massage therapist within the health care delivery system is presented. Topics such as history, licensure requirements, education, employment opportunities, professional organizations and the benefits of massage are covered. Ethical issues for the massage therapist are discussed. The student will learn basic techniques for hand and foot massage. The student is required to receive one full body massage from a licensed massage therapist during the semester.
Lecture: 2 hours

TMSG 1020 - Swedish Massage
(5 Credits)
Students will learn the five standard Swedish massage strokes, as well as complementary strokes commonly used in Swedish massage. Through demonstration and practice, the students are able to perform a full-body Swedish massage in one hour. The theoretical principles of research including scientific study of professional touch is discussed. The indications, contraindications, limitations and physiological effects of these techniques are described. Introduction to documentation is provided. Students are instructed in the scope of practice, creating professional boundaries, the therapeutic relationship, approaches to care, working with hospital based clients, proper draping methods, personal and client hygiene, obtaining a medical history, proper body mechanics, basic exercises for personal care, basic first aid, and OSHA regulations to provide a safe and nurturing practice environment.
Lecture: 3 hours, Lab: 4 hours

Prerequisite(s): TMSG 1000 and BIOL 1070 and RHAB 1100 and RHAB 1030 (may be taken concurrently)

TMSG 1030 - Deep Tissue Massage
(5 Credits)
This course presents student with a wider and deeper understanding of soft tissue techniques and their effects on the human body. Students are instructed in specific patterns for common pathological condition, the use of trigger point therapy, deep tissue manipulation, fascial restrictions to abnormalities and postural analysis. Origin, insertion, and action of major muscles will be reviewed. The indications, contraindications, limitations and physiological effects of these techniques will be described discussion along with the effects of stress and disease. Students will focus on determining and applying the appropriate modality to achieve the goals. Students will learn an introduction to the lymphatic system and how it works. Students will learn about the flow of lymphatic fluid, lymph nodes, and basic protocols along with contraindications. The course applies concepts from, anatomy, kinesiology, neuromuscular assessment and evaluation. Laboratory experience will provide students with the opportunity to become comfortable with the techniques, proper body mechanics, obtaining medical history and therapeutic relationships. Through demonstration and practice, the student will be able to complete a treatment plan and be able to perform a full body massage and receive a full body massage, using a variety of deep tissue techniques. Professional behaviors in the classroom setting are expected at all times and are evaluated each class.
Lecture: 3 hours, Lab: 4 hours

Prerequisite(s): (BIOL 1070 or BIOL 1010 and BIOL 1020) and (TMSG 1000 and TMSG 1020 and TMSG 1040 and RHAB 1100 and RHAB 1030 (may be taken concurrently))

TMSG 1040 - Introduction to Eastern Modalities
(2 Credits)
Students explore eastern modalities in health and wellness care. Primary focus is an introduction to the history, theory and basic practice of shiatsu therapy and acupressure. This includes a study of selected meridians, acupoints and other aspects of traditional Chinese medicine. The indications, contraindications, limitations and effects of shiatsu and acupressure are described. Students learn methods and terminology for documentation. Laboratory experience provides students with the opportunity to become comfortable with shiatsu and acupressure techniques, and to learn proper mind-body mechanics for providing safe and effective treatment on the shiatsu mat and on a massage chair. Students also learn techniques for integrating shiatsu and acupressure into their Swedish massage, and explore how to practice massage in a more embodied, mindful, compassionate, and ecologically attuned way. Students encounter a range of additional modalities including qi gong, yoga, t'ai chi, meditation, and feng shui. Participation in all aspects of this course is required.
Lecture: 1 hour, Lab: 2 hours

Prerequisite(s): BIOL 1070 and RHAB 1010 and TMSG 1000 and ENGL 1010 and TMSG 1020 (may be taken concurrently)

TMSG 1140 - Integrating Eastern and Western Techniques
(2 Credits)
Students will learn clinical applications of eastern modalities in the integrative clinical practice of massage therapy. Specifically, they learn how to integrate eastern body mechanics, mind-body techniques, and meridian/acupoint work into Swedish and/or deep tissue massage treatments. Students will explore integrative massage strategies for addressing chronic low back pain with a goal of preventing or reducing a client's use of prescription opioid medication. Students will also explore contemporary clinical acupuncture and acupressure research in the development of an integrative massage treatment protocol for a particular client population. Participation in all aspects of this course, which includes regular qi development exercises, mind-body cultivation, and integrative massage practice outside of class hours, is required.
Lecture: 1 hour, Lab: 2 hours

