

# Health Care Diagnostics and Therapeutics

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To find faculty & staff phone numbers and email addresses, please consult the University Directory (<http://www.dixie.edu/directory/directory.php>).

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## Program Descriptions

### Emergency Medical Services ([catalog.dixie.edu/programs/emergencymedicalservices](http://catalog.dixie.edu/programs/emergencymedicalservices))

The Emergency Medical Services (EMS) Program is designed to prepare students for career opportunities in pre-hospital emergency care, such as ambulance, fire department, search and rescue, law enforcement, and volunteer service. Pre-hospital emergency care involves a wide scope of activities such as recognition and management of patients with heart disease, trauma, burns, poisoning, alcohol and drug abuse, childbirth, acute psychiatric disorders, and other medical emergencies. Curricula for all EMS courses are based on the National Standard Curriculum.

### Medical Laboratory Science ([catalog.dixie.edu/programs/medicallaboratoryscience](http://catalog.dixie.edu/programs/medicallaboratoryscience))

The nationally accredited Medical Laboratory Science program is a course of study leading to a Bachelor of Science in Medical Laboratory Science. Students complete a rigorous competency-based laboratory science curriculum coupled with medical community-sponsored clinical training. Graduates are prepared to pursue careers in various laboratory settings including but not limited to medical, research, and public health. Those who complete the program are eligible to take the Medical Laboratory Science national board certification examination administered by the American Society for Clinical Pathology (ASCP).

### Medical Radiography ([catalog.dixie.edu/programs/medicalradiography](http://catalog.dixie.edu/programs/medicalradiography))

This is a two-year, full-time program that prepares students to enter the health care profession as a competent entry-level radiographer. Professional competence is achieved through a blend of theoretical and practical coursework which includes didactic and clinical experience at cooperating hospitals, clinics, and doctors' offices.

### Physical Therapist Assistant Program ([catalog.dixie.edu/programs/physicaltherapy](http://catalog.dixie.edu/programs/physicaltherapy))

A physical therapist assistant (PTA) is a health care provider who works under the supervision of a physical therapist (PT). They do hands-on care for people who need to recover from injuries to the bones and joints, brain and nerves, problems with pain, developmental complications, and other movement problems. Their main purpose is to assist people with reaching their maximum level of health and function. They help people to recover their ability to walk, to heal from wounds, and to learn to work and live with the effects of injuries and other health problems.

### Respiratory Therapy ([catalog.dixie.edu/programs/respiratorytherapy](http://catalog.dixie.edu/programs/respiratorytherapy))

Respiratory therapists, also known as respiratory care practitioners, provide treatment, evaluation, monitoring and management of patients with breathing disorders or cardiovascular problems. Care provided by respiratory therapists may include administration of oxygen, cardiopulmonary resuscitation, management of mechanical ventilators, administering drugs to the lungs, monitoring cardiopulmonary systems and measuring lung function. Respiratory therapists treat all types of patients, ranging from premature infants whose lungs are not fully developed to elderly people with lung disease.

### Surgical Technology ([catalog.dixie.edu/programs/surgicaltechnology](http://catalog.dixie.edu/programs/surgicaltechnology))

The goal of the Surgical Technology program is to prepare competent, entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Graduates of the program will be able to apply fundamental theoretical knowledge in the practice of surgical technology; acquire and evaluate emerging surgical knowledge; perform the roles and duties of the surgical technologist at entry-level for employment; demonstrate professional behaviors expected of surgical technologists; and demonstrate the effective use of reason and good judgment in surgical patient care situations.

## Phlebotomy (<https://health.dixie.edu/phlebotomy>)

The Phlebotomy course provides training for students to become proficient in drawing and obtaining blood and other samples for laboratory analysis. At the conclusion of the course, the student will be able to obtain blood from a vein or capillary using various methods. Students must submit documentation of criminal background check, immunization status, 5-panel drug screen, and CPR certification to the advisor prior to registering for the course.

## Course Prefixes

- EMS, HLOC, MLS, PHLB, PTA, RADT, RSTH, SURG

Emergency Medical Services ([catalog.dixie.edu/programs/emergencymedicalservices](http://catalog.dixie.edu/programs/emergencymedicalservices))

- Associate of Applied Science in Emergency Medical Services ([catalog.dixie.edu/programs/emergencymedicalservices/associate\\_of\\_applied\\_science\\_in\\_emergency\\_medical\\_service](http://catalog.dixie.edu/programs/emergencymedicalservices/associate_of_applied_science_in_emergency_medical_service))
- Advanced Emergency Medical Technician – Certificate of Proficiency (AEMT)\* ([catalog.dixie.edu/programs/emergencymedicalservices/advanced\\_emt\\_certificate\\_of\\_proficiency](http://catalog.dixie.edu/programs/emergencymedicalservices/advanced_emt_certificate_of_proficiency))
- Emergency Medical Technician – Certificate of Proficiency (EMT)\* ([catalog.dixie.edu/programs/emergencymedicalservices/emt\\_certificate\\_of\\_proficiency](http://catalog.dixie.edu/programs/emergencymedicalservices/emt_certificate_of_proficiency))
- Paramedic Certificate of Completion ([catalog.dixie.edu/programs/emergencymedicalservices/paramedic\\_certificate\\_of\\_proficiency\\_](http://catalog.dixie.edu/programs/emergencymedicalservices/paramedic_certificate_of_proficiency_))

Medical Laboratory Science ([catalog.dixie.edu/programs/medicallaboratoryscience](http://catalog.dixie.edu/programs/medicallaboratoryscience))

- Bachelor of Science in Medical Laboratory Science ([catalog.dixie.edu/programs/medicallaboratoryscience/bachelor\\_of\\_science\\_in\\_medical\\_laboratory\\_science](http://catalog.dixie.edu/programs/medicallaboratoryscience/bachelor_of_science_in_medical_laboratory_science))
- Associate of Applied Science in Medical Laboratory Science (on hiatus)

Medical Radiography ([catalog.dixie.edu/programs/medicalradiography](http://catalog.dixie.edu/programs/medicalradiography))

