

SCHOOL OF HEALTH SCIENCES COURSE DESCRIPTIONS

Department of Diagnostic Sciences Course Descriptions

Clinical Laboratory Sciences (CLST, CLSS)

CLST 100 - *Introduction to Medical Laboratory Sciences*

This introductory course covers the admission and medical requirements for entrance into the CLST program. General topics such as laboratory safety, professional behaviors, and communication skills are discussed. Career guidance and career development are addressed. The design of the lab and function of the CLST are described in detail.

Credit Hours: 1. *Prerequisites:* None

CLST 101 - *Introduction to Laboratory Techniques*

The theory and practice of laboratory safety, math, and quality control are included in the first few weeks of this course. Principles and procedures for laboratory instruments such as the microscope and the spectrophotometer are covered next. Basic laboratory techniques such as pipetting, blood smear preparation, urinalysis, and other simple hematological and microbiological procedures are studied and practiced.

Credit Hours: 3. *Prerequisites:* CHEM 101, MATH 112

CLST 203 – Urinalysis and Phlebotomy

Topics covered in this laboratory course are phlebotomy and body fluids. The body fluids topics includes morphology and physiology of the renal system and the theories associated with formation of synovial fluid, serous fluid, spinal fluid, semen, feces and the biochemical analyses of urine and other body fluids. The phlebotomy section includes the purpose and practice of phlebotomy as well as the proper collection containers, phlebotomy equipment, methods of patient identification, phlebotomy procedure for both routine and special procedures, and complications that may occur.

Credit Hours: 2. *Prerequisites:* BIOL 211, BIOL 280, BIOL 281, CHEM 102, CHEM 103, CLST 101. *Corequisites:* CLST 205, 206

CLST 205 – *Mycology and Parasitology*

This course instructs the student in the identification of human parasites, and in the isolation and identification of pathogenic molds and yeast by morphologic criteria.

Credit Hours: 1. *Prerequisites:* Admission to the CLS program. *Corequisites:* CLST 203, 206

CLST 206 – Clinical Immunology

The first half of this course will be devoted to immunology. Although the lectures cover concepts in innate resistance, humoral immunity and cell-mediated immunity, humoral immunity will receive the most attention. The lecture series will cover B lymphocyte ontogeny, the structure and function of immunoglobulins, the generation of antibody diversity, and the development of the humoral response. These lectures will also discuss the diagnostic application of immunologic measurements. The second half of this course will be devoted to serology. The lecture series will cover the principles of immunoassays, as well as test formats, performance and interpretation. The discussions will be limited to those immunoassays employing specific antibodies.

Credit Hours: 4. *Prerequisites:* Admission to the CLS program. *Corequisites:* CLST 203, 205

CLST 211 - *Clinical Chemistry I*

This lecture includes math and quality control, the principles of laboratory instrumentation, and the biochemistry of chemical substances affecting health and disease. The laboratory covers the principles and practice of methods used to identify and quantitate chemical substances measured in the clinical lab.

Credit Hours: 4. *Prerequisites:* CLST 203, CLST 204. *Corequisites:* CLST 210, CLST 212, CLST 213

CLST 212 - *Hematology I*

This lecture course explores the maturation, morphology, pathology, and destruction of erythrocytes, white blood cells, and platelets. The Hemostasis component includes lecture on the three components of normal coagulation: platelets, blood vessels, and factors. The laboratory includes practice of hand cell counts, white cell differentials, and other selected hematological and coagulation tests.

Credit Hours: 4. *Prerequisites:* CLST 203, CLST 204. *Corequisites:* CLST 210, CLST 211, CLST 213

CLST 213 - *Clinical Microbiology I*

This course covers the morphology and structure of microorganisms. The diseases and methods of identification are covered for selected organisms. The lab includes the techniques of isolation handling specimens, sterilization, and antibiotic treatment, biochemical testing, and infection control procedures.

Credit Hours: 1. *Prerequisites:* CLST 203, CLST 204. *Corequisites:* CLST 210, CLST 211, CLST 212

CLST 214 - *Immunohematology*

This course is divided into three sections. Section I, Immunohematology, discusses the biochemical genetic and immunologic aspects of the ABO(H), Rh and other blood group antigens. Section II, Blood Banking, is devoted to discussions of blood donors, blood and blood components and transfusion medicine. Section III, Immunopathology, focuses on the unique aspects of immunohematology associated with fetomaternal medicine, including fetal bleed screen and hemolytic disease of the newborn, discussions of the adverse consequences of transfusion and, finally, autoimmune hemolytic anemias. The course also includes a laboratory component in which participation is mandatory. In the laboratory, students will have the opportunity to practice: the registration, selection and phlebotomy of blood donors; selected serologic assays and related procedures; blood typing, antibody screens, antibody identifications and crossmatching; and other techniques and procedures relevant to the immunohematology laboratory.

