<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours (Lecture-Lab)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1406</td>
<td>Biology for Science Majors I</td>
<td>4</td>
<td>(3-3)</td>
</tr>
<tr>
<td>BIOL 1407</td>
<td>Biology for Science Majors II</td>
<td>4</td>
<td>(3-3)</td>
</tr>
<tr>
<td>BIOL 1408</td>
<td>Introduction to Biology I</td>
<td>4</td>
<td>(3-3)</td>
</tr>
<tr>
<td>BIOL 1409</td>
<td>Introduction to Biology II</td>
<td>4</td>
<td>(3-3)</td>
</tr>
<tr>
<td>BIOL 1424</td>
<td>Systematic Botany</td>
<td>4</td>
<td>(3-3)</td>
</tr>
<tr>
<td>BIOL 2106</td>
<td>Environmental Biology Lab</td>
<td>1</td>
<td>(0-3)</td>
</tr>
</tbody>
</table>

**BCIS 2390 Systems Analysis & Design**  
3 Hours (3-0)  
Analysis of business information needs and preparation of specifications and requirements for appropriate data system solutions. Includes instruction in information requirements analysis, specification development and writing, prototype evaluation, and network application interfaces.

**BIOL 1322 Nutrition & Diet Therapy**  
3 Hours (3-0)  
Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications. May not be used as a core science requirement.

**BIOL 2306 Environmental Biology**  
3 Hours (3-0)  
This course is designed to enable students to become proficient in human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems. Co-requisite: BIOL 2106.

**BIOL 2401 Anatomy and Physiology I**  
4 Hours (3-4)  
This course is designed to produce student proficiency in body organization, the skeletal system, the muscular system, and the nervous system. Laboratory work will include dissection of a mammal. Dissection required. Prerequisite: BIOL 1406 highly recommended.

**BIOL 2402 Anatomy and Physiology II**  
4 Hours (3-4)  
This course is designed to enable students to become proficient in the following biological systems: the circulatory system with special emphasis on the blood and heart, the respiratory system, the digestive system, and the reproductive system. Laboratory work will include dissection of a mammal. Dissection required. Prerequisite: Requires “C” or greater in BIOL 2401.

**BIOL 2416 Genetics**  
4 Hours (3-4)  
This course is designed to enable students to become familiar with the following topics in genetics: the physical basis and the chemical basis of heredity, the laws of heredity and variation, mitotic and meiotic cell division, and the study of human diseases that are caused by genetic defects. Prerequisite: BIOL 1406 and 1407 or BIOL 2401 and 1402.

**BIOL 2421 Microbiology for Science Majors**  
4 Hours (3-4)  
The study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology. Prerequisite: BIOL 1406 or BIOL 2401 or CHEM 1405 or CHEM 1411 or permission of instructor.

**BMGT 1301 Supervision**  
3 Hours (3-0)  
The role of the supervisor. Includes managerial functions as applied to leadership, counseling, motivation, and human relations skills. Students will explain the role, characteristics, and skills of a supervisor; identify the principles of management at the supervisory level; identify and discuss the human relations skills necessary for supervision; explain motivational techniques; and cite examples of how motivational techniques can be used by a supervisor in a working environment.

**BMGT 1305 Communications in Management**  
3 Hours (3-0)  
Basic theory and processes of communication skills necessary for the management of an organization’s workforce. Students will explain the communication process; identify and remedy major communication barriers; describe how communication contributes to effective management.
ENGL 1302 Composition and Literature
3 Hours (3-0)
This course is designed to enable students to further their composition skills by writing multi-paragraph essays, including a research paper; to write logically; and to read, research, analyze, and discuss the literary genres of poetry, short fiction, and drama. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2307 Creative Writing
3 Hours (3-0)
This course is designed to enable students to investigate and discuss the creative process, to study and practice techniques of creative writing; and to read, analyze, discuss, and write two or more of the following: narrative essays, poems, short stories, and researched reviews/abstracts. Course assignments will include a minimum of 6000 words of writing. Credit will be given only once for ENGL 2307.