Prerequisite(s): TMSG 1020 and TMSG 1040 and RHAB 1030

Corequisite(s):TMSG 1030

TMSG 2010 - Introduction to Sports Massage
(2 Credits)
This course serves as a basic introduction to the role of the Sports Massage Therapist; the course applies concepts from anatomy, orthopedic massage and will focus on the uses of massage in sports activities. Students will understand the benefits and learn techniques for pre-event, inter- event, post-event and maintenance massage. Students will gain skill in treatment session planning, palpation assessment and documentation. An overview of common sports injuries and conditions will be presented. Musculoskeletal concerns will be examined. Hydrotherapy as an adjunct to tissue and muscle healing will be addressed. Specific hydrotherapeutic methods will be reviewed and presented in laboratory sessions.
Lecture: 1 hour, Lab: 2 hours

Prerequisite(s): RHAB 1030 and TMSG 1020 and TMSG 1030

Corequisite(s):TMSG 2021

TMSG 2020 - Student Massage Clinic
(3 Credits)
This course marks the first part of the student's clinical education, it focuses on integrating skills learned in previous courses; community outreach and educating the public to the benefits of clinical massage therapy. The course is conducted at the college providing massage services to clients within the community. Students will set up and run the in-house clinic under the supervision licensed program faculty, with the emphasis on clinic policies and procedures, clinical behavior, professionalism, interview skills and develop treatment plans, ethics and proper client care. Students will gain experience relative to a massage office practice, marketing, record keeping, scheduling clientele, basic accounting procedures, and ensuring compliance with OSHA standards, blood borne pathogens and HIPAA training.
Other: 100 hours

Prerequisite(s): RHAB 1030 and BIOL 1070 and TMSG 1000 and TMSG 1020 and TMSG 1040 and TMSG 1030 and RHAB 1100

Corequisite(s):TMSG 2010, TMSG 2021

TMSG 2021 - Massage Practice Business Theory
(2 Credits)
This course focuses on providing students with knowledge of business management skills for massage practitioners. Students will demonstrate skills in business management including financial organization, accounting basics, taxes and maintaining proper documentation. Topics include legal and ethical issues, record-keeping, taxes, pricing, bookkeeping, inventory maintenance, interviewing skills and resume development. The student will be provided with an overview of OSHA, HIPAA and ADA regulations as they relate to the massage profession.
Lecture: 2 hours

Prerequisite(s): TMSG 1020 and TMSG 1030 and RHAB 1110 and RHAB 1030 (may be taken concurrently)

TMSG 2030 - Clinical Internship I
(2 Credits)
The focus of this course is to gain experience providing massage therapy services to the healthy population, or to special populations including those with various pathologies and injuries. Students will be supervised by qualified healthcare providers employed at various community and healthcare facilities. Clinical placements are available in a variety of settings including private offices, nursing homes, group homes, athletic training facilities and hospitals. In addition to gaining clinical experience, students will participate with record maintenance, accounting procedures, and ensuring OSHA standards in the health care environment.
Other: 60 hours

Prerequisite(s): RHAB 1030 and TMSG 1020 and TMSG 1040 and TMSG 1030 and TMSG 2010 and TMSG 2020 and TMSG 2021 and TMSG 1140

Corequisite(s):TMSG 2040, TMSG 2110

TMSG 2040 - Foundation of Evidence-Based Outcomes for Massage Therapists
(3 Credits)
This course is designed to provide students with information necessary to evaluate the effectiveness of various massage techniques, with client populations under various conditions. The emphasis is to provide the student with skills to conduct a literature search, appreciate the value of evidence-based practice for massage therapists, to critically evaluate research studies, and to use the information to design more effective treatment plans. Students will demonstrate the ability to use this evidence to inform consumers, health care providers, government agencies, and professional association of the value of massage in the health care system.
Lecture: 3 hours

