DEPARTMENT OF HEALTH SCIENCES

The Department of Health Sciences offers five (5) baccalaureate or undergraduate degrees: the Bachelor of Science in Environmental Health, the Bachelor of Science in Health Administration, the Bachelor of Science in Health Information Management, the Bachelor of Science in Clinical Laboratory Sciences (Medical Technology), and the Bachelor of Science in Respiratory Therapy. Each degree program has a Program Director, and courses specific to each degree discipline are offered through the unit under the following designations: HSEH (Environmental Health), HSHA (Health Administration), HSMR (Health Information Management), HSMT (Medical Technology), and HSRT (Respiratory Therapy). Student majors within the Health Sciences are required to complete three to six HSCR (Health Sciences Core) Courses, which are also offered through this unit. Members of the Department of Health Sciences are housed in Nabrit Center with the Department Office located in Room 202. Like the other two departments in the College of Pharmacy and Health Sciences, the Department supports the primary mission of the College: to produce quality health care professionals, especially African-Americans and other minorities, in Environmental Health, Health Administration, Health Information Management, Clinical Laboratory Sciences (Medical Technology), and Respiratory Therapy.

The Environmental Health Program provides graduates with the technical and administrative skills to function in industry, governmental agencies, consulting firms, and academia. Graduates are qualified to enter the workforce in air and water quality control, solid and hazardous waste management, occupational health and industrial hygiene, environmental toxicology and risk assessment, epidemiology, and disease surveillance.

The Health Administration Program provides graduates with the competencies and skills to become effective administrators for goal-oriented achievements in health delivery systems. Graduates are also prepared to function effectively in response to trends, issues, emergent problems, and other concerns that affect the health, welfare, and self-actualization of clients and citizens.

The Health Information Management Program provides graduates with the technical and administrative skills to manage health information systems consistent with professional standards (medical, administrative, ethical, and legal) in health care delivery systems. Graduates also possess the knowledge and skills needed to plan and develop health information systems which meet standards of accrediting and regulating agencies.

The Clinical Laboratory Sciences (Medical Technology) Program provides graduates with the technical and administrative skills required for the effective delivery of health care services consistent with the practices and standards of Clinical Laboratory Sciences. Graduates are prepared and qualified to perform evaluations of testing techniques, procedures, and personnel; to perform analytical testing of body samples; and to resolve discrepancies with the interpretation of diagnostic laboratory patient data. Graduates also possess the capabilities needed for public education, as well as for planning and developing clinical laboratory facilities that meet the standards of accrediting and governmental regulatory agencies.

The Respiratory Therapy Program provides graduates with the technical skills for performing diagnostic evaluation, therapy, patient/family education, and public education in cases of cardiopulmonary dysfunction. Graduates have the skills to perform diagnostic activities such as obtaining and analyzing physiological specimens, interpreting physiological data, and performing sleep disorder studies. They also have the skills for administering therapy involving such techniques as the application and monitoring of mechanical ventilation, environmental control systems, artificial airway care, and cardiopulmonary rehabilitation. These graduates have the further capability of conducting patient/family education activities that promote knowledge of disease processes, medical therapy, and self-help as well as public education activities that focus on the promotion of cardiopulmonary wellness.

Courses offered through this unit, curricular summaries for the various degrees, and the sequences in which discipline-specific courses and their primary prerequisite and corequisite courses should be taken are given below.

Students should refer to admission policies, comprehensive examination information, and other important information regarding the various B.S. degrees offered through this unit under the College of Pharmacy and Health Sciences introductory section of this document.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen, Reginald</td>
<td>Instructor</td>
<td>Respiratory Therapy</td>
<td>B.S., M.Ed., Texas Southern University</td>
</tr>
<tr>
<td>Hampton, Jean M.</td>
<td>Assistant Professor</td>
<td>Respiratory Therapy</td>
<td>B.S., M.S., Ph.D., Texas Southern University</td>
</tr>
</tbody>
</table>
| Hawkins, Fanny       | Assistant Professor            | Health Information Management | B.S., University of Southwestern Louisiana  
M.P.A., Ed.D., Texas Southern University |
| James, Andrew B.     | Assistant Professor            | Health Administration | Dr.P.H., University of Texas at Houston  
J.D., Texas Southern University  
L.L.M., University of Houston |
| Lawson, Melanie W.   | Assistant Professor            | Health Administration | M.P.H., University of Texas at Houston  
Ph.D., University of Houston |
| Mazique, Judith B.   | Assistant Professor            | Environmental Health  | B.S., Howard University  
J.D., South Texas College of Law  
M.P.H., University of Texas at Houston |
| McVea, Jackie        | Adjunct Assistant Professor    | Medical Technology    | B.S., M.Ed., Texas Southern University  
M.D., St. George's University  
M.P.H., University of Texas |
| Quiller, Dorothy     | Adjunct Assistant Professor    | Medical Technology    | B.S., M.Ed., Texas Southern University  
M.D., St. George's University  
M.P.H., University of Texas |
| Taylor, Andrew       | Instructor                     | Respiratory Therapy   | B.S., M.S., Texas Southern University                                    |
| Turner, Polly S.     | Assistant Professor            | Health Administration | B.S., Texas Southern University  
M.P.H., Dr.P.H., University of Texas at Houston |
| Williams, Karen      | Assistant Professor            | Health Administration | B.A., Texas A&M University  
M.H.S.A., The University of Arkansas at Little Rock  
Ph.D., University of Texas at Houston |
| Zikarge, Aстаткіе    | Assistant Professor            | Environmental Health  | B.S., M.S., East Tennessee State University  
M.P.H., University of Texas School of Public Health  
M.D., St. George's University School of Medicine |
### CORE COURSES

**HSCR 150**  
*Concepts of Health*  
(3)  
Overview of the health care industry and its transition from the past to the present via the scientific process and analysis of relationships among selected health problems. Three hours of lecture per week.

**HSCR 260**  
*Biomedical Ethics*  
(3)  
Comprehensive study of ethical rules, principles, and theories; their application to contemporary moral issues/dilemmas; and their impact on the legal, social, and medical communities. Three hours of lecture per week. Prerequisite: HSCR 150 or concurrent enrollment.

**HSCR 300**  
*Health Sciences Seminar*  
(1)  
Exposure to current social, political, and economics issues; their impact on specific health disciplines via discussions, simulations, and presentations. One hour of lecture per week. Prerequisite: HSCR 150 or concurrent enrollment.

**HSCR 360**  
*Principles of Disease*  
(3)  
Comprehensive study of principles and concepts in human disease focusing on the cellular and mechanical processes involved in disease and the clinical and physiological manifestations that result. Etiology, pathogenesis, treatment, prognosis and research relative to human disease and health are stressed. Three hours of lecture per week.

**HSCR 361**  
*Research for Health Professionals*  
(3)  
Review of the basic techniques and the principles of the research process in health facilities. Enrollees must perform quantitative health research using computer applications. Three hours of lecture per week.