ENGL 2308 Advanced Studies in Creative Writing
3 Hours (3-0)
This course is designed to enable students to investigate and discuss the creative process; to study and practice techniques of creative writing; and to read, analyze, discuss, and write one or more of the following: narrative essays, poems, short stories, and plays. Credit will be given only once for ENGL 2308. Prerequisite: ENGL 1301.

ENGL 2311 Technical Writing
3 Hours (3-0)
The study of longer significant works of British literature, including study of movements, schools, or periods. Prerequisite: ENGL 1302. Course assignments will include a minimum of 6000 words of writing.

ENGL 2314 Technical & Business Writing I
3 Hours (3-0)
This course is designed to enable students to organize and prepare basic technical materials in the following areas: abstracts; proposals, technical descriptions, instructional processes, informational processes, technical definitions, progress reports; formal technical reports, graphics, and business correspondence. Course is designed also to enable students to analyze audience and prepare oral reports. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2315 Technical & Business Writing II
3 Hours (3-0)
Second semester of a study designed to enable students to organize and prepare materials for college-level scientific, technical, or business writing. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2321 Masterworks of British Literature
3 Hours (3-0)
Third semester of a study designed to enable students to organize and prepare materials for college-level scientific, technical, or business writing. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2322 British Literature Anglo-Saxon Period through Neo-Classical
3 Hours (3-0)
This course is designed to enable students to develop a historical perspective on the development of ideas and literary techniques by studying major authors, works, and trends in English literature from the Anglo-Saxon Period through the Neo-classical Age. Students will develop their critical thinking, research, and writing skills. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1302.
HMSY 1343 Weapons of Mass Destruction
3 Hours (3-0)
This course covers hazard and risk assessment, crime scene preservation, chemical agents, biological agents, radiological agents, explosive devices, detection-sampling and plume models, and personal protection methods. The critical role of first responders in weapons of mass destruction, mitigation, and survival will also be presented. Discussion will include historical events related to the use of weapons of mass destruction. Students will identify weapons of mass destruction and means of dissemination; and compare the different biological, chemical, and radiological materials used in weapons of mass destruction.

HPR 1106 Essentials of Medical Terminology
1 Hour (1-0-0)
This course is a study of common medical terminology, word origin, structure, and application.

HPR 2200 Pharmacology for Health Professions
2 Hours (2-0-0)
This course is a study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. Co-requisite: BIOL 2401 or VNSG 1420.

HPR 2301 Pathophysiology
3 Hours (3-0-0)
This course is a study of the pathology and general health management of diseases and injuries across the life span. Topics will include etiology, symptoms, pharmacology and the physical and psychological reactions to diseases and injuries. Prerequisite: BIOL 2401 or SCIT 1407.

HUMA 1301 Humanities I
3 Hours (3-0)
“Humanities I” invites students to expand their appreciation of the cultural side of human experience on the premise that a complete education should stimulate the intellect as well as provide skills and job training. This course will offer selected, interrelated topics in philosophy, literature, religion, and the arts and sciences from ancient times to about the year 1500. Coverage will be interdisciplinary and multi-cultural, and will include readings, various media, and performance.

HUMA 1302 Humanities II
3 Hours (3-0)
“Humanities II” complements Humanities I by inviting students to expand their appreciation of the cultural side of human experience further on the premise that a complete education must stimulate the intellect as well as provide skills and job training. This course will offer selected and varying topics in philosophy, literature, religion, and the arts and sciences from about 1500 to the present. Coverage will be interdisciplinary and multi-cultural, and will include readings, various media, and performance. THERE IS NO PREREQUISITE FOR THIS COURSE.

IMED 1316 Web Design I
3 hours (3-1)
Instruction in web design and related graphic design issues including mark-up languages, web sites, and browsers. Students will identify how the Internet functions with specific attention to the World Wide Web and file transfer; apply design techniques in the creation and optimization of graphics and other embedded elements; demonstrate the use of World Wide Web Consortium (W3C) formatting and layout standards; and design, create, test, and maintain a web site.