- Associate of Applied Science in Medical Radiography ([catalog.dixie.edu/programs/medicalradiography/associate\\_of\\_applied\\_science\\_in\\_medical\\_radiography](http://catalog.dixie.edu/programs/medicalradiography/associate_of_applied_science_in_medical_radiography))

Physical Therapist Assistant ([catalog.dixie.edu/programs/physicaltherapy](http://catalog.dixie.edu/programs/physicaltherapy))

- Associate of Applied Science in Physical Therapist Assistant ([catalog.dixie.edu/programs/physicaltherapy/associate\\_of\\_applied\\_science\\_in\\_physical\\_therapist\\_assistant](http://catalog.dixie.edu/programs/physicaltherapy/associate_of_applied_science_in_physical_therapist_assistant))

Respiratory Therapy ([catalog.dixie.edu/programs/respiratorytherapy](http://catalog.dixie.edu/programs/respiratorytherapy))

- Associate of Applied Science in Respiratory Therapy ([catalog.dixie.edu/programs/respiratorytherapy/associate\\_of\\_applied\\_science\\_in\\_respiratory\\_therapy](http://catalog.dixie.edu/programs/respiratorytherapy/associate_of_applied_science_in_respiratory_therapy))

Surgical Technology ([catalog.dixie.edu/programs/surgicaltechnology](http://catalog.dixie.edu/programs/surgicaltechnology))

- Associate of Applied Science in Surgical Technology ([catalog.dixie.edu/programs/surgicaltechnology/associate\\_of\\_applied\\_science\\_in\\_surgical\\_technology](http://catalog.dixie.edu/programs/surgicaltechnology/associate_of_applied_science_in_surgical_technology))

Health Occupations

- Associate of Applied Science in General Technology: Healthcare Emphasis ([catalog.dixie.edu/programs/healthcare\\_diagnostics\\_therapeutics/associate\\_of\\_applied\\_science\\_in\\_general\\_technology\\_healthcare\\_emphasis](http://catalog.dixie.edu/programs/healthcare_diagnostics_therapeutics/associate_of_applied_science_in_general_technology_healthcare_emphasis))
- Phlebotomy Certificate ([catalog.dixie.edu/programs/healthcare\\_diagnostics\\_therapeutics/phlebotomy\\_certificate](http://catalog.dixie.edu/programs/healthcare_diagnostics_therapeutics/phlebotomy_certificate))

## Emergency Medical Services Courses

### EMS 1100. EMT. 9 Hours.

Open to students who have current CPR certification (AHA-HCP/RC-Pref. Res.). Presents instruction in the theory and practice of first aid, providing students with knowledge and skills necessary to meet common emergencies associated with injury and illness. Topics include CPR, bone and joint injuries, dressings and bandages, sudden illness, and emergency childbirth. Successful completers will be prepared to take the Utah EMT certification test. Course fee required. Prerequisite: Admission to the Dixie State University Emergency Medical Technician program. FA.

**EMS 1200. Advanced EMT (A-EMT). 8 Hours.**

Includes basic knowledge and skills necessary to provide basic and limited advanced patient care and transportation. Includes interventions with basic and advanced equipment typically found in an ambulance, IV insertion, medication administration, advanced airway management, and advanced cardiac resuscitation procedures with the goal of producing competent entry level A-EMTs to serve in career and volunteer positions within the EMS system. Includes 160 hours of lecture, practical lab skills, and clinical rotation hours. Prerequisites: EMS 1100. SP.

**EMS 2200. Paramedic Training I. 7.5 Hours.**

First semester course. The first of 5 paramedic courses includes lecture, laboratory, and clinical training in topics such as EMS communications, wellbeing of the paramedic, medical and legal responsibilities, pharmacology, pathophysiology, history taking, ventilatory management, suctioning, manual maneuvers, IV therapy, sterile techniques, IV medications/administration, and patient assessment. Course fee required. Prerequisite: Admission to the Dixie State University Paramedic degree or certificate program. SP.

**EMS 2300. Paramedic Training II. 7.5 Hours.**

First semester course. Open to students who have had the EMT certificate for at least 1 year. The first of 5 paramedic courses which includes lecture, laboratory, and clinical training in topics such as EMS communications, wellbeing of the paramedic, medical and legal responsibilities, pharmacology, pathophysiology, history taking, advanced ventilatory management, bag valve mask, mouth to mask, mouth to mouth/nose, ET insertion, EOA insertion, NPA insertion, OPA insertion, suctioning, manual maneuvers, IV therapy/sterile techniques, IV medications and their administration, and patient assessment. Prerequisite: Admission to the Dixie State University Paramedic Certificate program. SP.

**EMS 2400. Paramedic Training III. 8 Hours.**

Second semester course. Includes lecture, laboratory, and clinical training in topics such as advanced pediatric management, OB/GYN emergencies, cold weather rescue, environmental emergencies, neurology, endocrinology, gastroenterology, pulmonary emergencies, cricothyrotomy, chest venting, external jugular cannulation, toxicology, hematology, nasogastric tube insertion, and Foley catheter insertion. Course fee required. Prerequisite: Admission to the Dixie State University Paramedic degree or certificate program. SU.

**EMS 2500. Paramedic Training IV. 8 Hours.**

Second semester course. Includes lecture and laboratory training in topics such as spinal immobilization of the lying and sitting patients, chest needle decompression, IV/Bolus/Piggy Back medications, bleeding, wound care, shock, long bone splinting, head / face trauma, thoracic trauma, abdominal trauma, ventilatory management, dynamic cardiology, static cardiology, and extrication, mass casualty management, abuse and neglect, crime scene awareness, and hazardous materials. PHTLS certification included. 10 lecture hours per week; additional hours for ride-along and field course required. Prerequisite: Admission to the Dixie State University Paramedic Certificate program. SU.

