PENNSYLVANIA COLLEGE of HEALTH SCIENCES

CATALOG 2022-23

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The courses and curricular plans presented here reflect the curriculum for the 2022-2023 academic year. Courses and curricular plans may differ for future academic years. Current students should direct any questions regarding future courses or curricular plans to their academic advisor. Potential or incoming students can direct any questions to the Office of Admissions.

Introduction

History of Pennsylvania College of Health Sciences

When the Lancaster General Hospital was founded, its original charter stated it was formed for the purpose of establishing and maintaining a hospital for the treatment and care of the sick and suffering, and the training of nurses to be employed in such care. More than 100 years later, Penn Medicine Lancaster General Health continues to fulfill this mission through Pennsylvania College of Health Sciences. Throughout its more than 100-year history, the College has grown from one nursing program to numerous health science and nursing programs; from a private home for 40 students, to a dormitory for 240 to an all-commuter campus; and from a handful of students to an enrollment of more than 2,000.

Though nursing trainees were on Lancaster General Hospital's staff when the Hospital opened in 1893, a formal nursing school was not established until 1903. Then called the Lancaster General Hospital School of Nursing, the School offered a three-year nursing diploma program for single women. The School graduated its first male nurse in 1974.

In 1952, Lancaster General Hospital developed a program in medical laboratory science, its first allied health program, and continued to add additional health sciences programs throughout the following decades. These programs were run independently of the School until 1995, when the nursing and health sciences programs merged to form the Lancaster Institute for Health Education. In 2001, the Pennsylvania Department of Education granted the Institute the ability to confer degrees, and the Institute became the Lancaster General College of Nursing & Health Sciences, offering associate degrees in the health sciences. The College was accredited by the Middle States Commission on Higher Education in 2006.

The College introduced baccalaureate-level education in 2009 with a Bachelor of Science in Nursing degree, including an RN-BSN option. This was soon followed by baccalaureate degree programs in health sciences and healthcare administration.

In 2013, following two years of branding research, the Lancaster General College of Nursing & Health Sciences announced a new name: Pennsylvania College of Health Sciences. PA College continues to maintain its relationship with Penn Medicine Lancaster General Health and still functions as a vital part of the organization. The name clarifies the College's purpose, while positioning it to allow for future growth and expand upon its mission of educating students for excellence in health care practice, leadership and the continuous acquisition of knowledge.

Since changing its name, the College has added a number of new offerings, including associate degrees as well as professional, academic and technical certificates. Additionally, the College began offering graduate-level courses in four new master's degree programs in Fall 2015. In August 2016, the College launched a Three-Year BSN Program – the first of its kind in Pennsylvania. The College added its first doctoral program, a Doctor of Nursing Practice, in 2017, and three nurse practitioner master's degrees and three post-master's certificates in 2019.

In 2016, PA College relocated its campus to Greenfield Road. The campus offers more than 300,000 square feet of state-of-the-art learning space, including 20,000 square feet devoted to cross-discipline simulation in the Center for Excellence in Practice.

Philosophy of the College

The administration and faculty of Pennsylvania College of Health Sciences believe the individual is unique, adaptable and possesses intrinsic worth. Integrity and self-motivation for intellectual growth and character development are valued. The individual evolves within society, shaping and being shaped by culture and heredity. Society is global and dynamic, consisting of individuals, families, groups and communities that coexist in an environment articulated by the symbols of language, thought and history.

Health is a dynamic and holistic process. Health promotion, maintenance and restoration activities influence the individual's present level of wellness. Optimal health reflects the peak functioning of physiological, mental, emotional, sociocultural and spiritual dimensions throughout the life span.

Health care requires collaboration and competency from all practitioners within a complex spectrum of primary, secondary and tertiary delivery systems. The individual has the right to seek and receive quality, affordable health care.

Learning occurs in an interactive atmosphere that encourages and provides opportunities for self-direction and critical thinking. The learning environment is nurturing and promotes the cultivation of global perspectives, self-awareness and intelligent citizenship. Education challenges individuals to adapt to new experiences and to clarify life values. The curricula are developed to promote the acquisition of knowledge, skills and attitudes that enable learners to become professionally competent and socially responsible.

Mission and Educational Outcomes

Mission

Educate for excellence in health care practice, leadership and the continuous acquisition of knowledge.

Vision

We are recognized and chosen for our unparalleled education of health care professionals.

Educational Outcomes

Upon completion of the curriculum at Pennsylvania College of Health Sciences, the graduate will:

- Integrate humanities, sciences and professional education to make positive contributions to the community.
- Conduct oneself in a manner that respects diversity, values, beliefs and practices of all.
- Utilize reasoning, information resources and technology to enhance outcomes.
- Demonstrate inter-professional collaboration and communication in the promotion, restoration and maintenance of health.
- Model productive citizenship and civic responsibility.
- Exhibit conduct reflective of professional values, ethics and leadership qualities.
- Pursue opportunities for lifelong personal and professional development.

Learning Outcomes

Sciences and Humanities Outcomes

Upon completion of the curriculum at Pennsylvania College of Health Sciences, the graduate will:

- Demonstrate critical analysis and reasoning through the application of humanities and sciences.
- Use knowledge in a way that reflects sensitivity to cultural and global diversity.
- Use quantitative and scientific reasoning to make informed decisions.
- Utilize effective communication in interpersonal and professional interactions.
- Participate in activities that enhance community well-being.
- Apply ethical principles in decision making.
- Apply technology and information literacy in the pursuit of continued learning.
- Exhibit intellectual curiosity.

Associate Degree Outcomes

At the completion of the program, the graduate will:

- Apply sciences and humanities and professional education theory to practice.
- Demonstrate knowledge of and respect for diversity in academic and professional settings.
- Utilize creative and critical thinking.
- Apply effective communication skills to promote collaboration in the Health Care setting.
- Acknowledge awareness of the civic responsibility of the health care professional.
- Demonstrate professional values and ethics in practice.
- Assume responsibility for lifelong learning.

Baccalaureate Degree Outcomes

At the completion of the program, the graduate will:

- Integrate humanities, sciences and professional education into health care practice.
- Practice in a culturally competent manner that upholds legal and ethical standards.
- Utilize evidence to inform decision making.
- Demonstrate intra- and interprofessional communication and collaboration to enhance the health of the population served.
- Model civic engagement and fiscal responsibility to promote healthy communities.
- Integrate professional values, ethics and leadership in health care practice.
- Demonstrate a commitment to lifelong learning for personal and professional development.

Graduate Education Outcomes

At the completion of the program, the graduate will:

- Contribute to the profession through the acquisition and application of specialized knowledge.
- Evaluate practice through the lens of diversity.
- Initiate change using evidence and research.
- Exemplify leadership characteristics to enhance interdisciplinary communication and collaboration for quality outcomes.
- Be a role model, professional and community leader, and mentor.
- Exhibit legal and ethical principles and professional standards as a health care leader.
- Promote the continuous acquisition of knowledge for self and others.

Accreditation

Regional Accreditation

Middle States Commission on Higher Education
Pennsylvania College of Health Sciences is accredited by the Middle States Commission on Higher Education. The Middle States Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.
1007 North Orange Street
4th Floor, MB #166
Wilmington, DE 19801
(267) 284-5011
www.msche.org

Programmatic Accreditation and Certification

Commission on Accreditation of Allied Health Education Professions
25400 U.S. Highway 19 N., Suite 158
Clearwater, FL 33756
(727) 210-2350
www.caahep.org

The following programs are accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the program-specific committee on accreditation. The following is a list of programs and their associated accreditation review committees:

Cardiovascular Technology
Joint Review Committee on Education in Cardiovascular Technology
1449 Hill Street
Whitinsville, MA 01588-1032
(978) 456-5594
www.jrccvt.org

Diagnostic Medical Sonography and Vascular Sonography
Joint Review Committee on Education in Diagnostic Medical Sonography
6021 University Blvd., Suite 500
Ellicott City, MD 21043
(443) 973-3251
www.jrcdms.org

Paramedic
Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX
(214) 703-8445
www.coaemsp.org

Surgical Technology
Accreditation Review Committee on Education in Surgical Technology and Surgical Assisting
19751 E. Main Street, Suite 339
Parker, CO 80138
(303) 694-9262
www.arcstsa.org

Other Independent Programmatic Accreditors

Medical Laboratory Science
National Accrediting Agency for Clinical Laboratory Sciences
5600 N. River Road, Suite 720
Rosemont, IL 60018-5119
(773) 714-8880
www.naacls.org

Nuclear Medicine Technology
Joint Review Committee on Education Technology in Nuclear Medicine
820 W. Danforth Road, #B1
Edmond, OK 73003
(405) 285-0546
www.jrcnmt.org

Associate in Science in Nursing
Accreditation Commission for Education in Nursing
3390 Peachtree Road NE, Suite 1400
Atlanta, GA 30326
(404) 975-5000
www.acenursing.org

The baccalaureate degree program in nursing at Pennsylvania College of Health Sciences is accredited by the Commission on Collegiate Nursing Education, 655 K Street NW, Suite 750, Washington, DC 20001, 202-887-6791.

The master's degree program in nursing and post-graduate APRN certificate program at Pennsylvania College of Health Sciences is accredited by the Commission on Collegiate Nursing Education, 655 K Street NW, Suite 750, Washington, DC 20001, 202-887-6791.

Radiography
Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
(312) 704-5300
www.jrcert.org

Respiratory Care
Commission on Accreditation for Respiratory Care
264 Precision Boulevard
Telford, TN 37690
(817) 283-2835
www.coarc.com

Program Certification

Baccalaureate Degree in Healthcare Administration
Association of University Programs in Healthcare Administration
1730 M Street NW, Suite 407
Washington, DC 20036
(202) 763-7283
www.aupha.org

Approvals

Pennsylvania Department of Education
333 Market St.
Harrisburg, PA 17126-0333
(717) 783-6788

Pennsylvania State Board of Nursing
P.O. Box 2649
Harrisburg, PA 17105-2649
(717) 783-7142

Pennsylvania Department of Health
925 Health and Welfare Building
Harrisburg, PA 17120
(717) 787-1870

Academic Definitions and Learning Outcomes

Credit Hours

The standard academic year for undergraduate programs consists of two, 16-week semesters. Some programs require summer sessions. The standard academic year for graduate programs consists of three, 12-week semesters.
Credit hours are calculated by the following formula:

- 15 instructional hours per semester = 1 credit hour
- 60 lab/clinical hours per semester = 1 credit hour

Certificates, Degrees, and Accreditation Definitions

PA College uses the following definitions to describe certificates and degrees.

Certificates

Certificate can be described as academic, professional, technical, or post-masters.

Academic Certificate
An academic certificate requires the completion of at least one year of full-time study that includes career-specific instruction and selected general education courses. Upon completion, students may be eligible to pursue a specialty credentialing examination in their field of study. Courses in the curriculum leading to an academic certificate provide college credit.

Technical Certificate
A technical certificate requires less than one year of study in an area of job-specific instruction. Upon completion, students may be eligible to pursue a specialty credentialing examination in their field of study. Courses in the curriculum leading to a technical certificate do not include general education courses or college credit.

Professional Certificate
A professional certificate requires the completion of approximately 16 credits of career-specific coursework. Courses in the curriculum leading to a professional certificate provide college credit.

Post-Master's Certificate
A post-master's certificate is awarded to professionals who hold a master's degree in a related field and choose to advance their knowledge, skills, and competencies within an additional area of specialty. Courses in the curriculum leading to a post-master's certificate provide college credit.

Degrees

Degrees are offered at the associate, baccalaureate, master, and doctoral levels.

Associate Degree
An associate degree requires a minimum of 60 college credits in academic and professional fields of study and is typically completed in two years of full-time study. Associate degree programs include course requirements in general education and in the major course of study.

Bachelor's Degree
A bachelor's degree requires a minimum of 120 college credits in academic and professional fields of study. It typically is completed in four years of full-time study but may be completed in as few as three years for highly motivated students. Bachelor's degree programs include requirements for breadth as well as depth of study, and students complete general education courses for introductory and advanced knowledge in several subjects, as well as concentration in a major course of study.

Graduate Degree
A graduate degree is a general term used to describe academic work beyond the bachelor's degree. Included are master's and doctorate degrees.

Master's Degree
A master's degree generally requires 30-60 credits in advanced coursework in a professional field of study. It is typically completed in one to three years of academic work beyond the bachelor's degree.

Doctorate of Nursing Practice Degree
A doctorate in nursing practice degree is designed for professionals who hold an MSN and wish to advance their nursing knowledge, skills, and competencies. A doctorate degree is conferred upon completion of the program of study which includes advanced coursework, a scholarly project, and completion of clinical hour requirements.

Accreditation

Accredited Institution
Accreditation of an institution indicates that the higher education institution has been awarded accreditation for substantial fulfillment of the standards established by an accrediting agency that is recognized by the U.S. Department of Education and/or the Council for Higher Education Accreditation.

Accredited Program
Accreditation of a program indicates that the program of study has been awarded accreditation for substantial fulfillment of the standards established by an accrediting agency that is recognized by the U.S. Department of Education and/or the Council for Higher Education Accreditation

Core Performance Standards

Core performance standards for relevant programs are included in the Appendix.