### ENVIRONMENTAL HEALTH COURSES

**HSEH 232**  
*Introduction to Environmental Health*  
(3)  
Survey of topics in population and resource management, fundamentals of air and water pollution, solid and hazardous wastes, pest and vector control, and radiation protection. Open to majors and non-majors. Three lecture hours per week. Prerequisite: Consent of the Program Director.

**HSEH 233**  
*Epidemiology and Biostatistics*  
(4)  
Principles of distribution and determinants of diseases in human populations, including statistical methods and computer applications in data collection and analysis. Four hours of lecture per week. Prerequisite: HSEH 232.

**HSEH 234**  
*Health Physics*  
(3)  
Fundamentals of ionizing and non-ionizing radiation with respect to source, exposure dose, biological interaction, methods of surveillance, and protection. Three hours of lecture per week. Prerequisite: HSEH 233.

**HSEH 235**  
*Human Ecology*  
(3)  
Principles of environmental physiology; medical geography and sociology; international and travel health; adaptation mechanisms to extremes of temperature, pressure, altitude, and microgravity; circadian rhythms. Three hours of lecture per week. Prerequisite: HSEH 233.

**HSEH 334**  
*Public Health Organization and Administration*  
(3)  
Principles of organization and administration of environmental health programs by governmental agencies, including disease surveillance and health data management, environmental policy and ethics, and health education. Three hours of lecture per week. Prerequisite: HSEH 233.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>HSEH 337</td>
<td>Environmental Microbiology</td>
<td>4</td>
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<tr>
<td></td>
<td>Survey of microorganisms of ecological, medical, and industrial importance with respect to nutrient recycling, food spoilage, infectious diseases, and biotechnology. Two hours of lecture and four hours of laboratory per week. Prerequisite: HSEH 232.</td>
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<tr>
<td>HSEH 338</td>
<td>Water Pollution and Control</td>
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<td></td>
<td>Survey of chemical, physical, and biological pollutants affecting water quality for drinking and other designated end uses. Pollution monitoring and control strategies also discussed. Three hours of lecture per week. Prerequisite: HSEH 337.</td>
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<tr>
<td>HSEH 339</td>
<td>Air Pollution and Control</td>
<td>3</td>
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<td></td>
<td>Survey of ambient and indoor air quality changes due to toxic emissions. Atmospheric chemistry and meteorology, standard air pollution indicators, global climate changes, and control strategies discussed. Three hours of lecture per week. Prerequisites: HSEH 232 and HSEH 344.</td>
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<tr>
<td>HSEH 344</td>
<td>Environmental Chemistry</td>
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<td></td>
<td>Comprehensive survey of behavior and fate of chemical pollutants in atmosphere, hydrosphere, geosphere, and biosphere, including standard methods of chemical analysis of environmental media. Two hours of lecture and four hours of laboratory per week. Prerequisite: HSEH 232.</td>
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<tr>
<td>HSEH 425</td>
<td>Insect and Vector Control</td>
<td>3</td>
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<td>Comprehensive survey of agricultural and urban pests, disease transmitting vectors and their habitat, principles of entomology, parasitology and zoonoses, integrated vector control, and pest management. Three hours of lecture per week. Prerequisite: HSEH 344.</td>
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<tr>
<td>HSEH 431</td>
<td>Solid Waste Management</td>
<td>3</td>
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<td>Municipal solid waste problems and solutions: generation, storage, collection, transport, processing, and disposal. Three hours of lecture per week. Prerequisite: HSEH 337.</td>
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<tr>
<td>HSEH 432</td>
<td>Hazardous Waste Management</td>
<td>3</td>
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<td>Industrial, medical, and household hazardous waste problems and solutions: generation, characterization, transport, storage, treatment, and disposal. Minimization, exchange, recovery, incineration, and secure landfills discussed. Three hours of lecture per week. Prerequisites: HSEH 338 and HSEH 344.</td>
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<tr>
<td>HSEH 433</td>
<td>Institutional Health and Safety</td>
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<td>Survey of structural, electrical, and fire safety of residential, school, hospital, day-care, and penal institutions. Sick building syndrome, emergency planning, and accommodation of disabled persons discussed. Three hours of lecture per week. Prerequisite: HSEH 235.</td>
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<tr>
<td>HSEH 434</td>
<td>Sewage Treatment and Disposal</td>
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<td></td>
<td>Industrial, agricultural, and municipal wastewater collection, transport, treatment, and disposal. Design and operation of sewage treatment plants, on-site and waterless systems, and sludge management discussed. Three hours of lecture per week. Prerequisite: HSEH 338.</td>
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<tr>
<td>HSEH 435</td>
<td>Environmental Health Problems</td>
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<td>Global environmental issues: famine and starvation, environmental refugees, environmental justice and equity, hazardous waste sites, housing and urban blight, crime and substance abuse. Three hours of lecture per week. Prerequisite: Consent of the Program Director.</td>
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<tr>
<td>HSEH 442</td>
<td>Occupational Safety and Health</td>
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<td>Recognition, measurement, evaluation, and control of workplace hazard exposures. Fundamentals of industrial hygiene, ergonomics, occupational disease surveillance, hazard communication, and worker protection discussed. Three hours of lecture per week. Prerequisites: HSEH 339 and HSEH 450.</td>
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</tbody>
</table>
HSEH 450 Environmental Toxicology
Comprehensive survey of principles of toxicodynamics and toxicokinetics; xenobiotic dispersal and ecosystem response; exposure pathways and target organs; mechanisms of toxicity; toxicity testing for mutagenesis, carcinogenesis, and teratogenesis. Three hours of lecture per week. Prerequisite: HSEH 234.

HSEH 451 Environmental Impact Assessment
Consideration of environmental impacts and risks of legislative proposals, policies, programs, and projects following NEPA regulations: qualitative/quantitative risks, identification, characterization, exposure assessment, dose-response determination, interpretation, communication, and management. Three hours of lecture per week. Prerequisite: Consent of the Program Director.

HSEH 460 Internship
Field practicum in industry, governmental agencies, consulting firms, and academic research facilities providing observation and participation in the practice of environmental health programs. Twenty-two hours of laboratory (practicum) per week. Prerequisite: Consent of the Program Director.

HEALTH ADMINISTRATION COURSES

HSHA 211 Health Information Systems
Overview of the methods for collecting health data in the preparation of health surveys and reports with computer research applications emphasized. Three hours of lecture per week.

HSHA 262 Public Policy and Health Care
Overview of major national and state health legislation and health policy. Three hours of lecture per week.

HSHA 312 Health Administration in School Systems
Examination of health care issues in the Houston Independent School District where enrollees are provided an opportunity to perform projects in school health settings. Three hours of lecture per week.

HSHA 313 Health Care of the Poor
Examination of health care issues affecting the uninsured, the working uninsured, and the poor in the health care system. Three hours of lecture per week.

HSHA 314 Finance and Economics of Health Care
Overview of health care financial and economics concepts in health care facilities. Three hours of lecture per week.