**EMS 2600. Paramedic Training V. 12 Hours.**

Third semester course. Hands-on practice of current and previously learned skills. Includes lecture and out-of-classroom education in high angle rescue, swift water rescue, farmedic course, aeromedicine, ongoing field assessment and evaluation of the student's performance and competency. AMLS certification included. Lecture hours plus 144 hours field rotation and 120 clinicals required. Assists the student in preparation for state and national certification. Course fee required. Prerequisite: Admission to the Dixie State University Paramedic Certificate program. FA.

## Health Occupations Courses

**HLOC 1000. Medical Terminology. 2 Hours.**

Strongly recommended for students entering health professions; open to all students. Emphasizes memorization of word roots, suffixes, and prefixes of both Greek and Latin origin, as well as proper pronunciation and spelling of medical terms. Material is organized according to body systems; some basic anatomy and physiology is included. FA, SP, SU.

**HLOC 1001. FYE: Allied Health. 1 Hour.**

A First Year Experience course designed to help entering freshmen and transfer students with 0-24 credits majoring in nursing or allied health adapt to university life and become integrated into Dixie State University. Students will refine academic skills, create and foster social networks, learn about college resources, and explore different fields of study in the health sciences. Students will begin to explore the collaborative relationships necessary for interdisciplinary health care. Multiple listed with all other sections of First Year Experience (all 1001 courses, ENGR 1000). Students may only take one FYE course for credit. FA.

**HLOC 1010. Intro to Health Professions. 2 Hours.**

Open to all students. Emphasizes U.S. health care system, including health care reform; current political, social and ethical issues; and changes in educational and legal requirements for more than sixty health and health-related professions, including information on salaries, employment opportunities and trends, and various associations. Students will prepare a resume and receive tips on interviewing techniques and job hunting. Successful completion of the course should enable students to better select a career in health care suited to them.

**HLOC 1020. Intro to Sports Medicine. 3 Hours.**

Designed for individuals interested in athletic training, physical therapy, orthopedics, coaching, or other physical education or fitness related careers, but open to all students. Includes the basics of sports medicine (prevention of injury, evaluation of injury, and management of injury) and lab component where students have hands-on, field experiences with athletic trainers and therapists. Course fee required. FA, SP.

**HLOC 1050. Cardio-Pulmonary Resuscitation. 0.5 Hours.**

Open to all students. CPR training at multiple levels dependent on student need: airway management, adult/child/infant, cardio-pulmonary resuscitation adult/child/infant, and use of pocket masks. Course fee required. Prerequisite: Instructor permission. FA, SP.

**HLOC 1060. First Aid. 0.5 Hours.**

Open to all students who have a requirement for or personal interest in basic first aid. Techniques include bleeding control; treatment, stabilization of fractures, sprains, and dislocations; and metabolic and environmental emergencies. Course fee required. Prerequisite: Instructor permission. FA, SP.

**HLOC 2830. Pre-Hosp Trauma Life Support. 1 Hour.**

For students who hold a current EMT-P and current BLS Healthcare Provider (or equivalent) certifications. Designed by the National Association of EMTs (NAEMT) in cooperation with the Committee on Trauma of the American College of Surgeons, and targeted for the current paramedic to provide knowledge and skills for pre-hospital assessment and care of the trauma patient. Course fee required. Prerequisite: Instructor permission. Offered based upon sufficient student need.

**HLOC 2990. Seminar in Health Occupations. 0.5-3 Hours.**

For students wishing instruction that is not available through other regularly scheduled courses in this discipline. Occasionally, either students request some type of non-traditional instruction, or an unanticipated opportunity for instruction presents itself. This seminar course provides a variable-credit context for these purposes. As requirements, this seminar course must first be pre-approved by the department chair; second, it must provide at least nine contact hours of lab or lecture for each credit offered; and third, it must include some academic project or paper (i.e., credit is not given for attendance alone). This course may include standard lectures, travel and field trips, guest speakers, laboratory exercises, or other non-traditional instruction methods. Note that this course is an elective and does not fulfill general education or program requirements. Fees may be required for some seminar courses and instructor permission will be optional at the request of the instructor.

**HLOC 3080. Advanced Sports Medicine. 3 Hours.**

Open to all students, and designed to introduce injury recognition, care and rehabilitation of injuries occurring to the active individual for athletic training. Course fee required. Prerequisite: HLOC 1020.

**HLOC 3230. Health Communication. 3 Hours.**

For Human Communication students, for healthcare practitioners, and for practitioners-in-training. A course to strengthen communication skills associated with overall success of the practitioner-patient interface. The communicative disconnect between healthcare practitioners and their patients has led to misunderstandings about health care and its applications that may impact patients' actual and perceived well-being. Research suggests that effective communication interactions between practitioners and patients can lead to more pro-active and involved patients, higher patient satisfaction, shorter administration of health care routines, and fewer medical malpractice lawsuits. Dual listed with COMM 3230 (students may take only one course for credit). Prerequisites: COMM 1010 or COMM 1020 or COMM 2110, or instructor permission. FA.

**Medical Lab Science Courses****MLS 3310. Immunohematology I. 5 Hours.**

Required course for students in the Bachelor of Science Medical Laboratory Science Professional Program. Comprehensive study of the science and applied concepts of blood banking and transfusion service practices. The study of blood groups, their antigens and antibodies, is discussed in detail as are test methods and transfusion protocols, including donor selection, component preparation, quality management and compliance issues. In lab, students learn to perform a variety of tests that are prerequisite to the transfusion of blood and blood products. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. SP.

**MLS 3312. Clinical Immunology. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. A comprehensive study of the human immune system and the medical laboratory techniques used to assess immune responsiveness in health and during times of illness and disease. Lectures focus on innate and adaptive immunity, antibody structure and function, and the role of the complement system and cytokines in immune responsiveness. The immunologic manifestation of infectious disease, hypersensitivity, autoimmune diseases, transplantation immunity, tumor immunology, and immunodeficiency diseases will be discussed in detail. Using serological methods, electrophoresis, and molecular techniques, students test samples and correlate results with states of health and disease. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. FA.