ITCC 1401 Cisco Exploration 1-Network Fundamentals
4 Hours (3-3)
A course introducing the architecture, structure, functions, components, and models of the internet. Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Students will identify and describe internet architecture, structure, functions, components, and models; describe the use of OSI and TCP layered models; identify and describe the nature and roles of protocols and services at the application, network, data link, and physical layers; describe principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations; and build simple LAN topologies by applying basic principles of cabling, device configuration, and IP subnetsiding.

ITCC 1404 Cisco Exploration 2-Routing Protocols and Concepts
4 Hours (3-3)
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIP1, RIP2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. Students will describe the purpose, nature, and operations of a router; describe the purpose and nature of routing tables; describe the purpose and procedure of configuring static routes; design and implement a classless IP addressing scheme for a given network; describe the basis features and concepts of link-state routing protocols; and configure and verify basic RIP1, RIP2, single area OSPF, and EIGRP operations in a small routed network. Prerequisite: ITCC 1401.

ITCC 2408 Cisco Exploration 3-LAN Switching and Wireless
4 Hours (3-3)
This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced. Students will identify and correct common network problems at layers 1, 2, 3, and 7 using a layered model approach; select the appropriate media, cables, ports, and connectors to connect switches to other devices and hosts; perform and verify initial switch configuration tasks including remote access management; configure, verify, and troubleshoot VLANs, VLAN Trunking, Inter-VLAN routing, VTP, and RSTP; verify network status and switch operation using basic utilities (ping, traceroute, telnet, SSH, arp, ipconfig); identify and describe the purpose of the components in a small wireless network (SSID, BSS, ESS); and identify the basic parameters to configure on a wireless network to ensure that devices connect to the correct point. Prerequisite: ITCC 1404.
RNSG 1513 Foundations for Nursing Practice
5 Hours (4-3-0)
This course is an introduction to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of professional nursing, a systematic framework for decision-making, mechanisms of disease, the needs and problems that nurses help patients manage, and basic psychomotor skills. Emphasis on knowledge, judgment, skills, oral communications and professional values within a legal/ethical framework will be included. Prerequisite: Admission into the program.

RNSG 2130 Professional Nursing Review and Licensure Preparation
1 Hour (1-1-0)
This course is a review of concepts required for licensure examination and entry into the practice of professional nursing. The course includes application of the National Council Licensure Examination for Registered Nurses (NCLEX-RN) test plan, assessment of knowledge deficits, and remediation. Prerequisite: Admission into the program.

RNSG 2205 Intermediate Concepts of Clinical Decision Making II
2 Hours (2-1-0)
This course is an integration of previous knowledge and skills into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession. The course emphasizes clinical decision-making for clients in medical-surgical settings experiencing health problems involving reproductive and sexual disorders and musculoskeletal disorders. Included in this course is a discussion of knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisite: Admission into the program.

RNSG 2207 Transition to Nursing Practice
2 Hours (1-3-0)
This course is an introduction to selected concepts related to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. The course will review trends and issues impacting nursing and health care today and in the future. Topics will include knowledge, judgment, skill, and professional values within a legal/ethical framework. Prerequisite: Approval of program director.

RNSG 2213 Mental Health Nursing
2 Hours (2-1-0)
This course covers principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. Prerequisite: Approval of the program director and PSYC 2301.

RNSG 2261 Clinical Transition Option
2 Hours (0-0-6)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: Admission into the program.

RNSG 2370, Complex Clinical Decision Making
3 Hours (3-1-0)
This course is an application of complex concepts and skills for development of the professional nurse’s role in complex client/nursing situations. The emphasis is on clinical decision making for clients in medical-surgical settings experiencing health problems involving complex cardiovascular disorders; neurologic disorders; renal and urinary disorders; hematologic disorders; and complex oncological concepts. The focus will be knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisite: Admission into the program.