Credit Hours: 4 *Prerequisites:* CLST 203, 205, 206. *Corequisites:* CLST 211, 212, 213.

CLST 220 - *Clinical Practicum I*

This course includes a one week rotation in phlebotomy and a three week clinical rotation in a hospital immunohematology laboratory. It covers the principles and practices of serology, blood donor screening and collection, component preparation and blood banking.

Credit Hours: 4. *Prerequisites:* CLST 203, CLST 204, CLST 210, CLST 211, CLST 212, CLST 213. *Corequisites:* CLST 221, CLST 222, CLST 223

CLST 221 - *Clinical Practicum II*

This four week clinical rotation in a clinical chemistry hospital laboratory covers the principles and operation of multi channeled chemistry analyzers, spectrophotometers, osmometers and Cotlove titrators. The application and theories of analytical methodologies are included in this course.

Credit Hours: 4. *Prerequisites:* CLST 203, CLST 204, CLST 210, CLST 211, CLST 212, CLST 213. *Corequisites:* CLST 220, CLST 222, CLST 223

CLST 222 - *Clinical Practicum III*

This four week rotation in a clinical Hematology hospital laboratory covers the practices and theories of Hematology, Hemostasis, and Body Fluids. The principles and operations of Hematology, Hemostasis and Body Fluid analyzers are included in this course.

Credit Hours: 4. *Prerequisites:* CLST 203, CLST 204, CLST 210, CLST 211, CLST 212, CLST 213. *Corequisites:* CLST 220, CLST 221, CLST 223

CLST 223 - *Clinical Practicum IV*

This four week rotation in a clinical Microbiology hospital laboratory includes Microbiology, Parasitology, Mycology, and Virology. Included are the specimen collection, handling and preparation and principles of certain biochemical methods of detection.

Credit Hours: 4. *Prerequisites:* CLST 203, CLST 204, CLST 210, CLST 211, CLST 212, CLST 213.
Corequisites: CLST 220, CLST 221, CLST 222

CLSS 406 - Laboratory Management

The dynamics of the health care delivery systems and how they affect laboratory services are addressed in this course. Critical pathways, clinical decision making, and performance improvement are discussed as they relate to the principles of laboratory operations. Other topics examined in this course include the theories and practices of clinical laboratory supervision involving personnel, motivation, performance evaluation, recruitment, and selection of employees. Other human resource issues include the utilization of personnel, the analysis of workflow, and staffing patterns. The principles and practices of quality assurance as they apply to laboratory services are examined. The paradigms for workload, profit and loss, cost and reimbursements, and materials and inventory management are included in the financial management lectures. Methods of preparing for laboratory and hospital accreditations are important aspects of the course, as well as complying with government standards that apply to laboratory practices. Legal and ethical issues facing laboratory personnel are presented in case study format.

Credit Hours: 3. *Prerequisites:* CLST 210, CLST 211, CLST 212, CLST 213. *Corequisites:* CLSS 407,

CLSS 409 - Laboratory Education and Research

This is a 3-credit hour course consisting of three hours of lecture instruction per week. This course examines the topics of both laboratory education and research. The education topics examined in this course include teaching and learning strategies, student diversities, instructional design, competency-based education, and laws involving education. Bloom's taxonomy levels are used to develop objectives and test questions. Objectives are developed using Roger Mager's format.

The research component of this course begins with a discussion of the various types of quantitative and qualitative research designs. Elements of the research process including research questions/hypotheses, the literature review, data collection, and data/analyses/interpretations are discussed and applied to the field of Clinical Laboratory Sciences. The course participants are required to develop and design projects involving the research and educational issues presented in the course. *Credit Hours:* 3

Prerequisites: CLST 210, CLST 211, CLST 212, CLST 213 and admission to the B.S. degree program.
Corequisites: CLSS 406, CLSS 416

[Note effective spring 2006 the following 8-credit hour course replaces the 9-credit hour course, CLSS 407.