Degrees and Certificates Offered

Certificates

- **Academic Certificates**
  - Cardiac Sonography
  - Cardiovascular Technology
  - Diagnostic Medical Sonography
  - Medical Laboratory Science
  - Nuclear Medicine Technology
  - Surgical Technology
  - Vascular Sonography
- **Post-Master's Certificates**
  - Adult-Gerontology Acute Care Nurse Practitioner
  - Family Across the Lifespan Nurse Practitioner
  - Psychiatric Mental Health Nurse Practitioner
  - Nursing Education
- **Professional Certificates**
  - Foundation for Health Informatics
  - Healthcare Administration
- **Technical Certificates**
  - Medical Assistant
  - Paramedic

Associate Degrees

- **Associate in Applied Science**
  - Cardiac Sonography
  - Cardiovascular Technology
  - Diagnostic Medical Sonography
  - Nuclear Medicine Technology
  - Radiography
  - Respiratory Care
  - Surgical Technology
  - Vascular Sonography
- **Associate in Science in Nursing**

Baccalaureate Degrees

- **Bachelor of Science in Health Sciences**
- **Bachelor of Science in Healthcare Administration**
- **Bachelor of Science in Nursing**

Master's Degrees

- **Master of Healthcare Administration**
- **Master of Science in Nursing – Administration**
- **Master of Science in Nursing – Education**
- **Master of Science in Nursing – Nurse Practitioner**
    - Adult-Gerontology Acute Care Track
    - Family Across the Lifespan Track
    - Psychiatric/Mental Health Track

Doctoral Degree

- **Doctor of Nursing Practice**

Credentialing (License, Certification, Registry)

Upon successful completion of study, graduates of specific programs are eligible to file an application for licensure, certification or registry in their specialty area. Conviction of a felony or felonious act, an illegal act associated with alcohol, or an illegal act associated with substance abuse must be reported to the appropriate credentialing agency and may be cause for denial of permission to take a licensure, certification or registry examination.

Veterans Services

Veterans Services Pennsylvania College of Health Sciences is committed to helping military and veteran students achieve their educational goals. Veterans Services can assist with the Veterans Education Benefits application process and certification of enrollment.

As part of the Veterans Benefits and Transition Act of 2018, section 3679 of title 38, the following policy applies to any covered individual:

- PA College requires students to submit an electronic request for certification (VBR Form) of their enrollment each semester they plan to use Veterans Education Benefits.
- Any covered individual will be permitted to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under Chapter 31 or Chapter 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the VA's website e-Benefits, or a Tungsten Authorization for Chapter 31 purposes) and ending on the earlier of the following dates:
    1. The date on which payment from VA is made to the institution.
    2. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.
- Due to delayed disbursement of funding by the Veterans Benefit Administration, PA College will not impose any penalty, including the assessment of late fees; the denial of access to classes, libraries, or other institutional facilities; or the requirement that a covered individual borrow additional funds to cover financial obligations.
- PA College may require additional payment or impose a fee for the amount that is the difference between the amount of the student's financial obligation and the amount of the VA education benefit disbursement.

For any questions regarding military or Veterans Education Benefits, please contact veterans@PAcollege.edu.

Sciences and Humanities

PA College believes that a strong general education curriculum in sciences and humanities provides the foundation for any educational program. In addition, students use the foundational skills learned in sciences and humanities courses to further their intellectual, personal and professional growth.

Mission

Sciences and humanities education provides essential skills and knowledge that helps students succeed in their chosen field, advance successfully in a profession, adapt to the changing workplace, be good citizens in their future communities and become lifelong learners.

Department Description

Sciences and humanities education at PA College is offered through four distinct disciplines: Humanities, Mathematics, Science and Social Science. Each discipline has its own goals that contribute to the students' overall learning, supporting both the sciences and humanities as well as the College educational outcomes.

Humanities

The goals of Humanities are to foster opportunities that help students to:

- Stimulate intellectual and imaginative curiosity.
- Critically and creatively evaluate personal and professional experiences.
- Communicate thoughtfully and effectively.
- Reflect on ways to appropriately engage in global citizenship.

Humanities courses offered at PA College include the following:

- CSS 101 College Studies Seminar
- ENG 100 English Composition
- ENG 202 Advanced Communication
- ENG 300 Advanced Composition for Health Care
- ENG 310 Business Communication
- ENG 350 Health Care Stories
- HUM 210 World Religions
- HUM 310 Death, Dying & Bereavement
- PHI 210 Ethical and Legal Dimensions in the Health Sciences
- PHI 330 Ethical Issues in Health Care
- SPA 150 Introduction to Medical Spanish

Subjects that may transfer in as Humanities elective credits include art, literature, history, music, philosophy, communications, theatre, foreign languages and religion.

Mathematics

The goals of Mathematics are to:

- Mold students into confident users of mathematics.
- Develop students as critical mathematical decision makers.
- Enable students to become lifelong learners who continue to grow in their chosen professions and function as productive citizens.

Mathematics courses offered at PA College include the following:

- MAT 100 Quantitative Reasoning and Skills
- MAT 150 Clinical Mathematics for the Health Sciences
- MAT 160 College Algebra
- MAT 260 Statistics
- MAT 600 Statistics for Evidence-Based Practice

Subjects that may transfer as mathematics credits include mathematics, computer science (not computer applications) and statistics.

Science

The goal of Science is to provide a learner-centered foundation in the elements of scientific method, theory, applicability and laboratory practice that will encourage the student to:

- Acquire an in-depth appreciation of the scientific endeavor.
- Evaluate the quality of scientific information and its interpretation.
- Apply this knowledge in evidence-based practice decisions.

Science courses offered at PA College include the following:

- BIO 105 Human Biology/Laboratory
- BIO 175 Human Anatomy & Physiology I/Laboratory
- BIO 176 Human Anatomy & Physiology II/Laboratory
- BIO 185 Microbiology/Laboratory
- BIO 230 Immunology
- BIO 250 Nutrition for Life
- BIO 376 Pathophysiology
- BIO 380 Epidemiology
- CHE 100 General Chemistry I/Laboratory
- PHY 150 Physics/Laboratory

Subjects that may transfer in as science elective credits include biology, chemistry, physics, astronomy and geology.

Social Science

The goals of Social Science are to use the social sciences to:

- Promote intellectual and personal growth.
- Expand cultural and global awareness.
- Foster understanding and sensitivity to diversity.
- Encourage individuals to make enlightened judgments that are informed by theoretical, empirical and practical understandings of the social world.

Social Science courses offered at PA College include the following:

- ECO 150 Survey of Economics
- ECO 310 American Health Care System
- ECO 350 The Economics of Health Care
- HLT 150 Wellness for Life
- PSY 100 General Psychology
- SOC 100 Introduction to Sociology
- SOC 200 Cultural Diversity
- SOC 300 Social Problems

Subjects that may transfer in as social science elective credits include anthropology, criminology, cultural studies, economics, education, health, human geography, political science, psychology, sociology and social work.

Core Curricula

The current core curricula for the associate degrees and baccalaureate degrees are illustrated in the following tables. The College embraces this model as one that provides a common learning experience for all students but also flexibility within the requirements to meet the needs of different majors.

Associate Degrees: Sciences and Humanities Core Curriculum

Associate Degrees Required Courses	Credits
Science and Humanities Courses	
College Studies Seminar	3
Communication (includes English Composition)	3
Ethics	1
Math	3
Sciences (At least one course with a lab)	8
Social Sciences	3
Intensives	
Writing	3
Problem Solving	3
Diversity	3
Digital Literacy	3
Total	**33**

Baccalaureate Degrees: Sciences and Humanities Core Curriculum

Core Area	Baccalaureate Degree Required Courses	Credits
Science and Humanities 42-44 Credits	CSS 101 College Studies Seminar	3
	ENG 100 and Any other ENG course	6
	PHI 210 Ethical and Legal Dimensions in the Health Sciences or PHI 330 Ethical Issues in Health Care and Any ENG, HUM or SPA course	6
	MAT 260 Statistics and Any other MAT course	6
	BIO, CHE, PHY and SCI Courses (at least 1 with lab)	6-8
	ECO 310 American Health Care System and Any two ECO, HLT, PSY or SOC Courses from two different disciplines	9
	BIO, CHE, ECO, ENG, HLT, MAT, PHI, PHY, PSY, SCI, SOC or SPA electives	6
Interprofessional Collaboration 10 Credits	IPC Courses	10
Intensives 24 Credits	Writing	6
	Critical Thinking & Analysis	6
	Community Engagement	3
	Diversity	6
	Digital Literacy	3
Total		**76-78**

Intensives

To advance the students' knowledge in key competencies required of health care professionals, students are expected to fulfill the requirements in the following areas. These are not additional required courses, but rather courses from the health care professional core or program-specific coursework that meet identified criteria for the intensive. Courses meeting an intensive requirement are identified as WI (writing intensive), CT (critical thinking & analysis), PS (problem solving), DV (diversity), or DL (digital literacy). The associate-level intensives are designed to scaffold skills necessary for further development at the baccalaureate level.

Writing Intensive Courses

- ENG 100 English Composition
- ENG 202 Advanced Communication
- ENG 300 Advanced Composition for Health Care
- ENG 310 Business Communication
- ENG 350 Health Care Stories

Critical Thinking & Analysis Intensive Courses

- IPC 401 Research in Health Care
- MAT 260 Statistics

Digital Literacy Intensive Courses

- CSS 101 College Studies Seminar

Community Engagement Intensive Courses

- IPC 450 Capstone
- NUR 410 Issues and Trends in Nursing

Diversity Intensive Courses

- HUM 210 World Religions
- NUR 310 Human Diversity and Health Care
- NUR 311 Cultural Care in Nursing
- SOC 100 Introduction to Sociology
- SOC 200 Cultural Diversity
- SOC 300 Social Problems

Problem Solving Intensive Courses

- MAT 100 Quantitative Reasoning and Skills
- MAT 150 Clinical Mathematics for the Health Sciences
- MAT 160 College Algebra

Associate Degree and Academic Certificate Programs

Cardiac Sonography

Cardiac Sonography, commonly referred to as ECHO Sonography, is recognized as an integral part of the cardiovascular medical team. Using ultrasound imaging, the cardiac sonographer takes images of the heart and cardiovascular system to assist in the accurate detection of disease or injury. Through hands on and classroom learning, the student is prepared to step into the role of a cardiac sonographer.

Program Description

Pennsylvania College of Health Sciences offers a two-year curriculum of full-time study in cardiac sonography leading to an Associate in Applied Science degree. The College also offers an academic certificate program in cardiac sonography. Students receive theoretical and clinical instructions in all aspects of cardiac ultrasound in preparation for entry-level positions as cardiac sonographers. Upon satisfactory completion of program requirements and one year of cardiac sonography experience, graduates are eligible to take the American Registry for Diagnostic Medical Sonography examinations in physics and adult echocardiography or the Cardiovascular Credentialing International examination in adult echocardiography.

The faculty of the Cardiac Sonography program believe in the potential for the individual to grow in knowledge as well as in professional importance. It is the College's objective, through this program, to provide the opportunity, instruction, and education to assist in this personal endeavor. The profession of cardiac sonography is recognized as an integral part of the diagnostic medical team. Through the practiced skill of the sonographers, both the patient and the physician are assisted by the accurate detection of disease.

Education is a process of learning through a balance of didactic and clinical instruction which adequately prepares the individual equally for the registry examinations and for employment. Through the flexible design of our program, we strive to achieve this goal and take advantage of the full learning potential of each individual.

Mission

The mission of the Cardiac Sonography program is to meet the needs of the health care community by providing qualified individuals to become competent cardiac sonographers.

Educational Outcomes

It is the goal of the Cardiac Sonography program, and each of its clinical affiliates, to provide all students with didactic and clinical education, including hands-on, practical scanning experience. At the completion of the program, the graduate will:

- Be prepared as a competent entry-level general sonographer in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
- Obtain, review, and integrate pertinent patient history and supporting clinical information to facilitate optimum diagnostic results.

- Function as an integral part of the diagnostic medical imaging team, providing patient services efficiently and in a professional, sensitive manner.
- Incorporate concepts learned through classroom instruction and clinical practice, ensuring accurate, meaningful sonographic evaluations.
- Demonstrate appropriate communication skills with patients and colleagues.
- Provide patient education related to cardiac ultrasound and/or other diagnostic techniques.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities. At each of these clinical facilities, the students are exposed to a wide range of diagnostic examinations including adult and pediatric echocardiograms, Transthoracic echocardiograms, stress echocardiograms, trauma, intraoperative and invasive sonographic procedures.

The program also has a dedicated scanning lab at the College. In addition to learning basic patient care skills, students also learn to operate ultrasound equipment and perform imaging protocols in the supervised lab setting, in preparation for performing sonograms on clinical patients. Lab activities are closely integrated with classroom instruction and clinical experience.

First Year: Associate in Applied Science Degree

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 160	College Algebra	3
PSY 100	General Psychology	3
Total		**16**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
PHY 150	Physics	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient Care	1
Total		**12**

Summer Session I		Credits
DMS 111	Intro to Sonography	1
HSC 160	Rhythm and 12 Lead ECG Analysis	3
CAS 113	Echo Lab 1	1
Total		**5**
Total Combined Credits		**33**

Second Year: Associate in Applied Science Degree

Fall Semester		Credits
DMS 221	Ultrasound Physics	3
CVT206	Cardiac Anatomy & Physiology	3
CAS TBD	Echo Hemodynamics	1
CAS TBD	Cardiac Pathophysiology I	3
CAS TBD	Echo Lab II	1
CAS TBD	Echo Lab I	4
Total		**15**

Spring Semester		Credits
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
CAS TBD	Cardiac Pathophysiology II	3
CAS TBD	Echo Lab III	1
CAS TBD	Echo Clinical II	4
CAS TBD	Intro to Pediatric Echo	2
CAS TBD	Echo Pharmacology and Therapeutic Techniques	3
Total		**14**

Summer Session I		Credits
CAS TBD	Echo Clinical III	4
Total		**4**
Total Combined Credits		**66**

Cardiovascular Technology

The cardiovascular technologist assists physicians in the invasive cardiovascular laboratory. Procedures in the cardiovascular lab include coronary angiography and intervention, ventriculography, atherectomy, peripheral vascular angiography and intervention, structural heart, and electrophysiology, as well as other heart and vascular diagnostic and therapeutic studies.