HSHA 361 Long Term Care
Introductory examination of health issues on the rehabilitation and continuing care level: nursing homes, geriatric wellness centers, and homes for the mentally retarded. Three hours of lecture per week.

HSHA 363 Ambulatory Health Care Services
Examination of outpatient health care delivery settings: ambulatory surgery centers, fitness centers, clinics, and HMO’s. Three hours of lecture per week.

HSHA 411 Health Administration Internship
Direct exposure of students to professional work experiences and responsibilities through workplace settings. May be taken twice for credit. One hour of lecture and thirty-eight hours of laboratory per week. Prerequisite: Consent of the Program Director and instructor.
HSHA 412  Legal, Ethical, and Biomedical Aspects of Health Care  (3)
Examination of issues in health care from an ethical, medical, sociological, and legal perspective. Three hours of lecture per week.

HSHA 413  Seminar in Community Health  (3)
Detailed examination of state and local health care issues: role of the U. S. Department of Health and Human Services and the Harris County Health System. Three hours of lecture per week.

HSHA 414  Seminar in Issues in Health Care  (3)
Detailed study of health care management issues. Three hours of lecture per week. Prerequisites: HSHA 211, HSHA 363, PA 311, and PA 312.

HSHA 451  Health Care of the Aged  (3)
Detailed review of current and future issues in the delivery of health care services to the aged for interdisciplinary students. Three hours of lecture per week. Prerequisites: HSHA 211, HSHA 363, PA 311, and PA 312 or consent of the instructor.

HEALTH INFORMATION MANAGEMENT COURSES

HSMR 362  Medical Terminology/Word Processing  (3)
Designed to extensively develop the student’s medical vocabulary: Greek and Latin prefixes, suffixes, word roots, and combining forms used to build medical terms. Three hours of lecture per week. Prerequisites: BIOL 135 and BIOL 136.

HSMR 363  Basic Foundations I  (3)
Introduction to health information systems and technology; assessment of institutional and patient-related information needs; departmental, informational, service, and operational needs. Three hours of lecture per week. Prerequisite: HSCR 150.

HSMR 363L  Basic Foundations Laboratory  (2)
Designed to simulate a health information department with the activities of health information management. Concurrent enrollment in HSMR 363 required. Six hours of laboratory per week.

HSMR 364  Management of Health Data I  (3)
Indexes and registries; nomenclature and classification systems; data abstraction; departmental operations and services. Three hours of lecture per week. Prerequisites: HSMR 362, HSMR 363, HSMR 363L, HSMR 365, and HSMR 366.

HSMR 364L  Management of Health Data Laboratory  (2)
Simulated activities where students are given the opportunity to practice coding diagnoses and procedures from actual medical records using computer technology. Six hours of laboratory per week. Prerequisites: HSMR 362, HSMR 363, HSMR 363L, HSMR 365, and HSMR 366.

HSMR 365  Directed Practice I  (2)
Students assigned to Health Information Management Departments for experiences in the technical aspects of health information management. Two hours of lecture and one hour of laboratory per week. Prerequisites: BIOL 135 and BIOL 136.

HSMR 366  Legal Aspects  (2)
Legal terminology; the court system; control and use of health information; health care legislation and regulations; confidentiality; ethical standards for health information managers. Two hours of lecture per week. Prerequisites: HSCR 150 and HSCR 260.
HSMR 373 Basic Foundations II
Management of health information in non-traditional settings: long-term care, ambulatory care, hospices, home health care, psychiatric centers, and rehabilitation facilities. Two hours of lecture per week. Prerequisites: HSMR 363 and HSMR 363L.

HSMR 374 Management of Health Data II
Clinical coding procedures, outpatient coding, statistics, and reporting guidelines. Two hours of lecture per week. Prerequisites: HSMR 362, HSMR 363, HSMR 363L, HSMR 364, HSMR 365, and HSMR 366.

HSMR 401 In-Service Training for Health Information Managers
Presentation of in-service training tools and techniques. One hour of lecture per week. Prerequisite: HSMR 479.

HSMR 402 Comprehensive Health Information Management
Review of competencies addressed in all professional courses. Students enrolled must pass a comprehensive examination with a score of 75 or better prior to graduation. Prerequisites: Completion of all HSCR and HSMR courses, except HSMR 476 and HSMR 478.

HSMR 473 Quality Assurance Management
Theory and application of quality improvement, utilization review, risk management, Medicare and Medicaid review process, and other laws and regulations applicable to health information systems. Three hours of lecture per week. Prerequisites: HSMR 362, HSMR 363, HSMR 363L, HSMR 364, HSMR 365, and HSMR 366.

HSMR 474 Computerized Health Information Systems
Evaluation of hardware and software components of computers for health information systems: design and cost effectiveness, record linkages, and data sharing. Three hours of lecture per week. Prerequisites: HSMR 362, HSMR 363, HSMR 363L, HSMR 364, HSMR 365, and HSMR 366.

HSMR 475 Directed Practice II
Students assigned to a health information management center for experiences in quality improvement, computer applications, classification systems, and statistical analysis of health information. One hour of lecture, one hour of laboratory, independent study per week. Prerequisites: HSMR 362, HSMR 363, HSMR 363L, HSMR 364, HSMR 365, and HSMR 366.

HSMR 476 Preceptorship
Students assigned to a health information center for administrative management training. Individual projects assigned for completion at site. One hour of lecture and ten hours of laboratory per week. Prerequisite: Consent of the Program Director.

HSMR 477 Management of Health Information Systems
Theories of managerial concepts and control mechanisms as applied to health information systems. Four hours of lecture per week. Prerequisites: All HSMR courses through HSMR 475.

HSMR 478 Problems in Medical Records / Health Information Management
Problem identification and resolution, including formulation of alternative solutions, for health information management. Post-preceptorship discussions also included. Two hours of lecture per week. Prerequisite: Consent of the Program Director.