CLSS 416 - Pathophysiology and Laboratory Diagnoses

CLSS 416, Pathophysiology and Laboratory Diagnoses, is an 8-credit hour course that includes 6 hours of lecture and 2 hours of laboratory, participation in which is mandatory. The course covers advanced topics in clinical laboratory science, including, but not limited to, the following: molecular diagnostic methods, virology, medical genetics and cytogenetics, hematology and oncology, toxicology, fetomaternal medicine and others. Lectures typically compare and contrast the normal and abnormal anatomy and physiology of human diseases, and then discusses the laboratory diagnosis of the disease.

During laboratory meetings, students will have the opportunity to perform many of the diagnostic methods discussed, using normal and abnormal specimens obtained from the pathology laboratory. The laboratory also instructs students in the analysis and interpretation of data generated by the diagnostic tests. *Credit Hours:* 8. *Prerequisites:* CLST 210, CLST 211, CLST 212, CLST 213 and admission to the B.S. degree program.

Corequisites: CLSS 406, CLSS 409

CLSS 420 - Clinical Practicum IV

Clinical Practicum IV is the counterpart to CLSS 410, Molecular Biology and Genetics. The course is composed of several clinical rotations relating to immunohematology and genetic diseases with an emphasis on diagnosis by molecular methods. One week will be spent in a hospital laboratory in each of

the following areas: immunogenetics, cytogenetics, molecular biology and management of the clinical molecular biology laboratory.

Credit Hours: 3. *Prerequisites:* CLST 210, CLST 211, CLST 212, CLST 213

Corequisites: CLSS 421, CLSS 422, CLSS 423. CLINICAL LABORATORY SCIENCES (CLSS) 421

–

Clinical Practicum V

This practicum is the clinical component of CLSS 411 and consist of management based projects that affect the operation of a clinical chemistry laboratory. These projects include implementing a quality control program for a clinical chemistry laboratory, evaluating new instruments and procedures, designing a procedure manual, evaluating CAP criteria, developing a budget, and developing an instrument maintenance system.

Credit Hours: 3. *Prerequisites:* CLST 210, CLST 211, CLST 212, CLST 213

Corequisites: CLSS 420, CLSS 422, CLSS 423

CLSS 422 - *Clinical Practicum VI*

This practicum is the clinical component of CLSS 412. The course includes techniques of recognizing and counting abnormal blood cells on bone marrow and peripheral blood smears. The results are then evaluated and related to the appropriate hematological diseases. The course includes competency in staining and evaluating blood cells using the flow cytometer as well as the fluorescent microscope. Coagulation factor analyses are performed and results are evaluated and related to corresponding pathological conditions.

Credit Hours: 3. *Prerequisites:* CLST 210, CLST 211, CLST 212, CLST 213

Corequisites: CLSS 420, CLSS 421, CLSS 422

CLSS 423 - *Clinical Practicum VII*

Clinical Practicum VII is the counterpart to CLSS 413, Advanced and Molecular Microbiology. The course is composed of several clinical rotations relating to Clinical Microbiology with an emphasis on identification/diagnosis by molecular methods. One week will be spent in a hospital laboratory in each of the following areas: virology, bacteriology (does not include routine culture/identification/susceptibility testing), mycology and management of the clinical microbiology laboratory.

Credit Hours: 3. *Prerequisites:* CLST 210, CLST 211, CLST 212, CLST 213

Corequisites: CLSS 420, CLSS 421, CLSS 422

CLSS 424 - *Clinical Practicum IX*

This course includes clinical practice in phlebotomy, immunohematology, immunology, serology, blood donor screening and collection, component preparation and blood banking. The course also includes clinical practice in molecular diagnostics, medical genetics and cytogenetics. *Credit Hours:*

6. *Prerequisites:* CLSS 406, CLSS 409, CLSS 416

Corequisites: CLSS 425, CLSS 426, CLSS 427

CLSS 425 - *Clinical Practicum X*

This course is a clinical practicum in clinical chemistry and includes the principles and operation of multi-channelled chemistry analyzers, spectrophotometers, osmometers, and electrophoretic equipment. It also includes management-based projects concerning the evaluation of new instruments and procedure, the implementation of a quality control program, and the development of a budget. *Credit Hours:* 6.

Prerequisites: CLSS 406, CLSS 409, CLSS 416. *Corequisites:* CLSS 424, CLSS 426, CLSS 427

CLSS 426 - *Clinical Practicum XI*

This course includes clinical practice in both automated and manual methods in hematology, hemostasis, urinalysis, and body fluid analysis. The course also includes advanced hematological methods

including the principles and theories of flow cytometry, antinuclear antibody testing, and specialized testing in coagulation. Credit Hours: 6.