The cardiovascular technologist also provides extensive personal care to the patient before, during and after a cardiovascular procedure. Cardiovascular technology is a rapidly expanding field and has become an essential and integral component of the health care continuum.

Program Description

The Cardiovascular Technology program offers a two-year Associate in Applied Science degree or a 14-month academic certificate program for qualified students. The program provides the student with classroom and online theory courses and supervised clinical experiences. Clinical instruction offers a variety of experiences whereby students apply theoretical knowledge to develop clinical skills in the treatment of cardiovascular disease, peripheral disease and cardiac electrophysiology.

Prospective students who have completed a two-year, post-secondary allied health program; have earned an associate or baccalaureate degree; or will have met the degree requirements from their primary educational institution upon completion of this program are eligible to enter the 14-month Academic Certificate program. Prerequisite coursework includes Human Anatomy & Physiology I and II.

Students are required to take the Registered Cardiovascular Invasive Specialist credentialing examination offered by Cardiovascular Credentialing International prior to graduation.

Program Mission

The mission of the Cardiovascular Technology program is to create a compassionate, competent and professional cardiovascular technologist. The program will provide an education that encompasses theory, professionalism and ethical concepts relating to clinical practice. The program facilitates independent learning and critical thinking and promotes technical skill development, enabling graduates to function effectively as team members who provide quality client care in the cardiovascular environment.

Educational Outcomes

At the completion of the program, the graduate will:

- Be prepared as a competent entry-level cardiovascular technologist in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains for cardiovascular technology.
- Utilize theoretical knowledge and critical thinking as the basis for professional practice.
- Practice responsibly within the ethical and legal realm of cardiovascular technology.
- Assume responsibility for lifelong personal learning and professional growth.
- Provide quality care as a competent and compassionate professional in the dynamic cardiovascular environment.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities.

First Year: Associate in Applied Science Degree*

Fall Semester		Credits
BIO 175	Human A & P I	4
ENG 100	English Composition	3
MAT 160	College Algebra	3
CSS 101	College Seminar	3
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**14**

Spring Semester		Credits
BIO 176	Human A & P II	4
PHY 150/L	Physics with Lab	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient care	1
Total		**12**

Summer Session I		Credits
HSC 160	Rhythm and 12 lead ECG analysis	3
CVT 204	Cardiovascular Simulation Lab	1
CVT 205	Cardiac Invasive Procedures	3
CVT 202	Introduction to Radiation Physics and Safety	1
Total		**8**
Total Combined Credits		**34**

Second Year: Associate in Applied Science Degree*

Fall Semester		Credits
CVT 206	Cardiac A & P	3
CVT 207	Advanced Procedures	3
CVT 217	Cardiovascular Hemodynamics	3
CVT 212	Cardiovascular Clinical I	6
Total		**15**

Spring Semester		Credits
CVT 222	Cardiovascular Clinical II	6
CVT 219	Cardiac Arrhythmia Therapies	3
CVT 225	Cardiac Pharmacology	3
CVT 216	Cardiac Device Theory	3
Total		**15**

Summer Session I		Credits
CVT 232	Cardiovascular Clinical III	3
HSC 200	Advanced Cardiac Life Support (ACLS)	1
CVT 228	Radiation Biology	1
Total		**5**
Total Combined Credits		**69**

* Students starting the CVT program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Academic Certificate*

Prospective students already holding an associate or baccalaureate degree, or who will have met the baccalaureate degree requirements from their primary educational program upon completion of the certificate program, may apply for the 14-month academic certificate program on a space available basis.

These classes must be completed prior to the Summer Semester I		Credits
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient care	1
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**3**

Summer Semester I		Credits
HSC 160	Rhythm and 12 lead ECG analysis	3
CVT 204	Cardiovascular Simulation Lab	1
CVT 205	Cardiac Invasive Procedures	3
CVT 202	Introduction to Radiation Physics and Safety	1
Total		**8**

Fall Semester		Credits
CVT 206	Cardiac A & P	3
CVT 207	Advanced Procedures	3
CVT 217	Cardiovascular Hemodynamics	3
CVT 212	Cardiovascular Clinical I	6
Total		**15**

Spring Semester		Credits
CVT 222	Cardiovascular Clinical II	6
CVT 219	Cardiac Arrhythmia Therapies	3
CVT 225	Cardiac Pharmacology	3
CVT 216	Cardiac Device Theory	3
Total		**15**

Summer Semester I		Credits
CVT 232	Cardiovascular Clinical III	3
HSC 200	Advanced Cardiac Life Support (ACLS)	1
CVT 228	Radiation Biology	1
Total		**5**
Total Combined Credits		**46**

* Students starting the CVT program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Diagnostic Medical Sonography

The field of diagnostic ultrasound or medical sonography utilizes high frequency sound waves to image and evaluate organs and soft tissue structures of the body. The diagnostic medical sonographer is a skilled person qualified by academic and clinical education to perform sonographic examinations under the supervision of a qualified physician. The sonographer performs a variety of diagnostic examinations, including evaluations of the brain, abdomen and peripheral blood vessels, as well as studies of the pregnant and non-pregnant female patient. The skilled sonographer has a unique and vital role in the diagnostic process, and the profession continues to offer many excellent opportunities for employment.

Program Description

Pennsylvania College of Health Sciences offers a two-year curriculum of full-time study in diagnostic medical sonography leading to an Associate in Applied Science degree. The College also offers an academic certificate program in diagnostic medical sonography. Students receive theoretical and clinical instruction in all aspects of diagnostic ultrasound in preparation for entry-level positions as diagnostic medical sonographers. Upon satisfactory completion of program requirements, graduates are eligible to take the American Registry for Diagnostic Medical Sonography examinations in physics, abdomen and obstetrics/gynecology.

The faculty of the Diagnostic Medical Sonography program believe in the potential for the individual to grow in knowledge as well as in professional importance. It is the College's objective, through this program, to provide the opportunity, instruction and education to assist in this personal endeavor.

The profession of diagnostic medical sonography is recognized as an integral part of the diagnostic medical team. Through the practiced skills of the sonographer, both the patient and the physician are assisted by the accurate detection of disease.

Education is a process of learning through a balance of didactic and clinical instruction that adequately prepares the individual equally for the registry examinations and for employment. Through the flexible design of our program, we strive to achieve this goal and take advantage of the full learning potential of each individual.

Program Mission

The mission of the Diagnostic Medical Sonography program is to meet the needs of the health care community by providing qualified individuals to become competent diagnostic medical sonographers.

Educational Outcomes

It is the goal of the Diagnostic Medical Sonography program, and each of its clinical affiliates, to provide all students with didactic and clinical education, including hands-on, practical scanning experience. At the completion of the program, the graduate will:

- Be prepared as a competent entry-level general sonographer in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains.
- Function as an integral part of the diagnostic medical imaging team, providing patient services efficiently and in a professional, sensitive manner.
- Incorporate concepts learned through classroom instruction and clinical practice, ensuring accurate, meaningful sonographic evaluations.
- Serve as a resource and an advocate for the use of ultrasound in medicine.
- Demonstrate a commitment to the professional role through lifelong learning.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities. At each of these

clinical facilities, the students are exposed to a wide range of diagnostic examinations including abdomen, obstetrics, gynecology, superficial structures, neonatal, vascular, trauma, intraoperative and invasive sonographic procedures.

The program also has a dedicated scanning lab at the College. In addition to learning basic patient care skills, students also learn to operate ultrasound equipment and perform imaging protocols in the supervised lab setting, in preparation for performing sonograms on clinical patients. Lab activities are closely integrated with classroom instruction and clinical experience.

First Year: Associate in Applied Science Degree*

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 160	College Algebra	3
PSY 100	General Psychology	3
Total		**16**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient Care	1
PHY 150	Physics	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
Total		**12**

Summer Session I		Credits
DMS 111	Introduction to Sonography	1
DMS 112	Abdominal Sonography I	3
DMS 113	Ultrasound Lab I	1
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**6**
Total Combined Credits		**34**

Second Year: Associate in Applied Science Degree*

Fall Semester		Credits
DMS 221	Ultrasound Physics	3
DMS 222	Abdominal Sonography II	2
DMS 223	Obstetrical & Gynecological Sonography I	3
DMS 224	Ultrasound Clinical I	4
DMS 225	Ultrasound Lab II	1
DMS 227	Common Vascular Procedures	1
Total		**14**

Spring Semester		Credits
DMS 226	Obstetrical & Gynecological Sonography II	3
DMS 228	Ultrasound Clinical II	6
DMS 229	Ultrasound Lab III	1
DMS 230	Superficial Structures	2
DMS 231	Ultrasound Seminar	2
Total		**14**

Summer Session I		Credits
DMS 232	Ultrasound Clinical III	4
Total		**4**
Total Combined Credits		**66**

* Students starting the DMS program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Academic Certificate*

Students already holding an associate or baccalaureate degree, or who will have met the baccalaureate requirements from their primary educational program upon completion of the certificate program, may apply for the 13-month academic certificate program on a space available basis.

Summer Session I		Credits
DMS 111	Intro to Sonography	1
DMS 112	Abdominal Sonography I	3
DMS 113	Ultrasound Lab I	1
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**6**

Fall Semester		Credits
DMS 221	Ultrasound Physics	3
DMS 227	Common Vascular Procedures	1
DMS 222	Abdominal Sonography II	2
DMS 223	OBGYN I	3
DMS 224	US Clinical I	4
DMS 225	US Lab II	1
HSC 100	Med Term	1
HSC 101	Patient Care	1
Total		**16**

Spring Semester		
DMS 226	OBGYN II	3
DMS 233	US Clinical II	6
DMS 229	US Lab III	1
DMS 230	Superficial Structures	2
DMS 231	US Seminar	2
Total		**14**

Summer Session I & II Combined		Credits
DMS 234	Clinical III	4
Total		**4**
Total Combined Credits		**40**

* Students starting the DMS program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Medical Laboratory Science

Medical laboratory scientists perform laboratory tests on blood, body fluids and tissues. The results of these tests are used in diagnosis and treatment of disease, health maintenance, drug monitoring, organ transplants and forensic medicine. Medical laboratory procedures require the skilled use of an array of complex, precise instruments and a variety of automated and manual equipment. Medical laboratory scientists who use these tools must be accurate and reliable. They must also recognize and respond to clinically significant results. An interest in helping others and an awareness of responsibility for the lives of others establish the medical laboratory scientist as a vital member of the health care team.

Program Description

Pennsylvania College of Health Sciences' Medical Laboratory Science program, which has been in existence since 1952, prepares graduates to function in responsible positions in a laboratory environment. Students learn in a dynamic environment where they can put their studies into practice through a comprehensive clinical experience that coordinates with classroom lectures and activities. The real-world expertise of faculty and clinical staff shapes students into professionals with the right knowledge, skills and attitudes for a successful career. Students entering the 12-month program must have completed three years of college, including specific prerequisite courses, at an affiliate institution and be eligible for a baccalaureate degree following completion of the program's coursework. Candidates who have already received a baccalaureate degree may also be eligible for entry into the program, provided they have fulfilled necessary prerequisite science coursework. Classes take place at the College, with clinical experience provided in a variety of clinical laboratories.

Upon successful completion of the program, graduates are prepared to enter the health care field as entry-level medical laboratory scientists and are eligible to sit for a national certifying exam. Successful completion of the program is not dependent on passing a certification exam.

Mission

The mission of the Medical Laboratory Science program is to prepare students to enter the profession with the knowledge, skills and attitudes needed for clinical competence and with the independent learning skills needed to grow in and contribute to the profession throughout their careers.

Educational Outcomes

At the completion of the program, the graduate will:

- Collaborate with diverse health care team members to provide patient care and perform quality, cost-effective laboratory procedures.
- Incorporate concepts learned through classroom instruction and clinical practice to ensure accurate, meaningful laboratory results that reflect current standards of care.
- Practice responsibly in compliance with ethical, social, legal and regulatory requirements of medical laboratory science professionals.
- Utilize appropriate methods for the basic operation and troubleshooting of laboratory instrumentation and information systems.
- Recognize the importance of continuously integrating new technologies and procedures into clinical practice.
- Demonstrate a commitment to maintain competency and promote development through participation in professional activities.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities. Students are provided with a comprehensive clinical experience relevant to the content of classroom lectures and activities. The following list of clinical sites is subject to change at any time.

Clinical Site	City	State	Zip	Approx. Mileage	Est. Travel Time from College
Health Network Laboratories	Allentown	PA	18109	71	90 minutes
Lancaster General Hospital	Lancaster	PA	17602	5	10 minutes
St. Luke's University Health Network	Bethlehem	PA	18015	75	90 minutes
UMPC Harrisburg	Harrisburg	PA	17101	40	45 minutes
UPMC Memorial	York	PA	17403	28	35 minutes

Academic Certificate

Fall Semester		Credits
MLS 401	Fundamental Operations of the Clinical Laboratory	2
MLS 411	Clinical Microbiology I	4
MLS 421	Clinical Laboratory Hematology I	4
MLS 431	Medical Laboratory Chemistry I	4
MLS 441	Medical Laboratory Immunology/Serology	2
MLS 451	Clinical Laboratory Practicum I	3
MLS 471	Medical Laboratory Leadership Skills*	*
Total		**19**

Spring Semester		Credits
MLS 402	Clinical Parasitology and Mycology	2
MLS 412	Clinical Microbiology II	4
MLS 422	Clinical Laboratory Hematology II	4
MLS 432	Medical Laboratory Chemistry II	3
MLS 442	Medical Laboratory Immunohematology	3
MLS 452	Clinical Laboratory Practicum II	3
MLS 471	Medical Laboratory Leadership Skills*	*
Total		**19**

Summer Session I & II Combined		Credits
MLS 453	Clinical Laboratory Practicum III	3
MLS 454	Clinical Laboratory Practicum IV	3
MLS 471	Medical Laboratory Leadership Skills*	2
Total		**8**
Total Combined Credits		**46**

*Students participate in required seminar courses during the fall and spring semesters. Credit is applied upon completion of assignments in the summer semester.