HSMR 479 Health Information Personnel Management
Discussion of the skills, techniques, policies, and procedures needed for successful human resource management: interview process, performance appraisals, wage and salary administration. Three hours of lecture per week. Prerequisites: All HSMR courses through HSMR 475.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>HSMT 252</td>
<td><strong>Serology Practices and Procedures</strong></td>
<td>3</td>
<td>Study of the immune system, its cellular and non-cellular products, and serological tests to detect and identify these products and associated pathogens. Two hours of lecture and two hours of laboratory per week. Prerequisites: BIOL 454 and CHEM 232.</td>
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<tr>
<td>HSMT 304</td>
<td><strong>Clinical Laboratory Science Application I</strong></td>
<td>1</td>
<td>The course integrates didactic instruction with case studies and performance of laboratory procedures to provide a comprehensive understanding of clinical laboratory policies and procedures inclusive of an overview of the profession, phlebotomy, laboratory safety, compliance and regulatory agencies. One hour of lecture per week.</td>
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<tr>
<td>HSMT 305</td>
<td><strong>Clinical Laboratory Science Application II</strong></td>
<td>1</td>
<td>The course is designed to provide an orientation to the theory and required skills in education methodology, laboratory information systems, laboratory calculation and quality assurance. One hour of lecture per week.</td>
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<tr>
<td>HSMT 306</td>
<td><strong>Comprehensive Clinical Laboratory Science</strong></td>
<td>1</td>
<td>This course will provide exposure to laboratory management as well as research skills and techniques. Research class will culminate in a presentation of the clinical research. Additionally there will be reinforcement of theoretical acquisition of core knowledge in CLS to facilitate application to board type questions. The class will be repeated with the first semester of the senior year covering management and the second semester of the senior year covering research. One hour of lecture per week. Prerequisites: HSCR 300, HSMT 304, and HSMT 305.</td>
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<tr>
<td>HSMT 352</td>
<td><strong>Hematology I</strong></td>
<td>4</td>
<td>Study of cellular elements of blood in normal/abnormal states of diagnostic importance with laboratory experiences for enumeration by direct observation and electronic instruments. Two hours of lecture and four hours of laboratory per week. Prerequisites: BIOL 454, HSMT 252, and HSMT 356.</td>
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<tr>
<td>HSMT 353</td>
<td><strong>Clinical Microscopy and Quality Control</strong></td>
<td>4</td>
<td>Comprehensive exploration of principles and testing procedures used to diagnose and monitor diseases relevant to the renal system, including systemic diseases and dysfunctions. Two hours of lecture and four hours of laboratory per week. Prerequisite: BIOL 454.</td>
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<tr>
<td>HSMT 354</td>
<td><strong>Immunohematology I</strong></td>
<td>3</td>
<td>First part of a two-part sequence focusing on the role of antigens and antibodies in transfusion therapy practices and relevant testing practices and procedures. Two hours of lecture and three hours of laboratory per week. Prerequisites: HSMT 252, HSMT 353, and HSMT 356.</td>
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<tr>
<td>HSMT 355</td>
<td><strong>Medical Chemistry I</strong></td>
<td>3</td>
<td>Lecture and laboratory experiences to determine the body's chemistry using manual and automated methodologies for determination of disease processes. Two hours of lecture and three hours of laboratory per week. Prerequisites: HSMT 252, HSMT 353, HSMT 356, and CHEM 232 or equivalent.</td>
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<tr>
<td>HSMT 356</td>
<td><strong>Hemostatic Processes</strong></td>
<td>4</td>
<td>Study of abnormalities leading to the formation of a defective thrombus, including enumeration of platelets and evaluation of hemostatic parameters. Two hours of lecture and four hours of laboratory per week. Prerequisites: BIOL 454, HSMT 252, and HSMT 353.</td>
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<tr>
<td>HSMT 357</td>
<td><strong>Practicum I</strong></td>
<td>3</td>
<td>Performance of serological and urinalysis techniques and methods in an affiliated clinical facility. Includes quality assurance practices and procedures and equipment maintenance. Fifteen hours of laboratory per week. Prerequisite: Consent of the Program Director.</td>
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<td>Course Code</td>
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<tr>
<td>HSMT 358</td>
<td>Clinical Immunology</td>
<td>2</td>
<td>Clinical rotation in an affiliated clinical facility with emphasis on technical skills and applications. Ten hours of laboratory per week. Prerequisite: Consent of the Program Director.</td>
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<tr>
<td>HSMT 359</td>
<td>Microbial Human Disorders I</td>
<td>3</td>
<td>Skills development and performance in the detection, isolation, and identification of microbes of medical importance to human pathologic conditions. One hour of lecture and four hours of laboratory per week. Prerequisites: BIOL 347, BIOL 454, HSMT 252, HSMT 353, and HSMT 356.</td>
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<tr>
<td>HSMT 362</td>
<td>Hematology II</td>
<td>3</td>
<td>Study of the cellular elements of blood (formation, function, and morphology) in diseases that lead to the definition, diagnosis, and validity of test results. One hour of lecture and four hours of laboratory per week. Prerequisites: HSMT 352 and HSMT 353.</td>
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<tr>
<td>HSMT 364</td>
<td>Immunohematology II</td>
<td>3</td>
<td>Continuation of HSMT 354 with emphasis on antibody assessments, crossmatching techniques, component therapy, transfusion-associated diseases, problem solving techniques, and quality assurance procedures. Two hours of lecture and four hours of laboratory per week. Prerequisites: HSMT 354.</td>
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<tr>
<td>HSMT 365</td>
<td>Medical Chemistry II</td>
<td>3</td>
<td>Evaluation of chemical parameters to establish the relationship between the disease state and chemical variations from normal. Two hours of lecture and four hours of laboratory per week. Prerequisites: HSMT 355.</td>
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<tr>
<td>HSMT 369</td>
<td>Microbial Human Disorders II</td>
<td>2</td>
<td>Recognition of parameters to detect, isolate, and identify the characteristics of medically important microbiologic, mycologic, and parasitic organisms of man. One hour of lecture and four hours of laboratory per week. Prerequisites: HSMT 359.</td>
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<tr>
<td>HSMT 466</td>
<td>Clinical Hematology</td>
<td>4</td>
<td>Clinical practicum in an affiliated clinical facility with emphasis on practical/technical skills and applications. Two hours of lecture and eighteen hours of laboratory per week. Prerequisites: Senior standing and consent of the Program Director.</td>
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<tr>
<td>HSMT 467</td>
<td>Blood Bank</td>
<td>4</td>
<td>Clinical practicum focusing on the performance of antibody assessments, compatibility phlebotomy, component preparation, donor processing of donated blood, and quality assurance. Two hours of lecture and eighteen hours of laboratory per week. Prerequisites: Senior standing and consent of the Program Director.</td>
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<tr>
<td>HSMT 468</td>
<td>Clinical Microbiology</td>
<td>4</td>
<td>Clinical rotation at an affiliated clinical site to emphasize practical/technical skills and applications. Two hours of lecture and eighteen hours of laboratory per week. Prerequisites: Senior standing and consent of the Program Director.</td>
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<tr>
<td>HSMT 469</td>
<td>Clinical Biochemistry</td>
<td>4</td>
<td>Clinical rotation at an affiliated clinical site to emphasize practical/technical skills and applications. Two hours of lecture and eighteen hours of laboratory per week. Prerequisites: Senior standing and consent of the Program Director.</td>
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<td>Course Code</td>
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<tr>
<td>HSRT 220</td>
<td>Respiratory Therapy Clinical Practicum</td>
<td>2</td>
<td>Corequisites: HSRT 230 and HSRT 231.</td>
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<td>HSRT 222</td>
<td>Developmental Practicum in Clinical Applications</td>
<td>2</td>
<td>Corequisite: HSRT 232.</td>
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<tr>
<td>HSRT 230</td>
<td>Introduction to Respiratory Therapy</td>
<td>3</td>
<td>Corequisites: HSRT 220 and HSRT 230.</td>
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<td>HSRT 231</td>
<td>Cardiopulmonary Systems</td>
<td>3</td>
<td>Corequisites: HSRT 220 and HSRT 230.</td>
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<td>HSRT 232</td>
<td>Intermediate Clinical Applications</td>
<td>4</td>
<td>Corequisite: HSRT 222.</td>
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<td>HSRT 307</td>
<td>Respiratory Care Applications II</td>
<td>1</td>
<td>Prerequisite: Consent of the Program Director.</td>
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<td>HSRT 308</td>
<td>Respiratory Care Applications II</td>
<td>1</td>
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<tr>
<td>HSRT 321</td>
<td>Respiratory Therapy Clinical Practicum IV</td>
<td>2</td>
<td>Corequisite: HSRT 331.</td>
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<tr>
<td>HSRT 322</td>
<td>Respiratory Therapy Clinical Practicum V</td>
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<td>Corequisite: HSRT 332.</td>
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<tr>
<td>HSRT 323</td>
<td>Respiratory Therapy Clinical Practicum VI</td>
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<td>Credits</td>
<td>Description</td>
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<tr>
<td>HSRT 325</td>
<td>Pediatric Clinical Practicum</td>
<td>2</td>
<td>Procedures and treatment modalities utilized in the clinical management of neonatal and pediatric patients. Twelve hours of laboratory per week. Corequisite: HSRT 340.</td>
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<tr>
<td>HSRT 330</td>
<td>Applied Procedures and Equipment</td>
<td>3</td>
<td>Study of airway management, resuscitation, continuous assisted ventilation. Specific mechanics and applications of equipment/techniques utilized in corresponding clinical sites. Three hours of lecture per week. Corequisites: HSRT 320, HSRT 321, and HSRT 331.</td>
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<tr>
<td>HSRT 331</td>
<td>Theoretical and Applied Respiratory Therapy</td>
<td>3</td>
<td>Study of the pathophysiology and clinical presentations manifested in pulmonary disease and dysfunction. Acid-base balance; radiological and pulmonary function testing; hemodynamics; and ECG presentations studied. Three hours of lecture per week. Corequisite: HSRT 321.</td>
<td></td>
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<tr>
<td>HSRT 332</td>
<td>Applied Procedures and Equipment</td>
<td>3</td>
<td>Study of advanced, invasive, and specialized procedures applicable to the function of the cardiopulmonary and renal systems. Continuation and augmentation of HSRT 330. Three hours of lecture per week. Corequisite: HSRT 322.</td>
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<tr>
<td>HSRT 334</td>
<td>Respiratory Care Pharmacotherapy</td>
<td>3</td>
<td>Clinical aspects and physiologic effects of drugs administered by the respiratory care practitioner. Clinical activities involved in the preparation, delivery, and therapeutic evaluation of administered drugs. Three hours of lecture per week. Prerequisite: HSRT 230 or HSRT 231.</td>
<td></td>
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<tr>
<td>HSRT 340</td>
<td>Neonatal and Pediatric Respiratory Care</td>
<td>3</td>
<td>Respiratory care of newborns, infants, and children; procedures in oxygen, aerosol, and ventilatory therapeutics; and review of anatomy/physiology, specific abnormalities, specialized procedures, and clinical presentations. Three hours of lecture per week. Corequisite: HSRT 325.</td>
<td></td>
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<tr>
<td>HSRT 420</td>
<td>Comprehensive Respiratory Care</td>
<td>2</td>
<td>Comprehensive study of the respiratory care practice at both the technician and therapist levels based on NBRC job analysis survey results. Two hours of lecture per week. Prerequisite: Consent of the Program Director.</td>
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<tr>
<td>HSRT 435</td>
<td>Electrocardiographic Technology</td>
<td>3</td>
<td>ECG techniques, procedures, patterns, and interpretations; systematic methods for reading electrocardiograms. Three hours of lecture and four hours of laboratory per week. Prerequisite: Consent of the Program Director.</td>
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<tr>
<td>HSRT 440</td>
<td>Respiratory Therapy Management I</td>
<td>4</td>
<td>Departmental management involving personnel, decision making, budgeting, evaluation of departmental effectiveness, and development of departmental policies. Three hours of lecture and four hours of laboratory per week. Prerequisite: Consent of the Program Director.</td>
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<tr>
<td>HSRT 441</td>
<td>Respiratory Therapy Management II</td>
<td>4</td>
<td>Continuation of HSRT 440. Three hours of lecture and four hours of laboratory per week. Prerequisites: HSRT 440 and consent of the Program Director.</td>
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<td>HSRT 453</td>
<td>Cardiopulmonary Technology</td>
<td>(5)</td>
<td></td>
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<tr>
<td></td>
<td>Pulmonary function testing procedures and interpretation; study of equipment and standards used in pulmonary testing. Three hours of lecture and four hours of laboratory per week. Prerequisite: Consent of the Program Director.</td>
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<tr>
<td>HSRT 454</td>
<td>Critical Care and Internship</td>
<td>(5)</td>
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<td></td>
<td>Comprehensive study of advanced procedures, therapeutic modalities, decision making, and quality control for the practicing respiratory therapist. Two hours of lecture and six hours of laboratory per week. Prerequisites: Completion of all other professional HSRT courses and consent of the Program Director.</td>
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## CURRICULUM SUMMARY FOR
BACHELOR OF SCIENCE DEGREE IN
ENVIRONMENTAL HEALTH
TOTAL CREDITS REQUIRED: 149