Prerequisites: CLSS 406, CLSS 409, CLSS 416. *Corequisites:* CLSS 424, CLSS 426, CLSS 427

CLSS 427 - *Clinical Practicum XII*

This course includes clinical practice in microbiology, parasitology, mycology, and virology. Basic techniques such as specimen collection and processing and the performance of various manual/automated methods for biochemical and susceptibility testing are included. Advanced topics include the identification/diagnosis of infectious disease through the use of molecular methods. *Credit Hours: 6. Prerequisites:* CLSS 406, CLSS 409, CLSS 416

Corequisites: CLSS 424, CLSS 426, CLSS 427

Radiologic Technology (RADT) Course Descriptions

RADT 101 - *Introduction to Radiography*

An introduction to the principles and practices of radiology; historical and professional evolution, status of the health care delivery system, medicolegal and ethical considerations, medical communications, organization and operation of a radiology department, the imaging process and equipment, radiographic preparation and examinations, basic principles of radiation safety, and management techniques of the patient during radiologic procedures. Learning activities include demonstrations, video presentations and the use of computerized programs in patient care management in the Center for Information and Learning.

Credit Hours: 3. *Corequisites:* ACSM 100, BIOL 210, MATH 112, RADT 111, RADT 141

RADT 110 - *Radiographic Procedures*

A study of radiographic procedures with related positioning and anatomy. Emphasis on the vertebral column, abdomen, mobile, surgical, and trauma radiography, fluoroscopic and contrast media examinations. Cranial topography and morphology, radiography of the cranial, facial, nasal, and temporal bones, zygomatic arches, paranasal sinuses, orbits, optic foramen, mandible and temporomandibular joints with image analysis and interpretation is also included. Students are provided with laboratory opportunities to develop practical skills.

Credit Hours: 3. *Prerequisites:* ACSM 100, BIOL 100, MATH 112, RADT 101, RADT 111, RADT 141. *Corequisites:* BIOL 211, ENGL 101, RADT 112, RADT 142

RADT 111 - *Image Production I*

A study of radiation concepts with related practical application; x-ray properties, basic x-ray equipment, principles of x-ray production, x-ray interactions, prime factors of exposure, exposure calculations, image receptors and accessory devices, basic digital imaging process, components of image quality, technique charts, characteristics of image receptor systems, grids, filtration, beam restriction, technique manipulation, exposure control systems, and technical factors that influence and control image production and quality. Lab opportunities will allow students to produce and analyze images by varying technical parameters.

Credit Hours: 3. *Corequisites:* ACSM 100, MATH 112, RADT 101, RADT 141

RADT 112 - *Image Production II*

This course is a continuation of RADT 111. The technical factors and variables that affect the photographic and geometric quality of an image are analyzed. The course examines the methods of conventional and imaging technology processes with related practical application; design and construction requirements for acquisition, processing and displaying images; characteristics of conventional and digital image receptors and detectors including handling and storage, latent image formation; automatic processor equipment, system components, cycles, chemistry, processor monitoring and preventative maintenance; quality assurance/control testing programs, silver recovery, sensitometry, image artifacts, evaluation of image quality, exposure selection and conversions. Lab opportunities will allow students to produce and analyze images by varying technical parameters.

Credit Hours: 3. *Prerequisites:* ACSM 100, BIOL 210, MATH 112. RADT 101, RADT 111, RADT 141. *Corequisites:* BIOL 211, ENGL 101, RADT 110, RADT 142

RADT 123 - *Radiation Protection & Radiobiology*

A study of radiation protection safety practices and radiobiology; Emphasis on units of measurement, radiation quantities and units, detection devices, cellular components, radiation effects, dose limits and calculations, protective measures, equipment and shielding design; federal and state regulations governing radiation protection.

Credit Hours: 2. *Prerequisites:* LEVEL I Semesters I and II Radiologic Technology courses.

Corequisites: PHSC 100, RADT 143.

RADT 141 - *Radiographic Practicum*

Supervised clinical experiences designed to provide students with a fundamental understanding of the actual practice of radiology. This course includes theoretical and practical components. Instruction in positioning and basic imaging principles and considerations, terminology, anatomy and radiographic examination and evaluation of the upper extremity, shoulder girdle, lower extremity, pelvis and upper femora, bony thorax, thoracic viscera, and geriatric imaging; emphasis on operation of equipment, performance of darkroom procedures, patient care management, communication skills, application of radiation protection precautions, and the general radiographic process. Students are provided with laboratory opportunities to develop practical skills.