Nuclear Medicine Technology

Nuclear medicine is the medical specialty that utilizes the nuclear properties of radioactive substances and stable nuclides to make diagnostic evaluations of the physiologic and/or anatomic conditions of the body and to provide therapy with unsealed radioactive sources. The nuclear medicine technologist is an allied health professional who, under the direction of an authorized user, is committed to applying the art and skill of diagnostic evaluation and therapeutics through the safe and effective use of radiopharmaceuticals and pharmaceuticals.

The nuclear medicine technologist exhibits professionalism in the performance of duties, demonstrates an empathetic and instructional approach to patient care, and maintains confidentiality of information as required. Responsibilities include but are not limited to preparation, quality control testing and administration of radioactive and non-radioactive compounds; execution of patient imaging procedures including computer processing and image enhancement; laboratory testing; patient interviews; instruction and preparation for administration of prescribed radioactive compounds for therapy; quality control; and radiation safety. The nuclear medicine technologist applies knowledge of radiation physics and safety regulations to limit the radiation exposure to the general public, patients, fellow workers and self to as low as reasonably achievable. Professional growth and development are achieved through appropriate utilization of new technologies, participation in continuing education and involvement in research to enhance the quality of patient care.

Program Description

Pennsylvania College of Health Sciences offers a two-year curriculum of full-time study in nuclear medicine leading to an Associate in Applied Science degree. The College also offers a 12-month academic certificate program in nuclear medicine technology to students who have completed college-level courses in Human Anatomy & Physiology I and II, physics, mathematics (a minimum of college algebra), chemistry, English composition. Clinical education offers a variety of supervised experiences through which students gain competency-based, entry-level nuclear medicine technology skills. Class size is limited in order to provide the learner with individual attention in a wide variety of clinical areas. Upon completion of the program, the graduate is eligible for a national certification exam in nuclear medicine technology.

Mission

The mission of the Nuclear Medicine Technology program is to provide didactic and clinical education to persons who wish to serve the community as competent, entry-level nuclear medicine technologists.

Educational Outcomes

At the completion of the program, the graduate will:

- Work effectively with members of the health care team.
- Demonstrate competency in the performance of nuclear medicine procedures.
- Show ability to think critically by applying didactic knowledge to clinical situations.
- Assume responsibility for continuous learning, professional growth and service to the community.
- Respect the ethical, legal, moral and cultural issues that impact the care of patients.

Clinical Facilities

The program has multiple clinical affiliates including Penn Medicine Lancaster General Health and surrounding area hospitals and health care facilities. Clinical assignments will be made upon acceptance into the program.

First Year: Associate in Applied Science Degree

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 160	College Algebra	3
	Elective	3
Total		**16**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
CHE 100	General Chemistry I	3
PHY 150	Physics	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
	Elective	3
Total		**16**
Total Combined Credits		**32**

Second Year: Associate in Applied Science Degree

Fall Semester		Credits
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient Care	1
NMT 201	Nuclear Medicine Theory I	4
NMT 211	Nuclear Medicine Clinical I	5
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**12**

Spring Semester		Credits
HSC 195	Cross-Sectional Anatomy	1
NMT 202	Nuclear Medicine Theory II	6
NMT 212	Nuclear Medicine Clinical II	5
Total		**12**

Summer Session I & II Combined		Credits
NMT 203	Nuclear Medicine Theory III	2
NMT 213	Nuclear Medicine Internship	6
Total		**8**
Total Combined Credits		**64**

Academic Certificate

Students already holding an associate or baccalaureate degree, or who will have met the degree requirements from their primary educational program upon completion of the certificate program, may apply for the 12- month academic certificate program on a space available basis.

Fall Semester		Credits
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient Care	1
NMT 201	Nuclear Medicine Theory I	4
NMT 211	Nuclear Medicine Clinical I	5
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**12**

Spring Semester		Credits
HSC 195	Cross-Sectional Anatomy	1
NMT 202	Nuclear Medicine Theory II	6
NMT 212	Nuclear Medicine Clinical II	5
Total		**12**

Summer Session I & II Combined		Credits
NMT 203	Nuclear Medicine Theory III	2
NMT 213	Nuclear Medicine Internship	6
Total		**8**
Total Combined Credits		**32**

Nursing

ASN Program Description (for Students Enrolled Prior to Fall 2022)

Pennsylvania College of Health Sciences' Associate in Science in Nursing program is designed to prepare professional nurses to integrate knowledge from the sciences and humanities and utilize the nursing process, ethical principles and legal standards to promote, maintain and restore a maximal level of wellness. A two-year full-time curriculum is planned to provide the student with the principles and skills necessary to assume a beginning professional nurse position in hospitals and related institutions. A three-year schedule is also available, with a full-time schedule in the first year mirroring the two-year program, followed by a reduced course load in the second and third years.

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care needs of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes (also referred to as End-of-Program Student Learning Outcomes)

At the completion of the program, the graduate will:

- Practice as a provider and coordinator of care, utilizing knowledge from the nursing arts, humanities, social sciences, sciences and mathematics/computer sciences.
- Utilize creative and critical thinking as a basis for professional practice.
- Demonstrate knowledge and respect for diversity and the inherent rights and dignity of all clients.
- Practice independently within the legal and ethical framework of nursing.
- Assume accountability for intellectual growth, professional development and competent practice.

Graduates of the program receive an Associate in Science in Nursing degree and are eligible to take the National Council Licensure Examination (NCLEX – RN).

Associate in Science in Nursing Program: Two-Year Track

First Year: Associate in Science in Nursing Degree

Semester 1		Credits
BIO 175	Human Anatomy & Physiology I	4
ENG 100	English Composition	3
MAT 150	Clinical Mathematics for the Health Sciences	3
NUR 101	Foundations of Nursing Practice	5
NUR 111	Foundations of Nursing Practice: Clinical Laboratory	2
Total		**17**

Semester 2		Credits
BIO 176	Human Anatomy & Physiology II	4
NUR 102	Families Within the Community	7
NUR 112	Families Within the Community: Clinical Laboratory	3
PSY 100	General Psychology	3
Total		**17**
Total Combined Credits		**34**

Second Year: Associate in Science in Nursing Degree

Semester I		Credits
BIO 185	Microbiology	3
BIO 250	Nutrition for Life	3
NUR 201	Acute and Chronic Health Problems	7
NUR 211	Acute and Chronic Health Problems: Clinical Laboratory	4
Total		**17**

Semester 2		Credits
NUR 202	Crisis and Complex Health Problems	7
NUR 212	Crisis and Complex Health Problems: Clinical Laboratory	5
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
SOC 100	Introduction to Sociology	3
Total		**16**
Total Combined Credits		**67**

Associate in Science in Nursing Program: Three-Year Track

Prerequisites		Credits
BIO 175	Human Anatomy & Physiology I	4
BIO 176	Human Anatomy & Physiology II	4
Total		**8**

First Year: Associate in Science in Nursing Degree

Fall Semester		Credits
ENG 100	English Composition	3
MAT 150	Clinical Mathematics for the Health Sciences	3
NUR 101	Foundations of Nursing Practice	5
NUR 111	Foundations of Nursing Practice: Clinical Laboratory	2
Total		**13**

Spring Semester		Credits
NUR 102	Families Within the Community	7
NUR 112	Families Within the Community: Clinical Laboratory	3
PSY 100	General Psychology	3
Total		**13**
Total Combined Credits		**34**

Second Year: Associate in Science in Nursing Degree

Fall Semester		Credits
BIO 185	Microbiology	3
NUR 203	Acute and Chronic Health Problems Part 1	4
NUR 213	Acute and Chronic Health Problems Part 1: Clinical Laboratory	2
Total		**9**

Spring Semester		Credits
NUR 204	Acute and Chronic Health Problems Part 2	3
NUR 214	Acute and Chronic Health Problems Part 2: Clinical Laboratory	2
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**6**
Total Combined Credits		**49**

Third Year: Associate in Science in Nursing Degree

Fall Semester		Credits
BIO 250	Nutrition for Life	3
NUR 205	Crisis and Complex Health Problems Part 1	4
NUR 215	Crisis and Complex Health Problems Part 1: Clinical Laboratory	2
Total		**9**

Spring Semester		Credits
NUR 206	Crisis and Complex Health Problems Part 2	3
NUR 216	Crisis and Complex Health Problems Part 2: Clinical Laboratory	3
SOC 100	Introduction to Sociology	3
Total		**9**
Total Combined Credits		**67**

ASN Concept-Based (ASN-CB) Program Description (Starting Fall 2022)

Pennsylvania College of Health Sciences' Associate in Science in Nursing program is designed to prepare professional nurses to integrate knowledge from the sciences and humanities and utilize the nursing process, ethical principles and legal standards to promote, maintain and restore a maximal level of wellness. This concept-based associate degree gives you flexible options for class and clinical scheduling over 5 semesters and sets you on a course for a rewarding career as a competent and compassionate professional nurse. The newly revised curriculum is presented conceptually and allows students to develop their nursing knowledge, critical thinking skills, and clinical judgment through a combination of classroom and clinical experiences.

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care needs of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes (also referred to as End-of-Program Student Learning Outcomes)

At the completion of the program, the graduate will:

- Integrate theoretical and experiential knowledge from the general education curriculum into nursing practice.
- Utilize clinical judgment and clinical reasoning as a basis for safe and competent nursing practice.
- Provide holistic care which promotes health with respect for dignity, diversity, and the inherent rights of clients.
- Practice within the legal and ethical framework of nursing.
- Demonstrate inter and intra professional communication and collaboration to improve client outcomes.
- Integrate principles of quality and safety in nursing practice.
- Assume accountability for intellectual growth, professional development, and competent practice.

Graduates of the program receive an Associate in Science in Nursing degree and are eligible to take the National Council Licensure Examination (NCLEX – RN).

LPN Advanced Placement

Licensed practical nurses who successfully complete the LPN Assessment Module (NUR 010) have the opportunity for advanced placement into the two- or three-year option. The following courses must be completed with a minimum grade of "C" prior to entering the LPN Assessment Module:

- BIO 175 Human Anatomy & Physiology I
- BIO 176 Human Anatomy & Physiology II
- MAT 150 Clinical Math
- ENG 100 English Composition
- PSY 100 General Psychology

Successful completion of the assessment module exempts students from NUR 265, NUR 110, and NUR 120. Students who successfully complete the module are automatically accepted in the ASN program and may enroll in NUR 130 or NUR140. Students who do not pass the assessment at the end of the module have the option of enrolling into the second semester of the Associate in Science in Nursing Degree program.

Associate in Science in Nursing Program (ASN-CB):*

Semester 1		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS101	College Studies Seminar	3
ENG100	English Composition	3
Total		**10**

Semester 2		Credits
BIO 176	Human Anatomy & Physiology II	4
PSY100	Intro to Psychology	3
NUR 110	Concepts of Health and Illness I	2
NUR 120	Concepts of Health and Illness II	2
NUR 265	Health Assessment	3
Total		**14**

Semester 3		Credits
NUR280	Concepts of Pathophysiology	3
BIO 185	Microbiology	3
MAT 150	Clinical Mathematics for the Health Sciences	3
NUR 130	Concepts of Health and Illness III	3
NUR 140	Concepts of Health and Illness IV	3
Total		**15**

Semester 4		Credits
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
NUR 210	Concepts of Health and Illness V	4
NUR 220	Concepts of Health and Illness VI	4
NUR 230	Concepts of Health and Illness VII	5
Total		**14**

Semester 5		Credits
NUR 240	Concepts of Health and Illness VIII	5
NUR 250	Concepts of Health and Illness IX	3
NUR 290	Transition to Practice	3
SOC 100	Introduction to Sociology	3
Total		**14**
Total Combined Credits		**67**

*Starting Fall 2022

Radiography

Radiographers perform a variety of radiographic (X-ray) examinations on nearly every organ or body region utilizing radiographic and digital imaging equipment and computers. The radiographer comes in contact with patients of all ages and various levels of health, ranging from the patient requiring a routine check-up to the severely injured trauma patient. The radiographer must meet the health care needs of the patient while providing them with excellent service to meet the physician's diagnostic needs. Radiographers also have the opportunity to expand their careers through additional education and clinical experience in subspecialty areas such as vascular imaging, mammography, radiation therapy, computed tomography and magnetic resonance imaging. The radiographer is an integral part of the health care team, utilizing skills, talents and education to meet the patient's needs in an efficient and professional manner.

Program Description

The Radiography program is designed to educate students in the science of radiography. Students are instructed in the classroom and at multiple clinical facilities. Upon completion of the program, graduates are awarded an Associate in Applied Science degree and are eligible to take the American Registry of Radiologic Technologists registry examination.

Mission

The Radiography program provides the health care community with educated, professionally competent, entry-level radiographers.

Educational Outcomes

At the completion of the program, the graduate will:

- Function as a competent, entry level radiographer in the cognitive (knowledge) and psychomotor (skills) learning domains.
- Demonstrate a commitment to professional ethics, attitudes and behaviors.
- Apply theoretical knowledge and critical thinking to clinical practice.
- Communicate effectively and respectfully with the patient and members of the health care team.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities. These locations offer clinical experiences in fluoroscopy and general, trauma, mobile and operating room radiography. In addition to these diagnostic areas, students may participate in observational experiences at specialized imaging or therapeutic facilities.