RNSG 2400 Intermediate Concepts of Clinical Decision Making I
4 Hours (3-3-0)
This course is an introduction of previous knowledge and skills into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession. The course emphasizes clinical decision making for clients in medical-surgical settings experiencing health problems involving fluid and electrolyte disorders, respiratory disorders, peripheral vascular disorders, immunologic disorders, liver, biliary, and pancreatic disorders, gastrointestinal disorders, and endocrine and metabolic disorders. Included in this course is a discussion of knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisite: Admission into the program.

RNSG 2461 Clinical IV
4 Hours (0-0-15)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: Admission into the program.

RNSG 2560 Clinical V
5 Hours (0-0-21)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: Admission into the program.

RSPT 1141 Respiratory Home Care/Rehabilitation
1 Hour (1-0-0)
This course is designed to develop an understanding of respiratory home care/rehabilitation equipment, procedures, and patient care, with emphasis on the use of special technology and equipment in the treatment of patients in home care and alternate settings.

RSPT 1160 Clinical III
1 Hour (0-0-6)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: RSPT 1360.

RSPT 1161 Clinical IV
1 Hour (0-0-6)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: RSPT 1160.
RSPT 1213 Basic Respiratory Care Pharmacology
2 Hours (2-0-0)
In this course the student will study basic pharmacological principles/practices of respiratory care drugs. Emphasis will be on classification, routes of administration, dosages/calculations, and physiological interaction.

RSPT 1260 Clinical I
2 Hours (0-0-8)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: Admission to the program.

RSPT 1307 Cardiopulmonary Anatomy and Physiology
3 Hours (3-0-0)
In this course the student will gain an increased understanding of the anatomy and physiology of the cardiovascular, renal, and pulmonary systems. This will include the terminology used in respiratory physiology.

RSPT 1360 Clinical II
3 Hours (0-0-16)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: RSPT 1260.

RSPT 1410 Respiratory Care Procedures I
4 Hours (2-6-0)
This course provides students with the essential knowledge of the equipment and techniques used in the treatment of cardiopulmonary diseases and their clinical application. The following areas are discussed in-depth: medical gas therapy, humidity and aerosol therapy, hyperinflation therapy, chest physiotherapy, pulse oximetry, arterial puncture, and interpretation. Patient assessment skills will also be addressed.

RSPT 1411 Respiratory Care Procedures II
4 Hours (3-3-0)
This course provides students with essential knowledge of airway care and mechanical ventilation. Airway care includes indications, techniques, equipment, and hazards and complications. Mechanical ventilation includes indications, initiation, modes, clinical application, management, complications, and weaning. Prerequisite: RSPT 1410.

RSPT 1425 Respiratory Care Sciences
4 Hours (4-1-0)
This course will provide a study of physics, math, chemistry and statistics as related to Respiratory Care.

RSPT 2130 Respiratory Care Examination Preparation
1 Hour (0-2-0)
This course is a comprehensive review for selected respiratory care credentialing examinations. Test matrices and exam content areas for selected exams will be presented.

RSPT 2135 Pediatric Advanced Life Support
1 Hour (0-2-0)
This is a comprehensive course designed to develop the cognitive and psychomotor skills necessary for resuscitation of the infant and child. Strategies for preventing cardiopulmonary arrest and identification of high risk infants and children will be presented.

RSPT 2139 Advanced Cardiac Life Support
1 Hour (1-0-0)
This is a comprehensive course designed to develop the cognitive and psychomotor skills necessary for resuscitation of the adult. Strategies for managing and stabilizing the cardiopulmonary arrested patient will be included.

RSPT 2247 Specialties in Respiratory Care
2 Hours (2-0-0)
This course provides an introduction to emerging and specialty practice in which the Respiratory Therapist may find application and/or employment. The depth of instruction will provide the indications, expected outcomes, hazards and methods for hyperbaric oxygen (HBO), extracorporeal membrane oxygenation (ECMO), nitric oxide (NO), sleep studies, nutritional assessment, metabolic monitoring, exercise/stress testing, and electroencephalograms.