Credit Hours: 5. *Prerequisites:* Admission to the RADT associate degree program; Current CPR-C certification. *Corequisites:* ACSM 100, BIOL 210, MATH 112, RADT 101, RADT 111

RADT 142 - *Radiographic Practicum*

Supervised clinical performance of basic skills with more emphasis on preparation of the patient, room, and equipment for fluoroscopic, mobile, surgical, emergency/trauma and general radiographic procedures, including film evaluation. Continued development and application of clinical competencies.

Credit Hours: 6. *Prerequisites:* ACSM 100, BIOL 210, MATH 112, RADT 101, RADT 111, RADT 141 and current CPR-C Certification. *Corequisites:* BIOL 211, ENGL 101, RADT 110, RADT 112

RADT 143 - *Radiographic Practicum*

Continued development and application of clinical competencies with emphasis on precautions in patient care and performance of general radiographic procedures, emergency/trauma, mobile, surgical, fluoroscopic and contrast media procedures, and corresponding film evaluation.

Credit Hours: 3. *Prerequisites:* LEVEL I Semester I and II Radiologic Technology courses and current CPR-C Certification. *Corequisites:* PHSC 100, RADT 123

RADT 214 - *Special Imaging Technology*

A study of the fundamental principles of special imaging techniques and equipment with emphasis on radiographic equipment and accessory devices, x-ray circuitry and rectification, image intensified fluoroscopy, body section radiography, macroradiography, mammographic equipment, exposure control systems and devices, digital imaging, thermography, cine, mobile equipment, duplication, evaluation of radiographic equipment; uses of the computer in the radiology department. Introduction to specialized imaging and therapeutic equipment including MRI, CT, US, PET, radiation therapy and nuclear medicine technologies.

Credit Hours: 3. *Prerequisites:* LEVEL I Radiologic Technology courses.

Corequisites: PSYC 100, RADT 220, RADT 241

RADT 220 - *Advanced Radiographic Procedures*

An examination of radiographic anatomy advanced positioning, and patient care methods with related imaging equipment. Emphasis on basic pharmacology, venipuncture, advanced contrast media examinations, mammography, computed tomography, magnetic resonance imaging, scanograms, pediatric and trauma radiography, foreign body localization, advanced imaging studies of all body systems, including cross-sectional anatomy presentations. Students are provided with laboratory opportunities to develop practical skills.

Credit Hours: 3. *Prerequisites:* LEVEL I Radiologic Technology courses.

Corequisites: PSYC 100, RADT 214, RADT 241

RADT 230 - *Radiographic Pathology*

A study of medical disease processes and their radiographic manifestations. Emphasis on radiographic anatomy, physiology, pathology, and evaluation of radiographic quality with related exposure considerations.

Credit Hours: 2. *Prerequisites:* LEVEL II Semester III Radiologic Technology courses. *Corequisites:* HUMN elective, RADT 232, RADT 242

RADT 232 - *Senior Seminar*

Seminars of topics related to the practice of radiologic technology including written and oral presentations; a review of materials in preparation for the American Registry of Radiologic Technologists Examination

Credit Hours: 2. *Prerequisites:* LEVEL II Semester III Radiologic Technology courses. *Corequisites:* HUMN elective, RADT 230, RADT 242

RADT 241 - *Radiographic Practicum*

Continued participation and application of general radiographic procedures, emergency/trauma, mobile, surgical, fluoroscopic procedures, contrast media administration and examinations, angiography, patient care procedures, film evaluation, and quality control testing; introduction to CT, and MRI.

Credit Hours: 6. *Prerequisites:* LEVEL I Radiologic Technology courses and current CPR-C Certification. *Corequisites:* PSYC 100, RADT 214, RADT 220

RADT 242 - *Radiographic Practicum*

Advanced integration and application of all clinical skills including production of radiographs of optimal diagnostic quality. Clinical experiences are provided to enable students to manage patients and perform radiographic procedures with proficiency and using independent judgment. Clinical competencies related to patient preparation and management, room preparation, equipment operation, radiation safety practices, effective communication, performance of radiologic procedures utilizing appropriate supplies and accessory devices, image production, positioning, overall analysis of image quality and structures demonstrated. Elective rotations will be provided in radiation oncology, nuclear medicine, and ultrasound.

Credit Hours: 8. *Prerequisites:* LEVEL II Semester III Radiologic Technology courses and current CPR-C Certification. *Corequisites:* HUMN elective, RADT 230, RADT 232

RADT 345 - *Principles of Mammography*

The purpose of this course will prepare the student to enter the advanced practice of mammography. This course consists of didactic and clinical experiences necessary to expose the technologist to the actual practice of screening mammography. This course is not applicable to any of the degree or certificate programs at OLOL College.