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<th>CORE CURRICULUM* (STANDARD)</th>
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<th>OTHER REQUIREMENTS</th>
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<td>HSEH 233 (4)</td>
<td>BIOL 122 (2)</td>
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<td>HSEH 234 (3)</td>
<td>BIOL 131 (3)</td>
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<td>HSEH 235 (3)</td>
<td>BIOL 132 (3)</td>
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<td>HSEH 337 (4)</td>
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<td>ENG 200 Level (3)</td>
<td>HSEH 338 (3)</td>
<td>CHEM 212 (1)</td>
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<td>Visual &amp; Performing Arts (3)***</td>
<td>HSEH 339 (3)</td>
<td>CHEM 231 (3)</td>
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<td>HIST 231 (3)</td>
<td>HSEH 431 (3)</td>
<td>HSCR 260 (3)</td>
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<td>HSEH 432 (3)</td>
<td>HSCR 360 (3)</td>
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<td>HSEH 433 (3)</td>
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<td>HSEH 434 (3)</td>
<td>PHYS 215 (1)</td>
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<td>HSEH 435 (3)</td>
<td>PHYS 216 (1)</td>
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<td>CS 116 (3)</td>
<td>HSEH 442 (3)</td>
<td>PHYS 237 (3)</td>
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<td>HSEH 450 (3)</td>
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<td>HSEH 451 (3)</td>
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<tr>
<td>HSEH 460 (6)</td>
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* Students should seek advisement prior to registering for any course intended to be used as credit toward the degree.