**MLS 3314. Diagnostic Microbiology I. 5 Hours.**

Required course for students in the BS in Medical Laboratory Science professional program. Comprehensive topical study introduces students to clinically significant bacteria including epidemiology, pathogenicity, and procedures for the traditional laboratory identification and antimicrobial testing. Clinically significant pathogens of interest include: Staphylococcus, Streptococcus, Neisseria, Gram-Positive Bacilli, Enterobacteriaceae, Gram-Negative non-fermentors and other miscellaneous bacteria. The laboratory exercises focus on traditional and evolving methods of identification of bacteria of medical interest. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. FA.

**MLS 3330. Clinical Chemistry. 5 Hours.**

Required course for students in the Bachelor of Science Medical Laboratory Science professional program. : Basic concepts and techniques in clinical chemistry and quality control utilizing manual and automated laboratory procedures. Instrumentation background and use will be discussed. Emphasis on blood and body fluid assessments of carbohydrates, bilirubin, non-protein nitrogen testing, electrolytes, acid/base balance, lipids, hemoglobin, and electrophoresis. Laboratory section will facilitate student learning by students applying theory to laboratory assays. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. SP.

**MLS 3555. Research Seminar. 2 Hours.**

Required course for students in the Bachelor of Science program in Medical Laboratory Science. Addresses research methods in the clinical sciences and reviews accepted policies from the National Institutes of Health on informed consent, institutional review boards, and clinical trials. Students will read and interpret studies in the clinical laboratory sciences, comment on problems with studies, and note the further work needed in the respective area of research. Students will present a study, highlighting the research questions answered, methods employed, and relevance to other studies. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. SP.

**MLS 3850. Urinalysis and Body Fluids. 2 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. In-depth study of the physiology, formation and composition, and medical laboratory analysis of urine and other body fluids including cerebrospinal fluid, seminal fluid, serous fluids, synovial fluid, amniotic fluid, bronchoalveolar lavages and bronchial washings, and vaginal secretions. In lab, students learn to perform macroscopic (physical and chemical) and microscopic analysis on clinical samples, interpret test results, and correlate results with states of human health and disease. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. FA.

**MLS 4020. MLS Capstone. 1 Hour.**

Students will learn resume writing and take a mock registry examination in preparation for Board of Certification Exam by the American Society for Clinical Pathology. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. FA.

**MLS 4110. Laboratory Management/Edu. 2 Hours.**

Students will learn managerial problem solving, finance, and budgeting, Lean and Six Sigma techniques, leadership styles, and education/training relevant to the clinical laboratory. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. FA.

**MLS 4200. Clinical Chemistry and Molecular Diagnostics. 4 Hours.**

Required course for students admitted to the BS in Medical Laboratory Science professional program. Second of two courses covering essential practices related to the pre-analytical, analytical, and post-analytical components of the clinical chemistry laboratory service. Lectures focus on the pathophysiology of a variety of diseases including diabetes, liver disease, kidney disease, various endocrine disorders including thyroid disease, and on the specialized services of the clinical chemistry lab including toxicology, therapeutic drug monitoring, and molecular diagnostics. The use of molecular techniques with interest in instrumentation and evolving technology are discussed in detail. Laboratory exercises facilitate student skill development performing assays and correlating test results to states of health and disease. Lab fee required. The course will be taught for the first time fall semester 2018. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. FA.

**MLS 4300. Clinical Hematology. 5 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Lecture and laboratory coverage of the theories, concepts and practical aspects central to the study of blood and blood forming tissues by medical laboratory methods. Lectures topics of focus include hematopoiesis, blood cells' structure, function, kinetics, senescence and destruction. Hematologic diseases including the etiology and pathophysiology of anemia, and neoplastic and nonmalignant leukocyte disorders are discussed in detail. In lab, students use manual methods and automation to analyze clinical samples and correlate results with states of health and disease. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. SP.

**MLS 4320. Hemostasis. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Theories and concepts of hemostasis are presented, including plasma and cell-based models of normal coagulation and fibrinolysis. Hemorrhagic diseases and thrombotic disorders will be covered and laboratory tests critical to the diagnosis, prognosis, and to monitoring treatment of these conditions are discussed in detail. In the lab, students use manual methods and technology to analyze clinical samples to detect, differentiate, and quantify coagulation abnormalities. Lab fee required. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. FA.

**MLS 4330. Clinical Chemistry Practice. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a contemporary clinical chemistry/immunology laboratory and further develop discipline-specific competency. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. SP.

**MLS 4400. Immunohematology II. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Continued study of the science of antigen and antibody reactions and blood group systems, emphasizing decision-making and problem-solving skill development with application to blood banking practices and transfusion therapy services. Lab fee required. Science professional program. This course will be taught for the first time fall 2018. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. FA.

**MLS 4410. Blood Banking Practice. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a contemporary blood bank and further develop discipline-specific competency. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. SP.

**MLS 4414. Clinical Microbiology Practice. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a contemporary medical microbiology laboratory and further develop discipline-specific competency. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. SP.

**MLS 4423. Clinical Hematology Practice. 4 Hours.**

Required course for students admitted to the Bachelor of Science in Medical Laboratory Science professional program. Practical experience emphasizing application of knowledge and skills to perform a wide variety of testing in a contemporary clinical hematology/hemostasis laboratory and further develop discipline-specific competency. Prerequisite: Admission to the Dixie State University Bachelor of Science Program in Medical Laboratory Science. SP.

**MLS 4600. Diagnostic Microbiology II. 4 Hours.**

Required course for students admitted to the BS in Medical Laboratory Science professional program. Continued comprehensive study of diagnostic microbiology focusing on clinically significant pathogens including Anaerobes, Spirochetes, Chlamydia, Mycobacteria, medically important fungi, viruses and parasites. Student will further develop competency using traditional manual microbiological methods and evolving techniques, including molecular assays, to identify and aid the diagnosis, prognosis, and therapy monitoring of infections caused by the microbes discussed in this course. Lab fee required. This course will be taught for the first time in fall 2018. Prerequisite: Admission to the Dixie State University Bachelor of Science in Medical Laboratory Science professional program. FA.