The study of the fundamentals of mammography. The course will include mammographic imaging of the breast (including the augmented breast), positioning, breast anatomy, breast physiology, pathology, mammographic education/care, instrumentation, techniques, and laboratory/clinical demonstrations. It includes a clinical component in which participants will become skilled in screening mammography. This course will be taught in a condensed format utilizing evenings and weekends. This provides the opportunity for those students who are employed to enroll in this course. The learning activities are designed to enable students to meet course objectives. This class meets Mammography Quality Standards Act for the FDA.

Credit Hours: 3 - not for degree credit. *Prerequisites:* Must be a registered technologist, registry eligible technologist, or enrolled in the last semester of a radiologic technology program.

DEPARTMENT OF HEALTH SERVICES COURSE DESCRIPTIONS:

Gerontology (GERO)

GERO 100 - *Introduction to Gerontology*

Introduction to the interdisciplinary study of aging emphasizing biological, psychological, cultural, economic, and social processes. The course also explores gerontology as a career.

Credit Hours: 3.

GERO 200 - *Fundamentals of Movement Science*

This course presents an overview to the science of human movement through a multidisciplinary approach that includes mechanical, psychological, physiological, anatomical, environmental, and sociological conceptions. Throughout the course the effects of aging on human movement are integrated.

Credit Hours: 3.

GERO 300 - *Health Promotion and Aging*

Principles of health promotion surveying physiological, psychological and social health problems, and the changing health of adults during the middle and later years. This course focuses on the challenges facing older adults and on strategies to promote successful aging.

Credit Hours: 3.

GERO 310 - *Exercise in Health and Disease*

The course examines the role of exercise in health and disease, including acute and chronic effects of exercise for individuals with chronic diseases. In addition, this course explores exercise prescriptions, training guidelines, and therapeutic benefits of exercise intervention and rehabilitation.

Credit Hours: 4. Prerequisites: Junior standing; BIOL 210/212; GERO 200.

GERO 350 - *The Physiology of Aging*

Lecture and discussion of the effects of normative aging processes on homeostatic mechanisms and how these changes relate to development of disorders and diseases in later life.

Credit Hours: 3. Prerequisites: Junior standing; GERO 310.

GERO 380 - *Aging and Disabilities*

An examination of the disablement process, chronic disease, and aging. Issues and implications of disablement are discussed.

Credit Hours: 3. Prerequisites: Junior standing; GERO 350.

GERO 480 - *Gerontology Practicum*

Supervised experience in one or more community agencies that serve older adults.

Credit Hours: 3. Prerequisites: Senior standing.

GERO 490 - *Directed Research in Aging*

Individual readings and research leading to the preparation of a senior paper.

Credit Hours: 4. Prerequisites: Senior standing.

Health Service Administration (HSER)

HSER 320 - *Health Care Systems and Trends I*

The course is an introduction to the health care delivery system in the United States. Classes will be conducted as forums of discussion emphasizing contemporary issues related to health care professionals, facilities, organization patterns, reimbursement and quality of care.

Credit Hours: 3. Prerequisites: Junior standing or permission of instructor.

HSER 340 - *Health Care Systems and Trends II*

The course is an analysis of administrative structures and inter-organizational arrangements among hospitals and other health care organizations. Issues for institutional, community and home settings for chronic care as well as services to the poor are addressed. Issues and problems related to the design, implementation, and evaluation of quality assessment and risk management programs in acute and non-acute health care settings are also discussed. The role of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and federal legislation in the development of quality assessment and risk management are also covered.

Credit Hours: 3. Prerequisites: Junior standing or permission of instructor.

HSER 350 - *Introduction to Health Service Administration*

Introduction to the principles for management for organizations that deliver health care services such as hospitals, nursing homes, multi-specialty clinics, and home health care agencies. Concepts and theories from the general management literature that are particularly helpful in organization and management of health care organizations will be surveyed.

Credit Hours: 3. Prerequisites: Junior standing or permission of instructor.

HSER 360 - *Health Care Economics*

The health care economy is of special interest because of its size in the US economy and because of the profound effect that health and the lack of health can have on every individual. This course provides a focused look at the economics of the health sector and the major issues that motivate the current attempts at health care reform.

Credit Hours: 3. Prerequisites: HSER 320 or HSER 340, or permission from the instructor.

HSER 380 - *Accounting for Health Service Management*

Review of standard accounting techniques and applications to reimbursement structures, regulatory mechanisms, cost control and budgeting. Applications to health service administration.