Clinical assignments may fall on a weekday or weeknight. Students are responsible for travel and/or transportation to the College and to their clinical site(s).

Clinical Site	City	State	Zip	Mileage	Est. Travel Time from College
Lancaster General Hospital and Downtown Pavilion	Lancaster	PA	17602	5.5	13 minutes
Penn Medicine Lancaster General Health Crooked Oak	Lancaster	PA	17601	3.8	10 minutes
Penn Medicine Lancaster General Health Kissel Hill	Lititz	PA	17543	7.2	19 minutes
Penn Medicine Lancaster General Health Parkesburg	Parkesburg	PA	19365	20.4	34 minutes
Penn Medicine Lancaster General Health Suburban Pavilion	Lancaster	PA	17604	7.7	13 minutes
Penn Medicine Lancaster General Health Willow Lakes	Willow Street	PA	17584	6.8	14 minutes
Penn Medicine Lancaster General Health Norlanco	Elizabethtown	PA	17522	19.3	23 minutes
Orthopedic Associates of Lancaster	Lancaster	PA	17601	3.9	7 minutes
Orthopedic Associates of Lancaster – Spooky Nook	Manheim	PA	17545	12	18 minutes
Orthopedic Associates of Lancaster – Willow Street	Lancaster	PA	17584	5.2	14 minutes
Chester County Hospital	West Chester	PA	19380	30.1	51 minutes
Fern Hill Medical Center	West Chester	PA	19380	41.5	1 hour 2 minutes
Kennett Medical Campus	Kennett Square	PA	19348	38.1	58 minutes
Penn Medicine Southern Chester County	West Grove	PA	19390	29.9	50 minutes
WellSpan Good Samaritan Hospital	Lebanon	PA	17042	27.0	47 minutes
WellSpan Imaging – Helen Drive	Lebanon	PA	17042	24.8	40 minutes
WellSpan Imaging – Myerstown	Myerstown	PA	17067	27.5	46 minutes
WellSpan Imaging – Palmyra	Palmyra	PA	17078	31.4	38 minutes

Pregnancy Policy

The Penn Medicine Lancaster General Health pregnancy policy identifies no radiation hazard for the student or fetus during the gestational period when appropriate and identified radiation safety procedures are followed as described by each clinical site. When a student becomes pregnant, it is strongly recommended that she voluntarily provide a written statement to the program director declaring that she is pregnant. The student who has filed a voluntary declaration of pregnancy may at any time submit to the program director a written withdrawal of the declaration of pregnancy. After the student declares her pregnancy, the Radiation Safety Officer at her clinical site must be informed so he/she can make special arrangements and discuss the risks with the student. The student will be advised of the required radiation safety procedures she must follow while completing clinical assignments during her pregnancy. The pregnant student will not be placed at an academic or clinical disadvantage due to pregnancy and may continue in the program without modification to the published curriculum. The clinical and academic competency level of the pregnant student will be assessed upon her return to the program. Should the student become pregnant while attending a program within Pennsylvania College of Health Sciences that utilizes ionizing radiation, she still must fulfill all classroom and clinical requirements to be eligible for graduation from the program.

First Year: Associate in Applied Science Degree

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
HSC 101	Methods of Patient Care	1
RAD 101	Radiographic Procedures I	4
RAD 122	Clinical Practice I	3
RAD 131	Radiologic Science I	2
HSC 100	Medical Term	1
Total		**18**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
ENG 100	English Composition	3
RAD 123	Radiographic Procedures II	4
RAD 104	Clinical Practice II	3
RAD 132	Radiologic Science II	3
Total		**17**
Total Combined Credits		**34**

Second Year: Associate in Applied Science Degree

Fall Semester		Credits
MAT 160	College Algebra	3
PSY 100	General Psychology	3
RAD 221	Advanced Radiographic Procedures I	4
RAD 222	Clinical Education III	5
RAD 233	Radiologic Science III	1
Total		**16**

Spring Semester		Credits
HSC 195	Cross-Sectional Anatomy	1
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
RAD 223	Advanced Radiographic Procedures II	4
RAD 224	Clinical Education IV	5
RAD 240	Radiation Biology	1
SOC 200	Cultural Diversity	3
Total		**18**
Total Combined Credits		**69**

* Students starting the RAD program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Respiratory Care

The Respiratory Care program educates students to become registered respiratory therapists. Respiratory therapists are health care professionals that work at the bedside of patients with respiratory or breathing problems. Using patient interviews and chest exams, respiratory therapists assist in diagnosing pulmonary conditions and recommending treatment. Respiratory therapists consult with physicians and recommend changes in therapy based on evaluations of the patient. They analyze breathing, tissue and blood specimens to determine levels of oxygen and other gases. Respiratory therapists manage ventilators and artificial airway devices of patients in the neonatal, pediatric, or adult ICU who can't breathe normally on their own. They respond to cardiac arrests, traumas, and other urgent calls for care in the ER and critical care units. Respiratory therapists also educate patients and families about lung disease to maximize their recovery. Additionally, respiratory therapists may also be found in home care, long-term ventilator-dependent, pulmonary rehabilitation, or pulmonary function facilities.

Program Description

The Respiratory Care program is a 24-month, six-semester program that begins in the fall semester. The PA College Respiratory Care program is unique from other programs because students have clinical bedside experiences with their respiratory faculty every semester beginning in the first spring semester. Additionally, Respiratory Care students develop decision-making and critical thinking skills with the use of clinical simulation. Upon successful competition of the program, students earn an Associate in Applied Science degree and are eligible to take the National Board of Respiratory Care credentialing exams.

The AAS Degree Respiratory Therapy program at Pennsylvania College of Health Sciences, located in Lancaster, PA, program number 200558, is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com). For more information, contact the Commission on Accreditation for Respiratory Care at 264 Precision Boulevard, Telford, TN 37690 or (817) 283-2835.

Mission

The mission of the Respiratory Care program is to create a dynamic learning environment that educates its students to be compassionate, competent professionals that obtain the registered respiratory therapist credential. The program will facilitate critical thinking and independent learning as well as development of therapeutic skills to enable graduates to function effectively as part of the health care team.

Educational Outcomes

At the completion of the program, the graduate will:

- Demonstrate competence in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists.
- Function as an integral part of the health care team.
- Provide patients with competent, efficient and professional cardiopulmonary care.
- Utilize theoretical knowledge, clinical experience and critical thinking as the basis for professional practice.
- Practice responsibly within the ethical and legal realm of the respiratory therapist.
- Demonstrate compassionate and culturally sensitive patient care.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities. Each clinical experience is selected to give the student exposure to various aspects of respiratory care in general respiratory therapies, respiratory diagnostics, adult critical care, neonatal and pediatric critical care, home care and rehabilitative care.

First Year: Associate in Applied Science Degree

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
HSC 100	Medical Terminology	1
MAT 160	College Algebra	3
Total		**14**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
CHE 100	General Chemistry I	3
HSC 101	Methods of Patient Care	1
RCP 110	Respiratory Care Procedures I	3
RCP 120	Respiratory Care Lab I	3
RCP 130	Respiratory Care Theory I	2
Total		**16**

Summer Semester		Credits
RCP 140	Respiratory Care Procedures II	2
RCP 150	Respiratory Care Lab II	1
RCP 160	Respiratory Care Theory II	2
Total		**5**
Total Combined Credits		**35**

Second Year: Associate in Applied Science Degree

Fall Semester		Credits
PSY 100	General Psychology	3
RCP 201	Entry Level Review	2
RCP 210	Respiratory Care Procedures III	3
RCP 220	Respiratory Care Lab III	2
RCP 230	Respiratory Care Theory III	2
RCP 240	Clinical Level I	2
Total		**14**

Spring Semester		Credits
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
RCP 251	Respiratory Care Procedures and Diagnostics IV	3
RCP 260	Respiratory Care Lab/Clinical IV	3
RCP 271	Respiratory Care Theory and Application IV	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
Total		**13**

Summer Semester I & II Combined		Credits
RCP 280	Advanced Level Respiratory Care Review	2
RCP 290	Clinical Level II	4
Total		**6**
Total Combined Credits		**68**

Surgical Technology

Surgical technology is a health science discipline in which the practitioner is specifically educated to be a member of the surgical team. The surgical technologist works under the supervision of a surgeon to ensure the operating room environment is safe, all equipment functions properly, and the operative procedure is conducted under conditions that maximize patient safety.

A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique. As a respected and highly skilled member of the surgical team, this individual utilizes knowledge of human anatomy and physiology, microbiology, pharmacology, surgical procedures and instrumentation to facilitate surgically performed invasive and diagnostic procedures. Students of the Surgical Technology program are required to take the national certified surgical technology examination provided by the National Board for Surgical Technology and Surgical Assisting prior to graduation.

Program Description

The Surgical Technology program provides the student with classroom theory and supervised clinical and laboratory experience. Classroom instruction includes medical ethics, terminology, communication skills, anatomy, pathophysiology, microbiology and pharmacology. During the two-year program, students gain knowledge related to the principles of client care, asepsis and surgical procedures. In addition, the clinical practice component allows the student to build the skills and understanding necessary to become an integral member of the surgical team. Upon completion of the program, the surgical technology graduate is ready to assume entry-level responsibilities in a variety of surgical settings.

Class size is limited in order to provide the learner with individualized attention in a wide variety of surgical specialties. The student participates in surgical procedures that may include obstetrics and gynecology, genitourinary surgery, general surgery, plastic and reconstructive surgery, otorhinolaryngology, ophthalmology, orthopedics, neurosurgery, peripheral vascular surgery, endoscopy and cardiothoracic surgery in the acute care setting.

Students in the Surgical Technology program earn an Associate in Applied Science degree. Prospective students who already hold an associate or baccalaureate degree and meet the program entry requirements may opt to complete the academic certificate program.

Mission

The mission of the Surgical Technology program is to provide quality didactic and clinical education in the cognitive, affective and psychomotor domains to a diverse student population and to provide well-educated, competent, entry-level technologists to the community.

Educational Outcomes

At the completion of the program, the graduate will:

- Function as a competent entry-level surgical technologist in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains.
- Apply principles of liberal arts and sciences to the care of the perioperative client.
- Prepare the intraoperative environment with attention to quality and cost effectiveness.
- Respect the ethical, legal, moral and cultural issues that impact the care of the perioperative client.
- Formulate a plan for personal and professional growth.
- Demonstrate a commitment to lifelong knowledge and skill enhancement.
- Utilize effective communication skills and interactions with patients, members of the surgical team and other health care practitioners.
- Function as an integral member of the surgical team by performing perioperative technical skills in a safe, efficient and cost-effective manner.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospitals and health care facilities.

First Year: Associate in Applied Science Degree*

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 100	Quantitative Reasoning and Skills	3
HSC 100	Medical Terminology	1
SOC XXX	Sociology Elective	3
Total		**17**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
Elective		3
SUR 100	Perioperative Services	2
SUR 102	Perioperative Pharmacology	2
SUR 103	Surgical Armamentarium	2
SUR 115	Perioperative Services Lab	3
Total		**16**
Total Combined Credits		**33**

Second Year: Associate in Applied Science Degree*

Fall Semester		Credits
BIO 185	Microbiology	3
HSC 101	Methods of Patient Care	1
SUR 110	Intraoperative Patient Care	4
SUR 230	Surgical Procedures and Pathophysiology I	4
SUR 215	Perioperative Services Clinical I and Lab	4
SUR 212	Professionalism in Surgical Technology	1
Total		**17**

Spring Semester		Credits
PSY 100	General Psychology	3
PHI 210	Ethical and Legal Dimensions in Health Care	1
SUR 240	Surgical Procedures and Pathophysiology II	4
SUR 225	Perioperative Services Clinical II	6
SUR 299	Certification Exam Review	1
Total		**15**
Total Combined Credits		**65**

* Students starting the SUR program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Academic Certificate Program*

Students already holding an associate or baccalaureate degree, or who will have met the baccalaureate degree requirements from their primary educational program upon completion of the certificate program, may apply for the 18-month academic certificate program on a space available basis.

These classes must be completed prior to the First Year Spring Semester		Credits
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient Care	1
BIO 175	Human Anatomy & Physiology I	4
Total		**6**

First Year: Associate in Applied Science Degree

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
SUR 100	Perioperative Services	2
SUR 102	Perioperative Pharmacology	2
SUR 103	Surgical Armamentarium	2
SUR 115	Perioperative Services Lab	3
Elective		3
Total		**16**

Second Year: Associate in Applied Science Degree

Fall Semester		Credits
BIO 185	Microbiology	3
SUR 110	Intraoperative Patient Care	4
SUR 230	Surgical Procedures and Pathophysiology I	4
SUR 215	Perioperative Services Clinical I and Lab	4
SUR 212	Professionalism in Surgical Technology	1
Total		**16**

Spring Semester		Credits
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
PSY 100	General Psychology	3
SUR 240	Surgical Procedures and Pathophysiology I	4
SUR 299	Certification exam review	1
SUR 225	Perioperative Services Clinical II	6
Total		**15**
Total Combined Credits		**48**

* Students starting the SUR program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Vascular Sonography

The field of vascular sonography utilizes high frequency sound waves to image and evaluate arteries and veins of the body. The vascular sonographer is a skilled person qualified by academic and clinical education to perform vascular sonographic examinations under the supervision of a qualified physician. The sonographer working in this field performs a variety of diagnostic vascular examinations, including cerebrovascular, peripheral arterial and venous evaluations. The skilled sonographer has a unique and vital role in the diagnostic process, and the profession continues to offer many excellent opportunities for employment.