** (N) represents the number of course credits.

*** Select from the following courses: ART 131 or 132, THC 130 or 231, MUSI 131 or 239.
DEGREE PLAN LEADING TO THE
BACHELOR OF SCIENCE DEGREE IN
ENVIRONMENTAL HEALTH
BY LEVEL AND SEQUENCE

Freshman
First Semester
BIOL 121 (Biological Science I Laboratory), 2 cr
BIOL 131 (Biological Science I, Lecture), 3 cr
CHEM 111 (General Chemistry I Laboratory), 1 cr
CHEM 131 (General Chemistry I, Lecture), 3 cr
MATH 133 (College Algebra), 3 cr
ENG 131 (Freshman English I), 3 cr
VISUAL AND PERFORMING ARTS,* 3 cr

Second Semester
BIOL 122 (Biological Science II Laboratory), 2 cr
BIOL 132 (Biological Science II, Lecture), 3 cr
CHEM 112 (General Chemistry II Laboratory), 1 cr
CHEM 132 (General Chemistry II, Lecture), 3 cr
ENG 132 (Freshman English II), 3 cr
HSCR 150 (Concepts of Health), 3 cr
MATH 134 (Plane Trigonometry), 3 cr

Sophomore
First Semester
CHEM 211 (Organic Chemistry I Laboratory), 1 cr
CHEM 231 (Organic Chemistry I, Lecture), 3 cr
ENG 230-244 (English Literature), 3 cr
HIST 231 (Social & Political History of the U.S.), 3 cr
PHYS 215 (General Physics I Laboratory), 1 cr
PHYS 237 (General Physics Life Science Students I, Lecture), 3 cr
POLS 231 (American Political Systems I), 3 cr
SOC 157 (Sociology), 3 cr

Second Semester
CHEM 212 (Organic Chemistry II Laboratory), 1 cr
CHEM 232 (Organic Chemistry II, Lecture), 3 cr
CS 116 (Computer Introduction), 3 cr
HSCR 260 (Biomedical Ethics), 3 cr
PHYS 216 (General Physics II Laboratory), 1 cr
PHYS 238 (General Physics Life Science Students II, Lecture), 3 cr
POLS 232 (American Political Systems II), 3 cr
SC 233 (Speech Communication), 3 cr

Junior
First Semester
HSEH 232 (Introduction to Environmental Health), 3 cr
HSEH 233 (Epidemiology and Biostatistics), 4 cr
HSEH 234 (Health Physics), 3 cr
HSEH 235 (Human Ecology), 3 cr
HSEH 344 (Environmental Chemistry), 4 cr
BIOL 245 (Human Anatomy and Physiology), 4 cr
### Second Semester
- HSEH 337 (Environmental Microbiology), 4 cr
- HSEH 338 (Water Pollution and Control), 3 cr
- HSCCR 360 (Principles of Disease), 3 cr
- HSEH 425 (Insect and Vector Control), 3 cr
- HSEH 433 (Institutional Health and Safety), 3 cr
- HSEH 434 (Sewage Treatment and Disposal), 3 cr

### First Summer
- HSEH 460 (Environmental Internship), 3 cr

### Second Summer
- HSEH 460 (Environmental Internship), 3 cr

### Senior
- **First Semester**
  - HSEH 334 (Public Health Organization and Administration), 3 cr
  - HSEH 339 (Air Pollution and Control), 3 cr
  - HSEH 442 (Occupational Safety and Health), 3 cr
  - HSEH 450 (Environmental Toxicology), 3 cr

- **Second Semester**
  - HSEH 431 (Solid Waste Management), 3 cr
  - HSEH 432 (Hazardous Waste Management), 3 cr
  - HSEH 435 (Environmental Health Problems), 3 cr
  - HSEH 451 (Environmental Impact Assessment), 3 cr

*Visual and Performing Arts: THC 130, 231; MUSI 131, 239; ART 131, 132*
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<th>CORE CURRICULUM* (STANDARD)</th>
<th>MAJOR (HEALTH ADMIN)</th>
<th>OTHER REQUIREMENTS</th>
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<td>HSHA 262 (3)</td>
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<td>HSCR 300 (1)</td>
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<td>MATH 133 (3)</td>
<td>HSHA 313 (3)</td>
<td>HSCR 360 (3)</td>
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<td>CHEM 111, 131 (4) or</td>
<td>HSHA 314 (3)</td>
<td>HSCR 361 (3)</td>
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<td>HSHA 361 (3)</td>
<td>MATH 134 (3)</td>
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<td>CHEM 112, 132 (4) or</td>
<td>HSHA 363 (3)</td>
<td>PA 271 (3)</td>
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<td>BIOL 122, 132 (5)</td>
<td>HSHA 411 (6)^^</td>
<td>PA 301 (3)</td>
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<td>ENG 2xx (3)</td>
<td>HSHA 412 (3)</td>
<td>PA 302 (3)</td>
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<td>ART 131 or ART 132 (3)</td>
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<td>PA 311 (3)</td>
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<td>HSHA 414 (3)</td>
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<td>CS 116 (3)</td>
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<td>Free Electives (6)</td>
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* Students should seek advisement prior to registering for any course intended to be used as credit toward the degree.

** (N) represents the number of course credits.

^^ HSHA 411 must be taken twice where each enrollment counts for 3 credits.
DEGREE PLAN LEADING TO THE
BACHELOR OF SCIENCE DEGREE IN
HEALTH ADMINISTRATION
BY LEVEL AND SEQUENCE

Freshman

First Semester
CHEM 111 (General Chemistry Lab I) or BIOL 111 (Biological Science Lab I), 1 cr
CHEM 131 (General Chemistry I) or BIOL 131 (Biological Science I), 3 cr
ENG 131 (Freshman English), 3 cr
HSCR 150 (Concepts of Health), 3 cr
MATH 133 College Algebra, 3 cr
PE 101-125 (Physical Education), 1 cr
PSY 131 (Psychology) or SOC (Sociology) 141, 3 cr

Second Semester
CHEM 112 (General Chemistry Lab II) or BIOL 122 (Biological Science Lab II), 1 cr
CHEM 132 (General Chemistry II) or BIOL 132 (Biological Science II), 3 cr
CS 116 (Computer Introduction), 3 cr
ENG 132 (Freshman English), 3 cr
HIST 231 (Social & Political History of U.S.), 3 cr
MATH 134 (Trigonometry College Math II), 3 cr
PE 101-125 (Physical Education), 1 cr

Sophomore

First Semester
ART 131 or 132* (Drawing and Composition), 3 cr
HIST 232 (Social & Political History of U.S. II), 3 cr
HSHA 211 (Health Information Systems), 3 cr
ENG 230-244 (English Literature), 3 cr
POLS 231 (American Political Systems I), 3 cr

Second Semester
HSCR 260 (Biomedical Ethics), 3 cr
HSCR 300 (Health Sciences Seminar), 1 cr
HSHA 262 (Public Policy and Health Care), 3 cr
PA 271 (Intro to Public Administration), 3 cr
SC 233 or SC 135 (Speech Communications), 3 cr
POLS 232 (American Political Systems II), 3 cr