Prerequisite(s): (PHTA 1110 or RHAB 1110) and (PHTA 1030 or RHAB 1030) and TMSG 1020 and TMSG 1030 and TMSG 2010 and TMSG 2020 and TMSG 2021

TMSG 2050 - Selected Topics in Massage Therapy
(2 Credits)
This course is designed to present various topics designed to increase awareness of newer concepts and techniques in massage therapy. It will be open to licensed Massage Therapists and students in the Therapeutic Massage Program.
Lecture: 2 hours

TMSG 2110 - Advanced Sports Massage
(3 Credits)
The role of the Sports Massage Therapist in the athletic setting will be expanded. The course will focus on the uses of massage in the athletic training environment. Students will learn to recognize and apply specific massage skills for Repetitive Use Injuries, including hamstring strains, shoulder, knee and foot pathologies. Application of techniques for these specific problems will provide opportunities for psychomotor mastery that will be evaluated in hands on sessions. Indications and contraindications for heat and cold applications an adjunct to tissue and muscle healing will be addressed. Specific methods such as muscle energy techniques, including proprioceptive neuromuscular facilitation (PNF), a comparison of types of stretching methods and self-myofascial release techniques will be demonstrated in hands on sessions. Students will learn about overtraining syndrome causes and effects and the role of massage in supporting the over-trained athlete. An introduction to the Kinesio Taping method will also be provided outlining foundational concepts of this modality and specific applications for minor repetitive use conditions.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): RHAB 1030 and TMSG 1020 and TMSG 1030 and TMSG 2010

TMSG 2130 - Clinical Internship II
(2 Credits)
The focus of this course is to gain experience providing massage therapy to the healthy population, or to special populations including those with various pathologies and injuries. Students will be supervised by qualified healthcare providers employed at various community and healthcare facilities. Clinical placements are available in a variety of settings including private offices, nursing homes, group homes, athletic training facilities and hospitals. In addition to gaining clinical experience, students will participate with records maintenance, accounting procedures, and ensuring OSHA standards in the health care environment.
Other: 60 hours

Prerequisite(s): RHAB 1030 and TMSG 1020 and TMSG 1030 and TMSG 1040 and TMSG 2010 and TMSG 2020 and TMSG 2021 and TMSG 2040 (may be taken concurrently) and TMSG 1140 and TMSG 2110 (may be taken concurrently)

X-RAY Radiology

XRAY 1000 - Introduction to Radiography
(3 Credits)
This course is designed to give prospective Radiography students an introduction to allied health professions in general and to diagnostic imaging in particular. Topics include admission and graduation requirements for health programs. Medical terminology and an overview of anatomy is taught, along with basic imaging concepts. Radiation safety and patient care issues are addressed. Note: This course is a requirement for Radiography students but is open to all students.
Lecture: 3 hours

Prerequisite(s): ENGL 1010 (may be taken concurrently)

XRAY 1010 - Clinical Radiography
(3 Credits)
This course familiarizes students with the field of radiological technology. Topics include basic anatomy, radiation protection and safety, as well as medical ethics and law as related to radiographic practice. The anatomy, positioning and film critique for selected procedures are included and coordinated with laboratory practice and clinical application. Students are assigned to a four-week clinical rotation upon successful completion of the classroom and lab portion of this course.
Other: 43 hours

Prerequisite(s): XRAY 1000

XRAY 1110 - Principles of Radiography I
(3 Credits)
This course introduces students to the principles of radiographic exposure, image production and the prime factors in radiography.
Lecture: 3 hours

Prerequisite(s): XRAY 1000

XRAY 1130 - Radiographic Anatomy and Physiology
(3 Credits)
This course is a study of basic anatomy and physiology and provides students with the opportunity to develop an understanding of the normal functions of organs and body systems as a basis for radiological examination.
Lecture: 3 hours

Prerequisite(s): XRAY 1010 and XRAY 1110

XRAY 1220 - Principles of Radiography II
(3 Credits)
This course is a continuation of XRAY 1110 and is designed to give the student a thorough knowledge of the manipulation of exposure factors and to construct technique charts.
Lecture: 3 hours

Prerequisite(s): XRAY 1110

XRAY 1230 - Patient Care for Radiographers
(1 Credit)
This course is designed to develop skills needed to address the needs of patients in the radiology department. Medical asepsis, patient assessment, communication skills, patients' rights and standard of care are addressed, in addition to routine and emergency care.
Lecture: 1 hour