Program Description

Pennsylvania College of Health Sciences offers a two-year curriculum of full-time study in vascular sonography leading to an Associate in Applied Science degree. The College also offers an academic certificate program in vascular sonography for qualified students. Students receive theoretical and clinical instruction in all aspects of vascular sonography in preparation for entry-level positions as a vascular sonographer. Upon satisfactory completion of program requirements, graduates are eligible to take the American Registry for Diagnostic Medical Sonography examinations in physics and vascular technology.

The faculty of the Vascular Sonography program believe in the potential for the individual to grow in knowledge as well as in professional importance. It is the College's objective, through this program, to provide the opportunity, instruction and education to assist in this personal endeavor. The profession of vascular ultrasound is recognized as an integral part of the diagnostic medical team. Through the practiced skills of the vascular sonographer, both the patient and the physician are assisted by the accurate detection of disease.

Education is a process of learning through a balance of didactic and clinical instruction which adequately prepares the individual equally for the registry examinations and for employment. Through the flexible design of our program, we strive to achieve this goal and take advantage of the full learning potential of each individual.

Program Mission

The mission of the Vascular Sonography program is to meet the needs of the health care community by providing qualified individuals to become competent Vascular Sonographers.

Educational Outcomes

It is the goal of the Vascular Sonography program, and each of its clinical affiliates, to provide all students with didactic and clinical education, including hands-on, practical scanning experience. At the completion of the program, the graduate will:

- Be prepared as a competent entry-level vascular sonographer in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains.
- Obtain, review and integrate pertinent patient history and supporting clinical information to facilitate optimum diagnostic results.
- Function as an integral part of the diagnostic medical imaging team, providing patient services efficiently and in a professional and ethical manner.
- Incorporate concepts learned through classroom instruction and clinical practice, ensuring accurate, meaningful sonographic evaluation
- Demonstrate appropriate communication skills with patients and colleagues.
- Provide patient education related to medical ultrasound and/or other diagnostic vascular techniques.

Clinical Facilities

Clinical sites are available for our students at surrounding area hospitals and health care facilities. At each of these clinical facilities, the students are exposed to a wide range of diagnostic examinations including extracranial and intracranial examinations and peripheral arterial and venous sonographic procedures. The program also has a dedicated scanning lab at the College. In addition to learning basic patient care skills, students also learn to operate ultrasound equipment and perform imaging protocols in the supervised lab setting, in preparation for performing sonograms on clinical patients. Lab activities are closely integrated with classroom instruction and clinical experience.

First Year: Associate in Applied Science Degree*

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 160	College Algebra	3
PSY 100	General Psychology	3
Total		**16**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
HSC 100	Medical Terminology	1
HSC 101	Methods of Patient Care	1
PHY 150	Physics	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**13**

Summer Semester I		Credits
DMS 111	Introduction to Sonography	1
VAS 112	Vascular Sonography Procedures I	3
VAS 113	Vascular Sonography Lab I	1
Total		**5**
Total Combined Credits		**34**

Second Year: Associate in Applied Science Degree

Fall Semester		Credits
CVT 206	Cardiac A&P	3
DMS 221	Ultrasound Physics	3
DMS 227	Common Vascular Procedures	1
VAS 224	Vascular Sonography Clinical I	4
VAS 225	Vascular Sonography Lab II	1
VAS 227	Vascular Sonography Procedures II	3
Total		**15**

Spring Semester		Credits
VAS 228	Vascular Sonography Clinical II	6
VAS 229	Vascular Sonography Lab III	1
VAS 230	Vascular Sonography Advanced Topics	3
VAS 231	Vascular Sonography Review	3
Total		**13**

Summer Semester I		Credits
VAS 232	Vascular Sonography Clinical III	4
Total		**4**
Total Combined Credits		**66**

* Students starting the VAS program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Academic Certificate*

Students already holding an associate or baccalaureate degree, or who will have met the baccalaureate requirements from their primary educational program upon completion of the certificate program, may apply for the 13-month academic certificate program on a space available basis.

Summer I Semester		Credits
DMS 111	Intro to Sonography	1
VAS 112	Vascular Procedures I	3
VAS 113	Vascular Lab I	1
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**6**

Fall Semester		Credits
DMS 221	Ultrasound Physics	3
DMS 227	Common Vascular Procedures	1
VAS 227	Vascular Procedures II	3
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
VAS 224	VAS Clinical I	4
VAS 235	VAS Lab II	1
CVT 206	Cardiac AP	3
HSC 100	Med Term	1
HSC 101	Patient Care	1
Total		**17**

Spring Semester		Credits
VAS 233	VAS Clinical II	6
VAS 236	VAS Lab III	1
VAS 230	Vascular Advanced Topics	3
VAS 231	VAS Review	3
Total		**13**

Summer I Semester		Credits
VAS 234	VAS Clinical III	4
Total		**4**
Total Combined Credits		**40**

* Students starting the VAS program prior to August 2022 (Academic Year 2022/2023), please refer to curriculum in the College Catalog for the year you were admitted.

Health Sciences Professional Certificate Programs

Professional Certificate in Healthcare Administration

Program Description

The Healthcare Administration Professional Certificate is designed for learners who have an associate or baccalaureate degree in a field other than health care administration and who either currently work in or desire to work in a health care organization. This professional certificate program provides the foundational knowledge to be successful in a Master of Healthcare Administration program.

Educational Outcomes

At the completion of this certificate, the learner will:

- Demonstrate an understanding of the leadership qualities unique to the health care management professional.
- Plan the optimization of resources, processes and knowledge to support organizations in delivering health care.
- Analyze the health policy and management issues and their impact on all aspects of health care delivery.

Courses		Credits
HCA 200	Principles of Health Care Administration	3
HCA 400	Health Information Management	3
HCA 410	Health Care Quality	3
HCA 415	Health Care Finance	3
HCA 420	Health Care Planning and Policy	3
HCA 301 or HCA 305 or HCA 335 or HCA 340 or HCA 350	Health Care Marketing or Data Analysis or Human Resources in Health Care or Legal Issues in Health Care or Leading Change in Health Care	3
Total Combined Credits		**18**

Professional Certificate in Foundation for Health Informatics

Program Description

The Foundation for Health Informatics Professional Certificate is designed for individuals who wish to expand their knowledge and skills in order to function more effectively in an increasingly technology-driven health care environment. This professional certificate provides a foundational understanding that emphasizes management and facilitation of effective use of informatics in health care.

Educational Outcomes

At the completion of this certificate, the learner will:

- Explore the impact of the electronic medical health record on health care facilities and communities.
- Describe strategies for leading a team through a project related to health care informatics.
- Describe how leaders can leverage health informatics to improve health care.

Courses		Credits
HCA 350	Leading Change in Health Care	3
HCA 400	Health Information Management	3
HCA 410	Health Care Quality	3
HCA 305 or HCA 431	Data Analysis or Health Care Seminar	3 or 1
IPC 330	Health Informatics and Technology	3
IPC 447	Project Management	3
Total Combined Credits		**16-18**

Technical Certificate Programs

Medical Assistant

Medical assistants are an essential part of the medical team, providing administrative and clinical support services to keep an office running smoothly. This dynamic career means no two days are the same – medical assistants may take patient vitals, draw blood, or process lab samples one day, and spend the next day at the front desk checking in patients and processing insurance claims. Working as a medical assistant can be a lifelong calling, or it may be the perfect steppingstone to an expanded role on the health care team.

Program Description

PA College's medical assistant program can be completed in nine months. The full-time curriculum includes both theory and hands-on clinical practice courses, as well as a six-week externship experience. At the end of the program, students are eligible to sit for the Certified Clinical Medical Assistant exam through the National Healthcareer Association to become Certified Clinical Medical Assistants.

Students in the program are educated in both administrative and clinical skills which cover a variety of medical practice needs. Students learn administrative skills such as appointment scheduling, correspondence, maintaining and filing records, billing, bookkeeping and completing insurance forms. Clinical skills in the program include recording medical histories, preparing patients for exams and procedures, assisting with exams and procedures, measuring vital signs, performing phlebotomy, performing therapeutic and diagnostic tests, and giving injections.

Mission

The mission of the Medical Assistant program is to provide students with the knowledge and competence to become a multi-skilled health care professional who functions under the direct supervision of a licensed provider, through classroom theory, laboratory experiences and an externship experience.

Educational Outcomes

At the completion of the program, the graduate will:

- Demonstrate competence in the cognitive, psychomotor and affective learning domains of medical assistant practice.
- Function as an integral part of the health care team.
- Provide patients with competent, efficient and professional care.
- Utilize theoretical knowledge, clinical experience and critical thinking as the basis for professional practice.
- Practice responsibility within the ethical and legal realm of medical assistant practice.
- Demonstrate compassionate and culturally sensitive patient care.

Clinical Facilities

The main clinical affiliate of the program is Penn Medicine Lancaster General Health. Clinical sites may also be available for our students at surrounding area hospital systems and health care facilities. Each clinical experience is selected to give the student exposure to hands-on health care practices under the supervision of licensed or registered individuals in both administrative and clinical areas of medical assisting.

Curriculum Structure

The Medical Assistant program uses a module-based structure for its curriculum. The curriculum includes five consecutive five-week modules (two courses per module) of both online instruction and in-person sessions for building clinical and administrative skills. The program concludes with a six-week in-person

externship, where students are able to practice their skills in the health care environment. Students in the Medical Assistant program do not earn college credit.

Medical Assistant Technical Certificate

Face to Face Instruction on Tuesday and Wednesday, 4:30 p.m. to 9:30 p.m.

Online Asynchronous Instruction/Activities other times during the week.

Fall Module 1	
MAP100	Introduction to the Healthcare Setting (Hybrid)
MAP110	Medical Terminology (Hybrid)

Fall Module 2	
MAP120	A&P 1 (Hybrid)
MAP150	Clinical Techniques 1 (Hybrid)

Fall Module 3	
MAP125	A&P 2 (Hybrid)
MAP160	Laboratory Procedures (Hybrid)

Spring Module 1	
MAP130	MA Administrative Procedures (Hybrid)
MAP170	Clinical Techniques 2 (Hybrid)

Spring Module 2	
MAP105	Law and Ethics (Hybrid)
MAP180	Skills and Certification Review (hybrid)

Spring Module 3	
MAP190	Externship (180 hours)

Paramedic

Program Description

Paramedics are an important part of the health care community, providing immediate treatment to victims of illness or injury. Outside the hospital setting, they are typically the highest-level health care providers to respond during an emergency. Their leadership and expertise play a vital role in public health care and safety during medical emergencies, rescue operations, mass casualty situations, fires and crime scenes.

Paramedic education is provided to Commonwealth of Pennsylvania-certified EMTs by the Lancaster Consortium for Emergency Medicine Education, a partnership between Pennsylvania College of Health Sciences and Lancaster EMS. The 12-month program consists of approximately 1,200 hours of classroom and clinical/field experience. Classes begin in August and are held at Pennsylvania College of Health Sciences, with supplemental classes conducted at the Lancaster County Public Safety Training Center. Classes/labs are generally held three times per week, with some weekend hours. Students attending this program do not earn college credit; however, upon program completion and once certified as a paramedic, students enrolling in PA College's Bachelor of Science in Health Sciences program will earn equivalency credits commensurate with 33 lower-level health science credits.

Mission

To prepare competent entry-level Emergency Medical Technician Paramedics in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains.

Educational Outcomes

At the completion of the program, the graduate will:

- Provide quality care as a competent and compassionate professional in the pre-hospital environment.
- Develop a plan for lifelong learning and skill enhancement.
- Apply didactic knowledge and critical thinking skills to provide competent care of the pre-hospital patient.
- Respect the ethical, legal, moral and cultural issues that impact the care of the pre-hospital client.
- Model professionalism through community service, education and mentoring.
- Utilize effective communication skills in professional and interpersonal contexts.

Additional Certifications Obtained

In addition to being eligible to take the National Registry of Emergency Medical Technicians Paramedic certification exam, students who complete this program may receive the following certifications:

- Advanced Cardiac Life Support
- International Trauma Life Support
- Pediatric Advanced Life Support

Program Courses	
EMS 201	Paramedic Basic Curriculum I
EMS 202	Paramedic Basic Curriculum II
EMS 203	Paramedic Basic Curriculum III

Baccalaureate Degree Programs

Bachelor of Science in Healthcare Administration

Program Description

The Bachelor of Science in Healthcare Administration program provides students with the knowledge, skills and competencies to assume a professional role within a health care system. The focus of the program is to offer students an opportunity to enhance knowledge of leadership, contemporary issues in health care and business management. A baccalaureate degree in health care administration prepares the graduate to assume entry-level professional and managerial positions in hospital, ambulatory, long-term care or community health facilities.

Program Mission

Through learner-centered educational approaches, we develop students for success in health care administration practice, instill passion for the profession, and promote a commitment to lifelong learning.

Educational Outcomes

At the completion of the program, the graduate will:

- Function as a health care administrative professional, applying relevant health care management principles in areas such as finance, quality, human resources, law, policy and information systems management.
- Apply critical and analytical thinking and a systematic approach to respond to health care issues.
- Utilize evidence-based decision making in professional practice.
- Analyze current public and community issues and their impact on all aspects of health care delivery.
- Interact using collaborative approaches to build relationships and understand team dynamics within complex health care settings.
- Model ethical leadership, professionalism and excellence in health care practice.
- Assume responsibility for intellectual growth and lifelong learning for personal and professional development as a contributing member of a global society.