Credit Hours: 3. Prerequisites: HSER 320, HSER 350

HSER 410 - *Health Care Financial Management*

This course will review the financial issues in reimbursement structures, regulatory mechanisms, cost control and budgeting as it relates to health care.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 350, HSER 360, HSER 380

HSER 420 - *Managed Care and Insurance*

This course is designed to introduce the student to managed care as it exists in various forms in the United States today. The course includes a discussion of managed care structures, products, methods of reimbursement, and contracting enrollees, network providers, and/or services. The role of the health care administrator and the responsibilities of those under administrative span of control in a managed care environment are presented and illustrated through exercises and discussion.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 350, HSER 360, HSER 380

HSER 430 - *Health Care Marketing*

This course covers market research, strategy, and the strategic marketing process. Students will be introduced to the process of the development of marketing strategies and analysis in a health care setting. Topics include pricing, communication, distribution channels, and client motivation and services.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 350

HSER 440 - *Legal Aspects of Health Service Administration*

This course is an introduction to the law as it relates to health care settings. It provides an overview of health care law aimed at assisting students in developing an intuitive sense for what the laws will permit them to do, and for when to consult legal counsel. Unit Topics such as contracts, negligence, damages, workers compensation, litigation and trial proceedings will be covered.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340. Corequisites: HSER 350, HSER 360, HSER 380.

HSER 450 - *Health Policy*

This course will consider major aspects of the American health care policy system and changes in that system, their impact upon health services organizations, and appropriate administrative strategies for responding to those changes.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 350, HSER 360. Corequisites: HSER 380, HSER 410, HSER 420. Recommended HSER 440.

HSER 460 - *Managerial Epidemiology*

The overall goal of this course is to increase the health professional's ability to analyze problems and make decisions based on application of epidemiological concepts and methods in a variety of settings and across a spectrum of disease topics. Social, physical and biological determinants of disease will be examined, and the epidemiology of selected infectious and chronic diseases will be studied in greater depth. Epidemiological tools to be presented include use of vital statistics, rates, and methods of descriptive, observational and experimental studies.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 360

HSER 470 - *Seminar in Health Service Administration*

This course will integrate theory and practice by examining issues and solutions to problems in the management of health services organizations. It functions as a capstone for the health services administration program, allowing students to apply coursework from across the curriculum.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 350, HSER 360, HSER 380, HSER 410, HSER 430

HSER 480 - *Health Care Information Systems*

Survey of the technology and processes used in management information systems. Role of management information systems in health care organizations.

Credit Hours: 3. Prerequisites: HSER 320, HSER 340, HSER 350, HSER 360, HSER 380, one (1) HSER 400-level course completed successfully

HSER 491 - *Internship/Practicum*

Placement in a health care agency and completion of a project in one or more areas of health service administration. Seminars for participant presentations will be conducted.

Credit Hours: 1-6. Prerequisites: HSER 320, HSER 340, HSER 360, and HSER 380

Long-Term Care Administration (LTCA)

LTCA 100 - *Introduction to Long-Term Care Administration*

This course is a review of long-term care administration including the description of clients, services, and provider settings. Reimbursement and regulation of long-term care providers, ethical issues, and quality improvement are special topics. The second half of the course examines long-term care settings such as nursing homes, assisted living, subacute care, adult day care, home care and hospice care.

Credit Hours: 3

LTCA 200 - *Introduction to Long-Term Care*

This course explores long-term care and administration. The course reviews a description of the clients, services, and provider settings in long-term care. Reimbursement and regulation of long-term care providers, ethical issues, and quality improvement are special topics. The second half of the course examines long-term care settings such as nursing homes, assisted living, subacute care, adult day care, home care, and hospice care.

Credit Hours: 3. Prerequisites: LTCA 100

LTCA 230 Clinicals – *Administrator in Training*

Clinical instruction providing training and work-based experience, and direct patient/client care. This course will serve as the AIT requirement necessary for board examination and licensure.

Credit Hours: 6. Prerequisites: LTCA 200

Surgical Technology (SURT)

SURT 105 – *Introduction of Surgical Technology*

This course introduces basic information regarding the health care system in general and the profession of surgical technology in order to explore surgical technology as a career choice. Emphasis is placed on the history and scope of the practice of the surgical technologist, factors influencing the delivery of service, relationships and communication with other health care providers, professional behaviors and legal and ethical issues related to health care. Guest lecturers and panels will provide insight into health care from current practitioners. The student will gain an understanding of the professional responsibilities inherent in providing health care and learn basic concepts of developing provider relationships. *Requires permission from the instructor.*

Credit Hours: 1.