**Medical Radiography Courses****RADT 1010. Intro to Radiography. 2 Hours.**

Open to all students interested in medical radiography. Explores the field of radiography and its role in health care delivery. Covers fundamental concepts including medical terminology, radiation protection, ethics, career opportunities, professional development, and hospital operations. FA, SP.

**RADT 1020. Radiographic Procedures I. 5 Hours.**

First semester course. Instruction in how to perform radiographic procedures and identifying anatomy of the upper/lower extremities, chest, abdomen, bony thorax and pelvis with emphasis on radiation protection, surface landmarks and pathology. Image analysis is introduced. Course fee required. Prerequisites: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1030. Radiographic Imaging I. 3 Hours.**

First semester course. Analysis of factors affecting image quality and application of radiographic principles using imaging devices such as image receptors, grids and beam limiting devices, processing procedures, as well as introduction of basic digital imaging concepts. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1040. Clinical Education I. 4 Hours.**

First Semester Course. Students will apply theories and develop skills in a supervised setting through observation, assisting, and performing basic radiographic procedures on upper/lower extremities, chest, abdomen, pelvis and bony thorax. 180 clinical hours. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1050. Patient Care. 2 Hours.**

First semester course. Introduces the role of the radiographer as a health care provider. Topics include patient communication and education, patient transfer, vital signs, infection control, oxygen, suction, age-specific needs and cultural diversity. Prerequisite: Acceptance into the Medical Radiography Program Taught in cohort rotation.

**RADT 1120. Radiographic Procedures II. 4 Hours.**

Second Semester Course. Instruction in performing radiographic procedures and identifying anatomy of the vertebral column, genitourinary, gastrointestinal and biliary systems, skull and facial bones, as well as advanced mobile and surgical procedures, composition and the use and effects of contrast media. Course fee required. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1140. Clinical Education II. 5 Hours.**

Second Semester Course. Continuation of RADT 1040, providing students with the opportunity to apply theories and further develop technical skills with emphasis placed on vertebral column, biliary system, gastrointestinal and genitourinary procedures, skull and facial bones. Patient management specific to fluoroscopic and advanced radiographic procedures. 225 clinical hours. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1230. Radiographic Imaging II. 2 Hours.**

Second Semester Course. Builds on theories and concepts introduced in RADT 1030, emphasizing quality assurance and quality control, digital and computed imaging components and processes and data and information management with PACS. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1240. Clinical Education III. 7 Hours.**

Third semester course. Continuation of RADT 1140, providing students with the opportunity to apply theories and further develop technical skills. Students will gain experience in effective patient and time management specific to advanced radiographic procedures. 315 clinical hours. Course fee required. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 1250. Advanced Patient Care. 2 Hours.**

Second semester course. Instruction in advanced patient care skills, including pharmacology and contrast administration for medical imaging, medical ethics and law, and mobile and surgical radiography. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 2030. Radiographic Physics. 3 Hours.**

Fourth semester course. In depth analysis of electrical circuitry, transformers, and rectifiers as they relate to x-ray production, as well as construction and function of the x-ray tube, fluoroscopic systems, video systems, AEC, and digital imaging. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 2040. Clinical Education IV. 7 Hours.**

Fourth semester course. Continuation of RADT 1240 with emphasis on mastering basic procedures and attaining experience in advanced procedures with further awareness of radiation protection requirements. Students will rotate through advanced modality areas as assigned by Clinical Coordinator. 315 clinical hours. Course fee required. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 3020. Advanced Medical Imaging. 3 Hours.**

Fourth semester course. Introduces additional imaging modalities and radiation therapy, including interventional radiography, sonography, CT, MRI, mammography, nuclear medicine and basic sectional anatomy. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 3150. Radiobiology and Protection. 3 Hours.**

Fourth semester course. In depth analysis of ionizing radiation and its effects on matter, including early and late effects of radiation, dose limits, radiation monitoring, and limiting radiation exposure to patients and personnel. Prerequisite: Admission to DSU Medical Radiography program. Taught in cohort rotation.

**RADT 3240. Clinical Education V. 7 Hours.**

Fifth semester course. Continuation of RADT 2040 with emphasis on developing an autonomous approach to the diversity of clinical situations and successfully adapting to them. Extended advanced modality rotations may be arranged following established guidelines and at the discretion of the Clinical Coordinator. 315 clinical hours. Course fee required. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

**RADT 3260. Radiography Seminar. 3 Hours.**

Fifth semester course. Capstone course that offers review and reflection on previous coursework, providing students with a meaningful approach to evaluate strengths and weaknesses and to prepare for credentialing exams and employment. Prerequisite: Admission to the Dixie State University Medical Radiography program. Taught in cohort rotation.

## Phlebotomy Courses

**PHLB 1000. Phlebotomy. 4 Hours.**

For students wishing to learn phlebotomy. Provides hands on training to become proficient in drawing and obtaining blood samples from a vein or capillary for laboratory analysis using Vacutainer, syringe, butterfly, and heel and finger stick. Instruction includes universal precautions and proper handling of specimens. Successful completion requires a number of "live sticks". Course fee required. Prerequisite: Admission to the Dixie State University Phlebotomy program. FA, SP.

## Physical Therapist Assistant Courses

**PTA 1010. Introduction to Physical Therapy. 2 Hours.**

This course introduces students to the field of physical therapy through the history and definition of the profession. Other topics include medical terminology and documentation. Health care for a diverse population begins its thread in this course. PTA 1010 is prerequisite to acceptance into the technical phase of the PTA program and is an open-enrollment course. Note: You are responsible for content/dates/announcements posted on Canvas. SP.