Junior

First Semester
HSCR 360 (Principles of Disease), 3 cr
HSHA 312 (Health Administration in School Systems), 3 cr
HSHA 313 (Health Care of the Poor), 3 cr
HSHA 361 (Long Term Care), 3 cr
PA 301 (Research Methods in Public Administration), 3 cr
PA 311 (Introduction to Public Sector Planning), 3 cr

Second Semester
HSCR 361 (Research for Health Professionals), 3 cr
HSHA 314 (Finance and Economics of Health Care), 3 cr
HSHA 363 (Ambulatory Health Care), 3 cr
PA 302 (Quantitative Methods in Public Adm.)
PA 312 (Public Budgeting), 3 cr
PA 313 (Organization Behavior and Management), 3 cr
Senior

First Semester
HSHA 412 (Legal, Ethical, and Biomedical Aspects of Health Care), 3 cr
HSHA 413 (Seminar in Community Health), 3 cr
HSHA 414 (Seminar in Issues in Health Care), 3 cr
HSHA 451 (Health Care of the Aged), 3 cr
PA 321 (Personnel Administration), 3 cr
Free Elective, 3 cr

Second Semester
HSHA 411 (Health Administration Internship), (6) (2 sections)
Free Elective, 3 cr

*Visual and Performing Arts: THC 130, 231; MUSI 131, 239; ART 131, 132
CURRICULUM SUMMARY FOR
BACHELOR OF SCIENCE DEGREE IN
HEALTH INFORMATION MANAGEMENT
TOTAL CREDITS REQUIRED: 137

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<tr>
<th>CORE CURRICULUM* (STANDARD)</th>
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<th>OTHER REQUIREMENTS</th>
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<td>BIOL 121 (2)¹</td>
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<td>ENG 132 (3)</td>
<td>HSMR 363 (3)</td>
<td>BIOL 122 (2)¹</td>
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<td>BIOL 131 (3)²</td>
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<td>HSMR 364 (3)</td>
<td>BIOL 132 (3)²</td>
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<td>HSMR 364L (2)</td>
<td>BIOL 246 (4)</td>
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<td>BIOL 136 (4)</td>
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<td>ENG 200 Level (3)</td>
<td>HSMR 366 (2)</td>
<td>HSCR 260 (3)</td>
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<td>HSMR 373 (2)</td>
<td>HSCR 300 (1)</td>
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<td>HIST 231 (3)</td>
<td>HSMR 374 (2)</td>
<td>HSCR 360 (3)</td>
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<td>HIST 232 (3)</td>
<td>HSMR 401 (1)</td>
<td>HSCR 361 (3)</td>
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<td>POLS 231 (3)</td>
<td>HSMR 402 (1)</td>
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<td>HSMR 473 (3)</td>
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<td>HSMR 478 (2)</td>
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*Students should seek advisement prior to registering for any course intended to be used as credit toward the degree.
**(N) represents the number of course credits.
¹May together be substituted with CHEM 131 and 111 or with PHYS 235 and 215.
²May together be substituted with CHEM 132 and 112 or with PHYS 236 and 216.
DEGREE PLAN LEADING TO THE
BACHELOR OF SCIENCE DEGREE IN HEALTH INFORMATION MANAGEMENT
BY LEVEL AND SEQUENCE

Freshman

First Semester
BIOL 121 (Biological Science Laboratory I), 2 cr
BIOL 131 (Biological Science I, Lecture), 3 cr
HSCR 150 (Concepts of Health), 3 cr
ENG 131 (Freshman English), 3 cr
HIST 231 (Social and Political History of U.S. to 1877), 3 cr
MATH 133 (College Algebra), 3 cr
Visual and Performing Arts*, 3 cr

Second Semester
BIOL 122 (Biological Science Laboratory II), 2 cr
BIOL 132 (Biological Science II, Lecture), 3 cr
CS 116 (Computer Introduction), 3 cr
ENG 132 (Freshman English), 3 cr
HIST 232 (Social and Political History of U.S. since 1877) (3)
MATH 134 (Trigonometry) or MATH 135 (Math for Business), 3 cr
PSY 131 (General Psychology), 3 cr

Sophomore

First Semester
BIOL 135 (Human Anatomy and Physiology 1), 4 cr
HSCR 260 (Biomedical Ethics), 3 cr
ENG 230-244 (English Literature), 3 cr
SC 233 (Communication Skills for Health Professionals), 3 cr
POLS 231 (American Political Systems I), 3 cr

Second Semester
BIOL 136 (Human Anatomy and Physiology I), 4 cr
BIOL 246 (Microbiology for Health Related Professions), 4 cr
HSCR 300 (Health Sciences Seminar), 1 cr
MGSC 239 (Business Statistics I), 3 cr
POLS 232 (American Political Systems II), 3 cr

Junior

First Semester
HSCR 360 (Principles of Disease), 3 cr
HSMR 362 (Medical Terminology/Word Processing), 3 cr
HSMR 363 (Basic Foundations I), 3 cr
HSMR 363L (Basic Foundations Laboratory), 2 cr
HSMR 365 (Directed Practice), 2 cr
HSMR 366 (Legal Aspects), 2 cr

Second Semester
HSCR 361 (Research for Health Professionals), 3 cr
HSMR 373 (Basic Foundations II), 2 cr
HSMR 364 (Management of Health Data I), 3 cr
HSMR 364L (Management of Health Data Laboratory), 2 cr
MGMT 300 (Business Organization and Management), 3 cr
MGMT 301 (Personnel and Manpower Development), 3 cr
Elective, 3 cr
Senior

First Semester
HSMR 374 (Management of Health Data II), 2 cr
HSMR 401 (In-Service Training for Health Information Managers), 1 cr
HSMR 473 (Quality Assurance Management), 3 cr
HSMR 474 (Computerized Health Information Systems), 3 cr
HSMR 475 (Directed Practice II), 3 cr
Elective, 3 cr

Second Semester
HSMR 402 (Comprehensive Health Information Management), 1 cr
HSMR 476 (Preceptorship), 4 cr
HSMR 477 (Management of Health Information Systems), 4 cr
HSMR 478 (Problems in Medical Records/Health Information Management), 2 cr
HSMR 479 (Health Information Personnel Management), 3 cr
Elective, 3 cr

*Visual and Performing Arts: THC 130, 231; MUSI 131, 239; ART 131, 132
### CURRICULUM SUMMARY FOR BACHELOR OF SCIENCE DEGREE IN CLINICAL LABORATORY SCIENCES

**TOTAL CREDITS REQUIRED**: 135

<table>
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<th>OTHER REQUIREMENTS</th>
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** (N) represents the number of course credits.