RSPT 2255 Critical Care Monitoring
2 Hours (1-3-0)
In this course the students will be introduced to advanced monitoring techniques used clinically to assess a patient in the critical care setting.

RSPT 2305 Pulmonary Diagnostics
3 Hours (2-2-0)
In this course the student will study the theories and techniques involved in pulmonary function testing diagnostics with emphasis on blood gas theory and analysis, quality control, oximetry, and capnography.

RSPT 2310 Cardiopulmonary Disease
3 Hours (3-0-0)
This course will provide a discussion of etiology, pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases.

RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care
3 Hours (3-0-0)
In this course the student will study advanced concepts of acute care, monitoring, and management as applied to the neonatal and pediatric patient.

RSPT 2360 Clinical V
3 Hours (0-0-16)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: RSPT 1161.

RSPT 2361 Clinical VI
3 Hours (0-0-16)
This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: RSPT 2360.

SCIT 1407 Applied Human Anatomy and Physiology I
4 Hours (3-3-0)
This course is an indepth coverage of the structure and function of the human body. Topics include anatomical terminology, cell structure and function; tissues; body organization; and the integumentary, skeletal, muscular, nervous, and endocrine systems. The course emphasis is on homeostasis.
Core Curriculum Course List

All degrees with the exception of the AAS require students to complete the Core Curriculum. The Core Curriculum was established by the Texas legislature and the Texas Higher Education Coordinating Board to facilitate the transfer of courses between state supported institutions of higher education in Texas and to provide students with the basis of a liberal education. In order to obtain most degrees from a state supported institution in Texas, a student must complete the Core Curriculum. Thus, once a student has completed the Core Curriculum at one institution, it has been completed at all state supported institutions. Courses are chosen from the following areas. Consult degree programs for specific requirements. The required number of semester credit hours is noted in parenthesis beside each area.

010 - Communications (9)
ENGL 1301 and 1302, one course chosen from SPCH 1311, 1315, 1318, or 1321

020 - Mathematics (3)
MATH 1314, MATH 1316, MATH 1324, MATH 1342, MATH 2412, MATH 2413, MATH 2414, MATH 2415

030 - Natural Sciences (8)
BIOL 1406, BIOL 1407, BIOL 1408, BIOL 1409, BIOL 1424, BIOL 2401, BIOL 2402, BIOL 2421, CHEM 1405, CHEM 1411, CHEM 1412, GEOL 1401, GEOL 1403, GEOL 1404, GEOL 1405, GEOL 1447, PHYS 1401, PHYS 1402, PHYS 1403, PHYS 1404, PHYS 1415, PHYS 1417, PHYS 2425, PHYS 2426

040 - Humanities (3)
ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2331, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2311, FREN 2312, GERM 2311, GERM 2312, HUMA 1301, HUMA 1302, LATI 2311, LATI 2312, PHIL 1301, PHIL 2303, PHIL 2306, SPAN 2311, SPAN 2312

050 - Visual and Performing Arts (3)
ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, DRAM 2361, DRAM 2362, DRAM 2366, MUSI 1306, MUSI 1308, MUSI 1309, MUSI 1310

060 - 070 - 080 - Social and Behavioral Sciences (15)
U.S. History (6): HIST 1301, HIST 1302, HIST 2301
Government/Political Science (6): GOVT 2301, GOVT 2302
Other Social/Behavioral Sciences (3): ANTH 2302, ANTH 2351, COMM 2300, ECON 2301, ECON 2302, GEOG 1303, HIST 2311, HIST 2312, PSYC 2301, SOCI 1301, SOCI 1306

090 - Fitness and Wellness (1)
KINE 1100, KINE 1101, KINE 1102, KINE 1103, KINE 1104, KINE 1105, KINE 1106, KINE 1107, KINE 1108, KINE 1109, KINE 1110, KINE 1113, KINE 1117, KINE 1118, KINE 1119, KINE 1120, KINE 1125, KINE 1126.

Total: 42 semester credit hours