**PTA 2000. Practice Issues. 2 Hours.**

Discussions include the health care team, the rehabilitation-specific team, the roles and scopes of practice of the physical therapist and the physical therapist assistant, and the physical therapist/assistant interaction. Also covers the rehabilitation patient, communication in health care, patient care settings, reimbursement issues, the "Patient's Bill of Rights," and HIPAA. This course reviews the "Ethics & Jurisprudence" of physical therapist assistant practice. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2010. Kinesiology. 2 Hours.**

Students develop competencies in identifying anatomical landmarks and symmetry, joint mechanics and function, posture, an introduction to gait, and neurological control. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2011. Kinesiology Lab. 2 Hours.**

Students develop competencies in identifying anatomical landmarks and symmetry, joint mechanics and function, posture, an introduction to gait, and neurological control. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2110. Fundamentals Physical Therapy. 2 Hours.**

This course includes those fundamental skills required for successful patient treatment and care. Topics covered include patient draping and preparation, vital signs, body mechanics, bed mobility, transfers, gait training, wheelchair fitting and repair, tilt table, activities of daily living, architectural barriers, documentation, basic skills for patient/family education, safety, cultural sensitivity, and age related considerations. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA SP.

**PTA 2111. Fundamentals Physical Therapy Lab. 2 Hours.**

This course includes those fundamental skills required for successful patient treatment and care. Topics covered include patient draping and preparation, bed mobility, transfers, gait training, wheelchair fitting and repair, tilt table, activities of daily living, architectural barriers, documentation, basic skills for patient/family education, safety, cultural sensitivity, and age related considerations. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2200. Physical Agents. 2 Hours.**

Students develop competence in the correct application of therapeutic modalities including heat, cold, electrotherapy, intermittent compression, massage, traction, and ultrasound. Evidenced based practice and indications/contraindications are emphasized. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2201. Physical Agents Lab. 2 Hours.**

Students develop competence in the correct application of therapeutic modalities including heat, cold, electrotherapy, intermittent compression, massage, traction, and ultrasound. Evidenced based practice and indications/contraindications are emphasized. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2210. Observation & Measurement. 2 Hours.**

This is a course that covers the bases for recognizing movement and other dysfunctions and the tools used for problem solving in physical therapy. These include goniometry, manual muscle testing, posture, vital signs, sensation, gait and balance, etc. Students are instructed in the role and scope of the PTA in regard to these measures. Patient progress and accurate reporting to the physical therapist are emphasized. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA, SP.

**PTA 2211. Observation & Measurement Lab. 2 Hours.**

Students develop competence in the skills of measurements used in physical therapy. Students will become familiar with the use of goniometers, blood pressure cuffs, grip meters, and other tools of measurement. The skills of analyzing gait and posture will be included. Lab assessments will include the reporting of observable and measurable data and their significance to patient progress. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2300. Orthopedic Rehabilitation. 2 Hours.**

This course includes development of therapeutic exercise and other treatment practices for patients with musculoskeletal pathologies. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2301. Orthopedic Rehabilitation Lab. 2 Hours.**

Students practice and gain competence in the application of therapeutic exercise, the rationale for its use, safety principles involved in, and its application across the lifespan. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2400. Clinical Pathology. 2 Hours.**

An overview of basic disease progression and classification with special emphasis in musculoskeletal and nervous system pathologies treated with physical therapy interventions. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2410. Special Clientele. 2 Hours.**

Students are introduced to the therapeutic principles underlying the treatment of patients with burns, amputations, cardiopulmonary pathologies and considerations, women's health issues, and selected age-specific disorders. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2411. Special Clientele Lab. 1 Hour.**

Students review anatomical and physiological aspects of the cardiopulmonary system and are introduced to the cardiac rehabilitation program. Orthotic and prosthetic devices are presented, rationale for their use, fitting, and adjustments are reviewed. Students will review physical therapy techniques for women's health, and age-related pathologies and practice appropriate techniques. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2520. Neuromuscular Rehabilitation. 2 Hours.**

This course is intended to discover and develop a working knowledge of patients with neurological pathologies and their treatment. Age-related, injury, and disease processes are considered. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA, SP.

**PTA 2521. Neuromuscular Rehabilitation Lab. 2 Hours.**

Students are introduced to and develop competencies in the application of specific treatment procedures used with patients exhibiting neuromuscular pathologies. Treatment modifications, best practices, and current concepts are practiced. Lab fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2530. Seminar. 4 Hours.**

This course is divided into 3 main learning modules: Module I: Psychosocial considerations with application to cultural/gender/aging/family dynamics in relation to death and dying and the grieving process are presented and discussed. In addition, caregiver self-care, assertive communication, and clinical burnout are presented. Students will be introduced to emotional intelligence and what part it plays in physical therapy. Module II: An introduction to effective administration of physical therapy environments, including management techniques, fiscal considerations, continuous quality assurance, voluntary accreditation, and other relevant topics related to the business and delivery of physical therapy care. Students will also have the opportunity to create a descriptive resume, practice interview strategies, and discuss other topics in preparation for entering the physical therapy workplace. Module III: A review of the required text with an emphasis in board exam study and test-taking strategies. Some review of previous PTA course content will occur in this module. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. FA.

**PTA 2605. Clinical Practicum. 4 Hours.**

A three-week, full-time clinical experience in a physical therapy workplace setting. Students will have opportunities to apply the thinking processes and skills learned from previous courses. Supervision is provided by physical therapists and physical therapist assistants employed by the host facility. Course fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SU.

**PTA 2705. Clinical Affiliation I. 6 Hours.**

A six-week, full-time clinical experience in a physical therapy workplace setting. Students will have opportunities to apply the thinking processes and skills learned from previous courses. Supervision is provided by physical therapists and physical therapist assistants employed by the host facility. Course fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

**PTA 2805. Clinical Affiliation II. 6 Hours.**

A six-week, full-time clinical experience in a physical therapy workplace setting. Students will have opportunities to apply the thinking processes and skills learned from previous courses. Supervision is provided by physical therapists and physical therapist assistants employed by the host facility. Course fee required. Prerequisite: Admission to the Dixie State University Physical Therapist Assistant program. SP.

## Respiratory Therapy Courses

**RESP 1010. Introduction to Respiratory Therapy and Medical Terminology. 2 Hours.**

First semester course. Introduces respiratory care profession, including professional organizations, credentialing, and licensing agencies. Also provides an overview of medical ethics, medicolegal issues of health care, regulations such as HIPPA, and selected OSHA standards, as well as an introduction to medical terminology and patient-care documentation. FA.