Accelerated Online Curriculum Design

The program is offered primarily in an accelerated format. Accelerated learning is a concept of learning, not a concept of time, and allows students to achieve educational outcomes and apply learned skills and knowledge in the most efficient manner possible. Many accelerated courses are 5-10 weeks in length. There are a few courses that are offered in the traditional 15-week format. Learning outcomes are the same, regardless of the format.

Courses in the program are offered online for students' convenience. These courses typically do not require students' physical presence in a classroom. However, online courses may involve synchronous class meetings where course participants are expected to be online at the same time. These synchronous activities will be specified in the course syllabi.

Students may choose to take their courses in the format and pace best suited to their learning style and comfort level, based upon course and section availability. The program allows students to complete the degree in approximately four years. Students who transfer in credits, or who take additional courses per semester, may complete the degree in less time; those who take fewer courses per semester may require more time to complete the degree. Students have seven years total to complete the program.

Sciences and Humanities Requirements (64 credits)

Science Courses		Credits
BIO 105 (with lab)	Human Biology	3
BIO 185 or BIO 230	Microbiology or Immunology	3
BIO 250	Nutrition for Life	3
BIO 380	Epidemiology	3
Total Credits		**12**

Social Sciences Courses		Credits
ECO 150	Survey of Economics	3
ECO 310	American Health Care System	3
ECO 350	The Economics of Health Care	3
PSY 100	General Psychology	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
SOC 300	Social Problems	3
Total Credits		**18**

Mathematics Courses		Credits
MAT 100 or MAT 150 or MAT 160 or Any College-Level Math	Quantitative Reasoning & Skill or Clinical Mathematics for the Health Sciences or College Algebra or Any college-level math class	3
MAT 260	Statistics	3
Total Credits		**6**

Humanities Courses		Credits
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
ENG 202	Advanced Communication	3
ENG 300	Advanced Composition for Health Care	3
ENG 310	Business Communication	3
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
PHI 330	Ethical Issues in Health Care	3
Humanities Elective	Any course with an ENG, HUM or PHI prefix	3
Total Credits		**22**

General Elective Courses	Credits
Any course	3
Any 300-400-level course	3
Total Credits	**6**
Total Combined Credits	**64**

Health Care Administration, Public Health, Health Sciences and Interprofessional Collaborative Requirements (56 credits)

Health Care Administration and Public Health Core Courses		Credits
HCA 200	Principles of Health Care Administration	3
HCA 301	Health Care Marketing	3
HCA 305	Data Analysis	3
HCA 335	Human Resources in Health Care	3
HCA 340	Legal Issues in Health Care	3
HCA 350	Leading Change in Health Care	3
HCA 400	Health Information Management	3
HCA 410	Health Care Quality	3
HCA 415	Health Care Finance	3
HCA 420	Health Care Policy and Planning	3
HCA 448	Introduction to Internship	1
HCA 449	Internship in Health Care Administration	2
PHS 220	Introduction to Public Health	3
Total Credits		**36**

Health Sciences Core Courses		Credits
HSC 100	Medical Terminology	1
HSC 300	Organizational Behavior	3
HSC 402	Healthcare Leadership	3
Total Credits		**7**

Interprofessional Collaborative Courses		Credits
IPC 302	Introduction to Capstone	1
IPC 322	Teaching and Learning	3
IPC 401	Research in Health Care	3
IPC 447	Project Management	3
IPC 450	Capstone	3
Total Credits		**13**
Total Combined Credits		**120**

Bachelor of Science in Health Sciences

Program Description

The Bachelor of Science in Health Sciences program is designed to advance the learner's critical thinking, communication skills, theoretical knowledge, and professional development. A Bachelor of Science in Health Sciences degree prepares the graduate to advance careers in clinical practice, leadership, health and wellness, or health care informatics. This program offers practicing health care professionals the opportunity to pursue tracks in clinical management, health promotion and patient care; earn a professional certificate in health informatics or healthcare administration; or earn an academic certificate in vascular sonography or diagnostic medical sonography. The program is designed to provide graduates of an accredited associate or certificate program with the opportunity to earn the degree in approximately two years (usually seven semesters).

Program Mission

The mission of the Bachelor of Science in Health Sciences program is to foster professional growth through multi-disciplinary collaboration, empowering and educating health professionals to lead in the health care community.

Educational Outcomes

At the completion of the program, the graduate will:

- Function as a health care professional, customizing knowledge and skills to advance professional goals in clinical operations, advanced imaging practices, biological sciences, health care informatics or health care leadership.
- Apply critical and analytical thinking and a systematic approach to respond to health care issues.
- Utilize evidence-based decision making in professional practice.
- Analyze current public and community issues and their impact on all aspects of health care delivery.
- Interact using collaborative approaches to build relationships and understand team dynamics within complex health care settings.
- Model ethical leadership, professionalism and excellence in health care practice.
- Assume responsibility for intellectual growth and lifelong learning for personal and professional development as a contributing member of a global society.

Accelerated Learning and Course Formats

The program is offered primarily in an accelerated format. Accelerated learning is a concept of learning, not a concept of time, and allows students to achieve educational outcomes and apply learned skills and knowledge in the most efficient manner possible. Many of the accelerated courses are offered as 5-, 7- or 10-week courses. There are a few courses that are offered in the traditional 15-week format. Learning outcomes are the same, regardless of the format.

Courses in this program are primarily offered online for students' convenience. These courses typically do not require students' physical presence in a classroom. However, online courses may involve synchronous class meetings, where course participants are expected to be online at the same time. These synchronous activities will be specified within the course syllabi. The course activities occur in the online learning environment, hosted through a learning management system, and/or other programs specified by the course instructor. In some rare cases, students may be asked to be physically present for a final presentation or exam, even for a fully online course – this will be outlined in the course syllabi or announced via the online learning platform or email.

Students may choose to take their courses in the format and pace best suited to their learning style and comfort level, based upon course and section availability. The program allows students to complete the degree in approximately two years (usually seven semesters), or up to five years. Students who transfer in credits, or who take additional courses per semester, may complete the degree in less time; those who take fewer courses per semester may require more time to complete the degree.

Health Sciences Lower Level (33 Credits)

Credits for completing an accredited allied health, paramedic, or LPN program	Credits
Total Credits	**33**

Sciences and Humanities Requirements (56 credits)

Science Courses		Credits
BIO 185 or BIO 230	Microbiology or Immunology	3
BIO 380	Epidemiology	3
	Science Electives	11
Total Credits		**17**

NOTE: Two of three science electives must be 4 credits in order to total 17 credits.

Social Sciences Courses		Credits
CSS 101	College Studies Seminar	3
ECO 150	Survey of Economics	3
ECO 310	American Health Care System	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
SOC 300	Social Problems	3
Total Credits		**15**

Mathematics Courses		Credits
MAT 150 or MAT 160	Clinical Mathematics for the Health Sciences or College Algebra or Any college-level math class	3
MAT 260	Statistics	3
Total Credits		**6**

Humanities Courses		Credits
ENG 100	English Composition	3
ENG 300	Advanced Composition for Health Care	3
PHI 330	Ethical Issues in Health Care	3
Humanities Elective	Any course with an ENG, HUM or PHI prefix	3
Total Credits		**12**

General Elective Courses	Credits
Any course	3
Any 300- or 400-level course	3
Total Credits	**6**

Health Sciences, Interprofessional Collaborative and Concentration Requirements (31-34 credits)

Health Sciences Courses		Credits
HSC 300	Organizational Behavior	3
HSC 402	Healthcare Leadership	3
Total Credits		**6**

Interprofessional Collaborative Courses		Credits
IPC 302	Introduction to Capstone	1
IPC 322	Teaching and Learning	3
IPC 401	Research in Health Care	3
IPC 450	Capstone	3
Total Credits		**10**

Concentration #1: Clinical Management		Credits
HCA 200	Principles of Health Care Administration	3
HCA 305	Data Analysis	3
HCA 335	Human Resources in Health Care	3
HCA 410	Health Care Quality	3
HCA 415	Health Care Finance	3
Total Credits		**15**

Concentration #2: Health Promotion and Patient Care	Credits
This concentration is ideal for the imaging health care professionals who desire to advance their competence in advanced and multiple imaging modalities, such as CT, MRI, and Mammography; students who want to pursue graduate studies in physician assistant or medical schools; or students who want a more holistic perspective about health and wellness.	15
Total Credits	**15**

Concentration #3: Professional Certificate: Foundation for Health Informatics		Credits
HCA 350	Leading Change in Health Care	3
HCA 400	Health Information Management	3
HCA 410	Health Care Quality	3
HCA 305 or HCA 431	Data Analysis or Health Care Seminar	3 or 1
IPC 330	Health Informatics and Technology	3
IPC 447	Project Management	3
Total Credits		**16-18**

Concentration #4: Professional Certificate: Healthcare Administration		Credits
HCA 200	Principles of Health Care Administration	3
HCA 400	Health Information Management	3
HCA 410	Health Care Quality	3
HCA 415	Health Care Finance	3
HCA 420	Health Care Policy & Planning	3
NOTE: Additional 3 of 18 credits counted under General Electives by choosing one of the following: HCA 301, HCA 305, HCA 335, HCA 340 or HCA 350		3
Total Credits		**18**

BSHS with Vascular Sonography Certificate

The BSHS program with an Academic Certificate in Vascular Sonography is designed to advance the learner's critical thinking, communication skills, theoretical knowledge and professional development. A BSHS degree with an Academic Certificate in Vascular Sonography prepares the diagnostic medical sonography associate degree graduate to advance in clinical practice to become an entry-level vascular sonographer. This program is designed to allow the student to earn a bachelor's degree and certificate in vascular sonography in approximately two years (six semesters).

Health Sciences Lower Level (33 Credits)

Health Science Lower Level	Credits
HSC Professional Program Completion: Students completed a Diagnostic Medical Sonography program.	33
Total Credits	**33**

Sciences and Humanities Requirements (53 Credits)

Science Courses		Credits
BIO 185 or BIO 230	Microbiology or Immunology	3
BIO 380	Epidemiology	3
	Science Electives	11
Total Credits		**17**

NOTE: Two of three science electives must be 4 credits in order to total 17 credits.

Social Sciences Courses		Credits
CSS 101	College Studies Seminar	3
ECO 310	American Health Care System	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
SOC 300	Social Problems	3
Total Credits		**12**

Mathematics Courses		Credits
MAT 150 or MAT 160	Clinical Mathematics for the Health Sciences or College Algebra or Any college-level math class	3
MAT 260	Statistics	3
Total Credits		**6**

Humanities Courses		Credits
ENG 100	English Composition	3
ENG 300	Advanced Composition for Health Care	3
PHI 330	Ethical Issues in Health Care	3
Humanities Elective	Any course with an ENG, HUM or PHI prefix	3
Total Credits		**12**

General Elective Courses	Credits
Any course	3
Any 300- or 400-level course	3
Total Credits	**6**

Health Sciences, Interprofessional Collaborative and Vascular Sonography Requirements (48 credits)

Health Sciences Courses		Credits
HSC 300	Organizational Behavior	3
HSC 402	Healthcare Leadership	3
Total Credits		**6**

Interprofessional Collaborative Courses		Credits
IPC 302	Introduction to Capstone	1
IPC 322	Teaching and Learning	3
IPC 401	Research in Health Care	3
IPC 450	Capstone	3
Total Credits		**10**

Academic Certificate: Vascular Sonography Courses		Credits
CVT 206	Cardiac A&P	3
DMS 111	Introduction to Sonography	1
DMS 221	Ultrasound Physics	3
VAS 112	Vascular Sonography Procedures I	3
VAS 113	Vascular Sonography Lab I	1
VAS 224	Vascular Sonography Clinical I	4
VAS 225	Vascular Sonography Lab II	1
VAS 227	Vascular Sonography Procedures II	3
VAS 228	Vascular Sonography Clinical II	4
VAS 229	Vascular Sonography Lab III	1
VAS 230	Vascular Sonography Advanced Topics	3
VAS 231	Vascular Sonography Review	3
VAS 232	Vascular Sonography Clinical III	6
Total Credits		**32**

BSHS with Diagnostic Medical Sonography Certificate

The BSHS program with an Academic Certificate in Diagnostic Medical Sonography is designed to advance the learner's critical thinking, communication skills, theoretical knowledge and professional development. A BSHS degree with an Academic Certificate in Diagnostic Medical Sonography prepares the diagnostic vascular sonography associate degree graduate to advance in clinical practice to become dual certified in diagnostic medical sonography. This program is designed to allow the student to earn a bachelor's degree and certificate in diagnostic medical sonography in approximately two years (six semesters).

Health Sciences Lower Level (33 Credits)

Health Science Lower Level	Credits
HSC Professional Program Completion: Students completed a Vascular Sonography program.	33
Total Credits	**33**

Sciences and Humanities Requirements (53 credits)

Science Courses		Credits
BIO 185 or BIO 230	Microbiology or Immunology	3
BIO 380	Epidemiology	3
Science Electives		11
Total Credits		**17**

NOTE: Two of three science electives must be 4 credits in order to total 17 credits.