^^ CHEM 445 may be taken in lieu of CHEM 212 and CHEM 232.
DEGREE PLAN LEADING TO THE
BACHELOR OF SCIENCE DEGREE IN
CLINICAL LABORATORY SCIENCES
BY LEVEL AND SEQUENCE

Freshman First Semester
BIOL 131 (Biological Science I, Lecture), 3 cr
CHEM 111 (General Chemistry I Laboratory), 1 cr
CHEM 131 (General Chemistry I, Lecture), 3 cr
ENG 131 (Freshman English), 3 cr
HSCR 150 (Concepts of Health), 3 cr
MATH 133 (College Algebra), 3 cr
SC 135 or 136 (Speech Communication), 3 cr

Second Semester
BIOL 132 (Biological Science II, Lecture), 3 cr
CHEM 112 (General Chemistry II Laboratory), 1 cr
CHEM 132 (General Chemistry II, Lecture), 3 cr
CS 116 (Computer Science), 3 cr
ENG 132 (Freshman English), 3 cr
PSY 131 (Psychology Lecture), 3 cr

Sophomore First Semester
BIOL 245 (Human Anatomy and Physiology), 3 cr
BIOL 454 (Immunology), 3 cr
CHEM 211 (Organic Chemistry I Laboratory), 1 cr
CHEM 231 (Organic Chemistry I, Lecture), 3 cr
HIST 231 (Social and Political History of U.S. I), 3 cr
VISUAL AND PERFORMING ARTS* 3 cr
POLS 231 (American Political Systems I), 3 cr

Second Semester
BIOL 347 (Microbiology), 4 cr
CHEM 212 (Organic Chemistry II Laboratory), 1 cr
CHEM 232 (Organic Chemistry II, Lecture), 3 cr
HIST 231 (Social and Political History of U.S. I), 3 cr
POLS 232 (American Political Systems II), 3 cr
ENG 230-244 (English Literature), 3 cr

Summer Session
HSCR 260 (Biomedical Ethics), 3 cr
HSCR 360 (Principles of Disease), 3 cr

Junior First Semester
HSMT 304 (Clinical Laboratory Science Applications I), 1 cr
HSMT 352 (Hematology I), 4 cr
HSMT 353 (Clinical Microscopy and Quality Control), 4 cr
HSMT 354 (Immunohematology I), 3 cr
HSMT 355 (Medical Chemistry I), 3 cr
HSMT 359 (Microbial Human Disorders I), 3 cr
Second Semester
HSMT 252 (Serology Practice and Procedures), 3 cr
HSMT 305 (Clinical Laboratory Science Applications II), 1 cr
HSMT 362 (Hematology II), 3 cr
HSMT 364 (Immunohematology II), 3 cr
HSMT 365 (Medical Chemistry II), 3 cr
HSMT 369 (Microbial Human Disorders II), 2 cr

Summer Session
HSMT 356 (Hemostatic Processes), 4 cr

Senior
First Semester
HSMT 306-MGMT (Health Sciences Seminar), 1 cr
HSMT 357 (Practicum I), 3 cr
HSMT 467 (Blood Bank), 4 cr
HSMT 469 (Clinical Biochemistry), 4 cr

Second Semester
HSCR 300 (Health Sciences Seminar), 1 cr
HSMT 358 (Clinical Immunology), 2 cr
HSMT 466 (Clinical Hematology), 4 cr
HSMT 468 (Clinical Microbiology), 4 cr
HSMT 306-RESEARCH (Comprehensive Clinical Laboratory Science), 1 cr
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DEGREE PLAN LEADING TO THE
BACHELOR OF SCIENCE DEGREE IN
RESPIRATORY THERAPY
BY LEVEL AND SEQUENCE

Freshman
First Semester
BIOL 131 (Biological Science I, Lecture), 3 cr
CHEM 111 (General Chemistry I Laboratory), 1 cr
CHEM 131 (General Chemistry I, Lecture), 3 cr
ENG 131 (Freshman English I), 3 cr
MATH 133 (College Algebra), 3 cr
Visual and performing arts* 3 cr

Second Semester
BIOL 132 (Biological Science II, Lecture), 3 cr
CHEM 112 (General Chemistry II Laboratory), 1 cr
CHEM 132 (General Chemistry II, Lecture), 3 cr
ENG 132 (Freshman English II)
MATH 134 (Trigonometry College Math II), 3 cr
PHAR 212 (Medical Terminology), 1 cr
HSCR 260 (Biomedical Ethics), 3 cr

Sophomore
First Semester
BIOL 245 (Human Anatomy and Physiology), 4 cr
ENG 230-244 (English Literature), 3 cr
HIST 231 (Social & Political History of the U.S.), 3 cr
PHYS 237 (General Physics Life Science I, Lecture), 3 cr
POLS 231 (American Political Systems I), 3 cr

Second Semester
HSRT 220 (Respiratory Therapy Clinical Practicum), 2 cr
HSRT 230 (Introduction to Respiratory Therapy), 3 cr
HSRT 231 (Cardiopulmonary Systems), 3 cr
HIST 232 (Social & Political History of U.S. II), 3 cr
POLS 232 (American Political Systems II), 3 cr
PHYS 238 (General Physics Life Science II, Lecture), 3 cr

Summer First Term
HSRT 222 (Developmental Practicum in Clinical Applications), 2 cr
HSRT 232 (Intermediate Clinical Applications), 3 cr
PSY 131 (General Psychology), 3 cr

Summer Second Term
HSCR 150 (Concepts of Health), 3 cr
CS 116 (Computer Introduction), 3 cr

Junior
First Semester
HSRT 320 (Applied Procedures and Equipment-Clinical Practicum III), 2 cr
HSRT 321 (Respiratory Therapy Clinical Practicum IV), 2 cr
HSRT 325 (Pediatric Clinical Practicum), 2 cr
HSRT 330 (Applied Procedures and Equipment), 3 cr
HSRT 331 (Theoretical and Applied Respiratory Therapy), 3 cr
HSRT 334 (Respiratory Care Pharmacotherapy), 3 cr
HSRT 340 (Neonatal and Pediatric Respiratory Care), 3 cr
Second Semester
BIOL 246 (Microbiology for Health Care Professionals), 4 cr
HSCR 300 (Seminar in Health Sciences), 1 cr
HSCR 360 (Principles of Disease), 3 cr
HSRT 322 (Respiratory Therapy Clinical Practicum V), 2 cr
HSRT 323 (Respiratory Therapy Clinical Practicum VI), 2 cr
HSRT 332 (Applied Procedures and Equipment), 3 cr
HSRT 333 (Cardiopulmonary Diseases), 3 cr

Summer First Term
HSRT 307 (Respiratory Care Applications I), 1 cr
HSRT 454 (Critical Care and Internship), 5 cr

Senior
First Semester
BIOL 460 (Biostatistics), 3 cr
HSRT 308 (Respiratory Care Applications II), 1 cr
HSRT 420 (Comprehensive Respiratory Care), 2 cr
HSRT 440 (Respiratory Therapy Management I), 4 cr
SC 233 (Speech Communications for Health Professionals), 3 cr

Second Semester
HSRT 435 (Electrocardiographic Technology), 3 cr
HSRT 441 (Respiratory Therapy Management II), 4 cr
HSRT 453 (Cardiopulmonary Technology), 5 cr

*Visual and Performing Arts: THC 130, 231; MUSI 131, 239; ART 131, 132