**RESP 2020. Cardiopulmonary Anatomy and Physiology. 3 Hours.**

First semester course. Expands on basic human anatomy and physiology, concentrating on the cardiopulmonary system. Covers selected gas laws and physical principles associated with respiration and gas exchange, ventilation, pulmonary mechanics, circulation, and hemodynamics. Introduces fetal and newborn anatomy and physiology and basic cardiac and renal function. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 2030. Introduction to Pathophysiology. 3 Hours.**

First semester course. Introduction to human diseases, injuries, conditions, and disorders. Review of the hematologic, gastrointestinal, musculoskeletal, integumentary, endocrine, urinary, neurological, cardiac, and pulmonary systems, including fluid and electrolyte and acid-base balance. Integration of general pathologies as they relate to the scope of respiratory therapy practice. Pathologies associated with genetic traits or abnormalities and carcinogenesis are also covered, as are specific clinical application of respiratory care diagnostics. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 2040. Respiratory Care Therapeutics I. 3 Hours.**

First semester course. Theory and clinical applications of a wide range of respiratory therapy modalities, including medical gases (including cylinders, regulators, flowmetering devices, and liquid oxygen), aerosols, humidity, hyperinflation techniques, chest physiotherapy, and airway clearance techniques. Clinical Practice Guidelines [CPGs] are introduced, and students must master clinical indications, contraindications, side-effects, and desired therapeutic outcomes. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 2041. Laboratory Practice/Therapeutics I. 2 Hours.**

First semester course. Introduction to patient care, including body mechanics, patient interactions, and documentation. Practice in the selection, use, and troubleshooting of equipment associated with providing medical gases, aerosol and humidity, hyperinflation techniques, IPPB, and airway clearance. Introduction to respiratory pharmacology and devices used to administer and monitor aerosolized medications. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 2050. Introduction to Respiratory Care Pharmacology. 3 Hours.**

Second semester course. Introduction to principles of pharmacology associated with treatment of infectious diseases and disorders of the hematologic, cardiovascular, pulmonary, endocrine, renal, GI, and neurologic systems, including administration routes and dosage calculation of selected medications. Sedation management, anesthesia, analgesia, chemotherapeutic agents, specific application of principles associated with aerosolized medications, and topical absorption are also included. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

**RESP 2060. Patient Assessment. 2 Hours.**

Second semester course. Introduction to basic patient assessment techniques, including physical assessment and integration of laboratory and diagnostic findings associated with specific diagnoses. Covers physical findings; radiologic findings and other imaging studies; laboratory tests such as electrolytes, bacteriology, hematology, and metabolic studies; acid-base balance and blood gas analysis; basic pulmonary function; and hemodynamic values. Emphasis is on the integration of patient presentation and associated pathology. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

**RESP 2065. Cardiopulmonary Pathophysiology. 3 Hours.**

Second semester course. Expands on RESP 2030 with an emphasis on cardiopulmonary and renal injuries, diseases, disorders, and conditions, using a case-based method that integrates the etiology, presentation, pathophysiology, diagnosis, treatment, and prognosis of cardiopulmonary, hemodynamic, and renal dysfunction. Also explores neonatal and pediatric pathologies of the renal and cardiopulmonary systems, including congenital and structural defects. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

**RESP 2070. Respiratory Care Therapeutics II. 3 Hours.**

Second semester course. Provides theory and clinical applications of respiratory therapy modalities, including airway management (intubation, extubation, tracheostomy care); manual ventilation; introduction to concepts of artificial ventilation (CPAP, BiPAP, positive and negative pressure ventilators); blood gas sampling, analysis, and quality control; noninvasive monitoring (oximetry, capnography, pulmonary mechanics); and equipment decontamination. Associated CPGs are introduced. Mastery of the clinical indications, contraindications, side-effects, and desired outcomes of therapies is required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

**RESP 2071. Laboratory Practice/Therapeutics II. 2 Hours.**

Laboratory portion of RESP 2070. Requires students to master artificial airway management skills including endotracheal intubation and bag-valve-mask ventilation. Also provides practice in blood gas sampling, noninvasive monitoring, basic ventilatory support, basic pulmonary function assessments and bedside spirometry. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

**RESP 2100. Clinical Practice I. 5 Hours.**

Second semester course. Introduction to the hospital setting in order to practice clinical application of all skills mastered in RESP 2041 and RESP 2071 while developing interaction skills with patients and other members of the health care team. Proficiency must be demonstrated in providing therapies, monitoring and documenting care, and prioritizing to develop time management skills, while students participate in clinical care conferences and in evaluation of the appropriateness of care with respect to CPGs. 225 clinical hours. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SP.

**RESP 2200. Cardiopulmonary Diagnostics. 3 Hours.**

Third semester course. In-depth review of pulmonary function studies such as spirometry, lung volumes and diffusing capacities, bronchial provocation testing, and bronchodilator response studies as well as blood gas analysis and interpretation of arterial, capillary, and mixed venous blood gases, with an emphasis on case-based learning and application of diagnostic findings to initiating or modifying patient care. Introduction of cardiac assessments and interventions (EKGs, echocardiography, IABP support, and hemodynamics including Swann-Ganz and arterial catheters). Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

**RESP 2300. Introduction to Mechanical Ventilation. 3 Hours.**

Third semester course. Theory and clinical indications of all modes of ventilatory support, emphasizing mastery of understanding the indications for initiation and continuation of ventilatory support, assessing and monitoring patients on life-support, integrating patient response to therapy with recommendations for modifying ventilator support, and determining the appropriate time and method for weaning from mechanical ventilation. Includes application of CPAP, BiPAP, negative pressure ventilation, and positive pressure ventilation, and introduces ventilators used in extended care or home care. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

**RESP 2301. Laboratory/Adult Mechanical Ventilation. 2 Hours.**

Lab portion of RESP 2300. Case-based practice in selecting appropriate mode of mechanical ventilation from a wide range of ventilation modes based on patient situations; then initiating, monitoring, assessing, and recommending changes to ventilatory support; and weaning from mechanical ventilation. A wide range of ventilation modes and applications is mastered through a case-based format. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

**RESP 2310. Clinical Practice II. 5 Hours.**

Third semester course. Clinical experience course emphasizing the provision of mechanical ventilation and assessment of patients in the emergency and intensive care settings. 225 clinical hours. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

**RESP 2400. Alternative Site and Subacute Respiratory Care. 1 Hour.**

Fourth semester course. Introduces practice of respiratory care in a home care/DME setting, pulmonary rehabilitation, patient education, smoking cessation, asthma management, and sleep disorders including sleep apnea. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 3005. Critical Care/ACLS. 3 Hours.**

Third semester course. Expands basic skills acquired in previous respiratory therapy courses and focuses on the presentation and management of patients in the ICU and emergency settings, emphasizing patient assessment and procedures involved in resuscitation including current practices in advanced life support. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. SU.