SURT 109 – *Fundamentals of Surgical Technology*

This course introduces the surgical technology student to the basic principles and practices of surgical technology, which includes preoperative, intraoperative, and postoperative concepts, with emphasis on asepsis and sterile technique and the needs of the patient in the surgical environment.

Requires permission from the instructor.

Credit Hours: 3. Corequisites: SURT 105, SURT 111, BIOL 100, BIOL 210, BIOL 212.

SURT 111 - *Fundamentals of Surgical Technology Skills Lab*

Instruction takes place in a well-equipped skills lab (mock OR). Emphasis is on instrument identification, classification, and use; sterile technique; case sequence - laying out and opening of supplies; skin preparation; surgical scrubbing, gowning, gloving and draping; minor and basic set-ups with count procedures; and post case activities. *Requires permission from the instructor.*

Credit Hours: 1. Corequisites: SURT 110

SURT 115 - *Surgical Procedures I*

This course introduces the surgical technology student to the basic surgical procedures; related anatomy, pathology and diagnostic measures; necessary instrumentation, supplies, equipment, and medications; possible complications; expected patient outcomes; and immediate postoperative care. Specific surgical procedures include; general, gastrointestinal, obstetrics, and gynecology.

Credit Hours: 3. Prerequisites: SURT 105, SURT 109.

Corequisites: SURT 117.

SURT 116 – *Surgical Procedures II*

This course introduces the surgical technology student to the basic surgical procedures; related anatomy, pathology and diagnostic measures; necessary instrumentation, supplies, equipment, and medications; possible complications; expected patient outcomes; and immediate postoperative care.

Specific surgical procedures include: peripheral vascular, obstetrics, gynecology, plastics, oral, eye, ear, nose and throat.

Credit Hours: 3. Prerequisites: SURT 105, SURT 109, SURT 115.

Corequisites: SURT 117.

SURT 117 – Skills Lab I

This course provides instruction and demonstration, with return demonstration, in a well-equipped skills lab (mock operating room). Emphasis is on basic procedure set-ups and intraoperative activities, including establishing the sterile field around the patient, passing instruments, loading suture, dressing application, and postoperative routines. Students are also instructed in obtaining vital signs and urinary catheterization.

Credit Hours: 2. Prerequisites: SURT 111.

Corequisites: SURT 115, SURT 116.

SURT 205 – Surgical Procedures III

This course introduces the surgical technology student to the basic surgical procedures; related anatomy, pathology and diagnostic measures; necessary instrumentation, supplies, equipment, and medications; possible complications; expected patient outcomes; and immediate postoperative care. Specific surgical procedures include: thoracic, cardiovascular, orthopedic, and neurosurgery.

Credit Hours: 3. Prerequisites: SURT 115, SURT 116, SURT 117.

Corequisites: SURT 215.

SURT 215 - *Surgical Procedures Practicum I*

The student will rotate through the operating rooms at OLOLRMC, BRGMC Bluebonnet, Woman's Hospital, and Healthsouth SurgiCenter using and refining the knowledge and skills learned in the 100 level courses. Additional sites may be available. All students during this course must complete clinical summaries for each surgical procedure and must attend a one hour weekly class separate from the clinical hours.

Credit Hours: 7. Prerequisites: SURT 115, SURT 116, SURT 117. Corequisites: SURT 205

SURT 225 - *Surgical Procedures Practicum II*

The student will rotate through the operating rooms at OLOLRMC, BRGMC Bluebonnet, Woman's Hospital and Healthsouth SurgiCenter with St. Elizabeth Hospital in Gonzales and North Oaks Medical Center in Hammond as elective sites. Additional sites may be available. The student will continue to utilize and refine the knowledge and skills learned in the 100 level courses. All students during this course must complete clinical summaries for each surgical procedure and must attend a one hour weekly class separate from the clinical hours.

Credit Hours: 9. Prerequisites: SURT 205, SURT 215.

SURT 240 - *Professional Portfolio Self Study Course*

The self-study program is designed only for previous Our Lady of the Lake College students who have completed the Surgical technology Certificate Program at this College. This will capture and document, in a portfolio format, all of the prospective candidate's professional, technical and work related experience since certificate completion and provide comprehensive documentation for assessment and evaluation of the candidate's abilities and aptitudes within the professional field of the Surgical Technologist. This course will be a self-study with periodic sessions with the Surgical Technology Faculty to assure focus, provide guidance and evaluate progress.