Prerequisite(s): XRAY 1010

XRAY 1910 - Radiography I
(6 Credits)
This course is a study of basic positioning for extremities, chest, abdomen and the bony thorax. Proper patient communication, radiation protection and identification of structures on radiographs are incorporated into each unit of study. This course is coordinated with practical application in the radiography laboratory and at the affiliated hospital.
Lecture: 3 hours, Lab: 2 hours

Prerequisite(s): XRAY 1010 and XRAY 1110

XRAY 1920 - Radiography II
(6 Credits)
This course is a study of the vertebral column, skull and facial bones. This course also studies the alimentary canal, biliary tract and the urinary system in relationship to the contrast agents and positioning utilized for each examination. This course is coordinated with practical application in the radiography laboratory and at the affiliated hospital.
Other: 21 hours

Prerequisite(s): XRAY 1910

XRAY 1930 - Radiography III
(6 Credits)
This course is designed to expand the students' working knowledge of technique formulation and conversion factors; to understand the use and limitations of the X-ray tube; to develop an understanding of the function and use of various types of imaging equipment and accessories; and to examine methods for producing radiographic images in fluoroscopy, the operating room and at the patient's bedside. This is related to the students' ongoing clinical experience and their use of computer-assisted imaging modalities in a hospital setting.
Other: 39 hours

Prerequisite(s): XRAY 1920

XRAY 2340 - Quality Assurance in Radiography
(1 Credit)
This course is designed to examine the effective functioning of a radiology department. Methods for evaluating quality, equipment testing and documentation will be discussed, as well as the role of the registered radiographer in maintaining quality.
Lecture: 1 hour

Prerequisite(s): PHYS 1110 and XRAY 1930

XRAY 2410 - Introduction to Radiation Biology
(3 Credits)
This course presents basic radiobiology in relationship to the possible genetic and somatic effects of radiation dependent upon dose and the rate to specific types of human cells, organs, and systems. Every known method used to limit ionizing radiation from diagnostic examinations is presented.
Lecture: 3 hours

Prerequisite(s): PHYS 1110 and XRAY 1130

XRAY 2430 - Sectional Imaging
(3 Credits)
This course is a study of human anatomy from a sectional perspective. The anatomy of the head, neck, thorax, abdomen, pelvis and vertebral column are studied. This anatomy is related to the use of computer-assisted imaging modalities. Common pathological findings in each area are discussed.
Lecture: 1 hour

Prerequisite(s): XRAY 1130

XRAY 2460 - Principles of Imaging Diverse Patient Populations
(3 Credits)
This course allows students to apply their knowledge of radiographic imaging and patient care to a variety of non-traditional patient populations such as pediatric, geriatric, and trauma patients.
Lecture: 3 hours

Prerequisite(s): PHYS 1110 and XRAY 1930 and XRAY 1920 and XRAY 1220

XRAY 2470 - Radiographic Pathology
(1 Credit)
This course examines the most common congenital and acquired diseases that are demonstrated radiographically. Etiology, symptoms, treatment and prognosis are discussed. Students evaluate the quality of radiographs of patients with these conditions.
Lecture: 4 hours

Prerequisite(s): XRAY 1130 and XRAY 2340 and XRAY 2910 and XRAY 1930

XRAY 2910 - Radiography IV
(7 Credits)
This course deals with the specialized and highly technical procedures in radiography, the equipment and contrast media employed and the general indications for each examination. This course is coordinated with practical application in the radiographic laboratory and the clinical affiliate, where practical skills associated with these procedures are developed.
Lecture: 3 hours, Lab: 2 hours, Other: 24 hours

Prerequisite(s): XRAY 1930

XRAY 2920 - Radiography V
(4 Credits)
This course requires students to prepare a research project that forms the basis for a written paper and an oral presentation. Students are also required to read and evaluate material on selected topics in health care and new imaging modalities. Mastery of previously learned material is evaluated by comprehensive examinations. Mastery of clinical skills built on previously learned material is also evaluated. Observations in associated imaging modalities is required.
Other: 25 hours

Prerequisite(s): XRAY 2910 and XRAY 2340 and XRAY 2460