**RESP 3020. Neonatal/Pediatric Respiratory Care. 2 Hours.**

Fourth semester course. Introduces theory and practice of pediatric and neonatal respiratory care, including specific anatomy, physiology and pathophysiology associated with neonates and children. Includes assessment, management, ventilatory techniques and equipment specific to infants and children as well as pharmacology, with medications and dosages specific to infants and children, and ventilatory modes such as HFJV and oscillation ventilation. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 3021. Laboratory Practice/Neonatal Care. 2 Hours.**

Fourth semester course. Laboratory practice of techniques associated with airway management, ventilatory support, and resuscitation of infants and children. Case-based learning emphasizes patient assessment and initiation of appropriate respiratory support for infants and children. Lab fee required. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 3100. Clinical Practice III. 5 Hours.**

Fourth semester course. Capstone clinical practice course includes experience in neonatal intensive care as well as demonstrating continuing competency in adult intensive care, emergency care, and general respiratory care. Clinical rotations include experience in the home care setting and sleep laboratory. 300 clinical hours. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

**RESP 3150. Critical Thinking Seminar/NBRC Review. 2 Hours.**

Fourth semester course. Comprehensive curriculum review based on NBRC credentialing exams. Case-based clinical simulations require students to integrate all concepts learned throughout the curriculum and clinical practice courses and apply this knowledge to branching-logic scenarios. Prerequisite: Admission to the Dixie State University Respiratory Therapy program. FA.

## Surgical Technology Courses

**SURG 1000. Introduction to Surgical Technology. 2 Hours.**

First semester course. Students will be introduced to the profession of surgical technology. Students will acquire knowledge of professional requirements and expectations, scope of practice, the surgical team, hospital and health delivery systems, the physical environment of surgery, hazards and safety practices, ethical and legal aspects, risk management, credentialing, and professional organizations. Students will gain an understanding of various roles for surgical technologists, and specific tasks required to deliver surgical patient care before, during, and after a surgical procedure. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. FA.

**SURG 1021. Surgical Sciences. 3 Hours.**

First semester course. Foundational concepts of surgical microbiology and pathophysiology are introduced. Emphasis is placed on surgical applications of microbiology and pathophysiology including surgical infection control, diagnosis of diseases and disorders of human body systems, and identification of surgical interventions for specified pathophysiologic conditions. Students apply basic medical terminology to develop fluency in surgical terminology. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. FA.

**SURG 1050. Surgical Technology Theory. 3 Hours.**

First semester course. Introduction to fundamentals of the surgical environment, including principles and applications of sterile technique, sterilization principles and practices, safety practices in the OR, handling and safety of specialized equipment, and introduction to surgical case management. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. FA.

**SURG 1055. Surgical Technology Lab I. 2 Hours.**

First semester course. Students learn, practice, and demonstrate entry-level surgical technology skills such as scrubbing, gowning, and gloving, aseptic technique, instrument identification, preparation of the sterile field, safe sharps handling, procedure steps anticipation, and professional behaviors. Taught in cohort rotation. Lab fee required. Prerequisite: Acceptance into the Surgical Technology program. FA.

**SURG 1060. Surgical Technology Clinical I. 4 Hours.**

First semester course. Students correlate theory to practice in an actual surgical setting. Students apply previously learned foundational information and hands on skills as they perform in the first scrub role in assigned surgical procedures under the supervision of clinical site preceptors. An emphasis is placed on developing competence in basic surgical procedures in various surgical specialties. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. FA.

**SURG 2010. Surgical Pharmacology. 2 Hours.**

First semester course. Students gain information necessary for safe medication practice in surgery. Students attain competence in the metric system, medication calculations, fundamental concepts of pharmacology, medication identification and handling, medications used in surgery and at the surgical site, and aspects of anesthesia. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. FA.

**SURG 2050. Surgical Procedures. 7 Hours.**

Second semester course. Student identify anatomy, physiology, pathophysiology, diagnostic tests, medications, equipment, instruments, supplies, procedural steps, and postoperative patient care concepts for surgical procedures in all major surgical specialties. Course fee required. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. SP.

**SURG 2055. Surgical Technology Lab II. 1 Hour.**

Second semester course. Students learn, practice, and demonstrate intermediate level surgical technology skills with an emphasis on anticipation skills, surgical specialty instrumentation, and professional behaviors. Students also develop critical thinking competence in aseptic practice by identifying, analyzing, and correcting errors in sterile technique. Taught in cohort rotation. Lab fees required. Prerequisite: Acceptance into the Surgical Technology program. SP.

**SURG 2060. Surgical Technology Clinical II. 7 Hours.**

Second semester course. Students correlate theory to practice in an actual surgical setting. Students apply previously learned foundational information and skills as they perform in the first scrub role in assigned surgical procedures under the supervision of clinical preceptors. An emphasis is placed on developing competence in more complex surgical procedures in various surgical specialties. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. SP.

**SURG 2070. Surgical Synthesis. 1 Hour.**

Second semester course. Students analyze the clinical experience by maintaining accurate documentation of case experiences and presenting case studies. Students correlate clinical experiences to surgical technology theory to prepare for the National Board Certification Examination. Taught in cohort rotation. Prerequisite: Acceptance into the Surgical Technology program. SP.