Social Sciences Courses		Credits
CSS 101	College Studies Seminar	3
ECO 310	American Health Care System	3
SOC 100 or SOC 200	Introduction to Sociology or Cultural Diversity	3
SOC 300	Social Problems	3
Total Credits		**12**

Mathematics Courses		Credits
MAT 150 or MAT 160	Clinical Mathematics for the Health Sciences or College Algebra or Any college-level math class	3
MAT 260	Statistics	3
Total Credits		**6**

Humanities Courses		Credits
ENG 100	English Composition	3
ENG 300	Advanced Composition for Health Care	3
PHI 330	Ethical Issues in Health Care	3
Humanities Elective	Any course with an ENG, HUM or PHI prefix	3
Total Credits		**12**

General Elective Courses	Credits
Any course	3
Any 300- or 400-level course	3
Total Credits	**6**

Health Sciences, Interprofessional Collaborative and Diagnostic Medical Sonography Requirements (48-53* credits)

Health Sciences Courses		Credits
HSC 300	Organizational Behavior	3
HSC 402	Healthcare Leadership	3
Total Credits		**6**

Interprofessional Collaborative Courses		Credits
IPC 302	Introduction to Capstone	1
IPC 322	Teaching and Learning	3
IPC 401	Research in Health Care	3
IPC 450	Capstone	3
Total Credits		**10**

Academic Certificate: Diagnostic Medical Sonography		Credits
DMS 111*	Introduction to Sonography	1
DMS 112	Abdominal Sonography I	3
DMS 113	Ultrasound Lab I	1
DMS 221*	Ultrasound Physics	3
DMS 222	Abdominal Sonography II	2
DMS 223	Obstetrical & Gynecological Sonography I	3
DMS 224	Ultrasound Clinical I	4
DMS 225	Ultrasound Lab II	1
DMS 226	Obstetrical & Gynecological Sonography II	3
DMS 227*	Common Vascular Procedures	1
DMS 228	Ultrasound Clinical II	4
DMS 229	Ultrasound Lab III	1
DMS 230	Superficial Structures	2
DMS 231	Ultrasound Seminar	2
DMS 232	Ultrasound Clinical III	6
Total Combined Credits		**37**

* These courses may be evaluated for transfer credit.

Bachelor of Science in Nursing

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care needs of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes

At the completion of the program, the graduate will:

- Integrate theoretical and empirical knowledge from the sciences and humanities curriculum into the practice of nursing.
- Provide holistic and competent care that promotes health and disease prevention to diverse individuals and populations.
- Utilize evidence to enhance quality and safety in nursing practice.
- Demonstrate inter- and intra-professional communication and collaboration to improve client outcomes.
- Utilize information management and technology in the provision of client care.
- Model civic engagement and fiscal responsibility in the delivery of health care.
- Demonstrate ethical values, leadership and professionalism in the practice of nursing.
- Assume accountability for intellectual growth, professional development and competent practice.

Service Learning

Students in all tracks of the BSN program complete a Service Learning project. Service Learning is an opportunity that allows students to experientially meet academic objectives while engaging in a meaningful community partnership to both serve and learn. BSN students will design their Service Learning projects in collaboration with a faculty advisor and community partner. Students provide 30 hours of direct clinical service during their time in the BSN program.

RN to BSN Track

Program Description

The RN to BSN track provides students an opportunity to synthesize liberal education and nursing education that contributes to advanced critical thinking and professional autonomy in the delivery of holistic, competent nursing care. Students strengthen their ability to communicate and build on their existing knowledge of nursing practice, preparing them for both interdisciplinary collaboration and leadership roles. Students are introduced to the importance of incorporating evidence-based findings as well as managing information to ensure quality outcomes and patient safety. Students are challenged to consider diverse theories and perspectives to provide culturally competent care to a variety of populations. The program endeavors to create an enduring appreciation of learning in the RN to BSN student.

Accelerated Learning

The RN to BSN track utilizes an accelerated learning design to meet the needs of practicing nurses who have work, family, or other commitments. Accelerated learning is a learning strategy in which students achieve educational outcomes equivalent to traditional courses in a more autonomous, student-centered course environment. Most classes are offered in 5- and 10-week blocks. All courses are offered online. The program is structured to be completed in 22 months; however, the exact length of time for the program is dependent upon students' goals and previous college experiences. Customized scheduling is available to meet the needs of individual students.

Lower Division Courses

	Credits
Two-Year Diploma/ASN	65
Three-Year Diploma	74

RN to BSN Curriculum (Sample Schedule)

This sample schedule lists all required courses in a suggested sequence, except electives. There are four required electives, which may be completed at any time prior to graduation.

Fall Semester		Credits
CSS 101	College Studies Seminar	3
IPC 302	Introduction to Capstone	1
NUR 301	Conceptual Foundations of Nursing Practice	3
NUR 312	Human Diversity and Cultural Care in Nursing	3
Total Credits		**10**

Spring Semester		Credits
ENG 300	Advanced Composition for Health Care	3
IPC 322	Teaching and Learning	3
NUR 340	Comprehensive Health Assessment	3
Total Credits		**9**

Summer Semester		Credits
ECO 310	American Health Care System	3
PHI 330	Ethical Issues in Health Care	3
Total Credits		**6**

Fall Semester		Credits
IPC 401	Research in Health Care	3
MAT 260	Statistics	3
Total Credits		**6**

Spring Semester		Credits
NUR 410	Issues and Trends in Nursing	3
NUR 420	Nursing Leadership and Management	3
NUR 430	Nursing in a Global Society	3
Total Credits		**9**

Summer Semester		Credits
IPC 450	Capstone	3
Total Credits		**3**

Electives		Credits
	Humanities Elective	3
	300- or 400-Level Elective	3
	Other Electives	6
Total Elective Credits		**12**
Total RN to BSN Credits		**55**
Total Combined Credits		**120**

Bachelor of Science in Nursing (Pre-Licensure Track)

Program Description

The Bachelor of Science in Nursing Pre-Licensure Track is a path to a BSN degree for highly motivated students. The pre-licensure track is designed using a concept-based approach. Through the use of concepts and exemplars, students become active learners who engage in both classroom and clinical learning activities. Concept-based learning prepares graduates to gain a deep understanding of health care concepts and application of evidence-based practice, and the aptitude to transfer knowledge, skills and abilities to other concepts and contexts. Additionally, concept-based learning leads to higher levels of critical thinking and reasoning skills necessary for competent clinical judgment in the care of clients throughout the lifespan and in a variety of settings in today's dynamic and complex health care system. The Pre-Licensure BSN has two options – a three-year accelerated track and a four-year track.

Graduates of the program receive a Bachelor of Science in Nursing degree and are eligible to take the National Council Licensure Examination (NCLEX-RN).

Sample Curricular Plan – Three-Year Accelerated Track
First Year

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 150	Clinical Mathematics for the Health Sciences	3
NUR 170	Foundational Nursing I	3
NUR 160	History and Theory of Nursing Practice	3
Total		**19**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
ENG 202	Advanced Communication	3
NUR 270*	Foundational Nursing II	3
NUR 265	Health Assessment	3
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
SOC 100	Introduction to Sociology	3
Total		**17**

* Students beginning Fall 2022 will take NUR 271 (4 cr) instead of NUR 270 (3 cr).

Summer Semester I		Credits
PSY 100	General Psychology	3
	Humanities Elective	3
Total		**6**
Total Combined Credits		**42**

Second Year

Fall Semester		Credits
BIO 185	Microbiology	3
IPC 302	Introduction to Capstone	1
NUR 275	Health and Illness I	5
NUR 312	Human Diversity and Cultural Care in Nursing	3
NUR 260	Pharmacology	3
PHI 330	Ethical Issues in Health Care	3
Total		**18**

Spring Semester		Credits
BIO 250	Nutrition for Life	3
IPC 322	Teaching and Learning	3
MAT 260	Statistics	3
NUR 280	Concepts of Pathophysiology	3
NUR 295	Health and Illness II	6
Total		**18**

Summer Semester I		Credits
NUR 349	Nursing Internship	3
	300- or 400-level IPC or NUR elective	3
Total		**6**
Total Combined Credits		**84**

Third Year

Fall Semester		Credits
IPC 330	Health Informatics and Technology	3
IPC 401	Research in Health Care	3
NUR 355	Health and Illness III	6
NUR 410	Issues and Trends in Nursing	3
	Elective	3
Total		**18**

Spring Semester		Credits
ECO 310	American Health Care System	3
IPC 450	Capstone	3
NUR 405	Health and Illness IV	5
NUR 406*	Clinical Decision Making	1
NUR 421*	Leadership and Transition into Practice	3
NUR 430	Nursing in a Global Society	3
Total		**18**
Total Combined Credits		**120**

* For students starting Fall 2022, NUR 406 (1 cr) and NUR 421 (3 cr) will be replaced by NUR 422 (3 cr).

Sample Curricular Plan – Four-Year Track
First Year

Fall Semester		Credits
BIO 175	Human Anatomy & Physiology I	4
CSS 101	College Studies Seminar	3
ENG 100	English Composition	3
MAT 150	Clinical Mathematics for the Health Sciences	3
	Humanities Elective	3
Total		**16**

Spring Semester		Credits
BIO 176	Human Anatomy & Physiology II	4
BIO 185	Microbiology	3
BIO 250	Nutrition for Life	3
PSY 100	General Psychology	3
SOC 100	Introduction to Sociology	3
Total		**16**
Total Combined Credits		**32**

Second Year

Fall Semester		Credits
NUR 280	Concepts of Pathophysiology	3
NUR 160	History and Theory of Nursing Practice	3
NUR 170	Foundational Nursing I	3
NUR 312	Human Diversity and Cultural Care in Nursing	3
	Elective	3
Total		**15**

Spring Semester		Credits
ENG 202	Advanced Communication	3
MAT 260	Statistics	3
NUR 270*	Foundational Nursing II	3
NUR 265	Health Assessment	3
NUR 322	Teaching and Learning	3
Total		**15**
Total Combined Credits		**61**

* Students beginning clinical courses Fall 2022 will take NUR 271 (4 cr) instead of NUR 270 (3 cr).

Third Year

Fall Semester		Credits
ECO 310	American Health Care System	3
IPC 302	Introduction to Capstone	1
NUR 260	Pharmacology	3
NUR 275	Health and Illness I	5
PHI 210	Ethical and Legal Dimensions in the Health Sciences	1
Total		**13**

Spring Semester		Credits
IPC 330	Health Informatics and Technology	3
NUR 295	Health and Illness II	6
PHI 330	Ethical Issues in Health Care	3
	NUR/IPC Elective	3
Total		**15**

Summer Semester III		Credits
NUR 349	Nursing Internship	3
Total		**3**
Total Combined Credits		**93**

Fourth Year

Fall Semester		Credits
IPC 401	Research in Health Care	3
NUR 355	Health and Illness III	6
NUR 410	Issues and Trends in Nursing	3
NUR 430	Nursing in a Global Society	3
Total		**15**

Spring Semester		Credits
IPC 450	Capstone	3
NUR 405	Health and Illness IV	5
NUR 406*	Clinical Decision Making	1
NUR 421*	Leadership and Transition into Practice	3
Total		**12**
Total Combined Credits		**120**

* For students starting clinical courses Fall 2022, NUR 406 (1 cr) and NUR 421 (3 cr) will be replaced by NUR 422 (3 cr).

Graduate Degree Programs

Master of Healthcare Administration

Pennsylvania College of Health Sciences offers graduate degree programs to meet the needs of the ever-changing field of health care. Woven through the coursework are nine health care administration competencies including Communication, Finance, Systems Thinking, Teamwork, Change Management, Decision Making, Creative Innovation, Analytics and Informatics, and Legal and Ethical Behavior.

Central to the vision of the PA College graduate programs is an interprofessional core of five courses in which students from all master's degree programs collaborate and study together just as health care professionals do in their work settings. Courses are taught in an asynchronous online format designed to meet the needs of the practicing professional who has work, family and other commitments. The online experience is enhanced through the Integrating Experiences.

Introduction to Graduate Studies

During their first or second week of class, new students attend a four-hour orientation that provides important information on registration, using the Library, online learning and program requirements. Upon completion of Introduction to Graduate Studies, along with Integrating Experience I and Integrating Experience II, students receive one academic credit.

Integrating Experience I and II

Students participate in two Integrating Experiences. During these educational events, graduate students at all levels network with colleagues and faculty, learn through hands-on workshops, and present their scholarly work. Upon completion of Introduction to Graduate Studies, along with Integrating Experience I and Integrating Experience II, students receive one academic credit. Completion of these courses is required for graduation.

Applied Practice

The Applied Practice is a 120-hour semester-long field experience that gives the students the opportunity to synthesize skills, interests and abilities developed during their studies to impact real-life professional situations through application of research and theory in the practice environment. Mentored by a preceptor at a health care and/or educational site, students further develop and apply knowledge acquired in their coursework.

Program Description

The Master of Healthcare Administration degree prepares health care professionals with the knowledge needed to effectively serve as managers and leaders within health care organizations and other health-care-related industries. Coursework focuses on leadership development, financial and analytical skill development, and strategic planning.

Mission

The mission of the Master of Healthcare Administration program is to prepare future health care administrators to lead their organizations through application of creative and reflective state-of-the-art skills in analysis, planning and implementation of administrative solutions.

Educational Outcomes

At the completion of the program, the graduate will:

- Contribute to the profession through the acquisition and application of specialized knowledge.
- Evaluate practice through the lens of diversity.
- Initiate change using evidence and research.
- Exemplify leadership characteristics to enhance interdisciplinary communication and collaboration for quality outcomes.
- Be a role model, professional and community leader, and mentor.
- Exhibit legal and ethical principles and professional standards as a health care leader.
- Promote the continuous acquisition of knowledge for self and others.

Curriculum

Courses		Credits
HCA 620	Applied Practice in Health Care Administration	3
IPC 500*	Introduction to Graduate Studies	Recorded Under IPC 655
IPC 501*	Health Promotion and Disease Prevention in a Diverse Society	3
IPC 504*	Communication and Technology	3
IPC 511*	Graduate Research	3
IPC 512*	Health Care Policy and Finance	3
IPC 550*	Integrating Experience I	Recorded Under IPC 655
IPC 601*	Leadership in Healthcare	3
IPC 655*	Integrating Experience II	1
NHA 521	Health Systems Organization and Management	3
NHA 522	Organizational Behavior and Performance Improvement	3
NHA 601	Quantitative Business Analysis	3
NHA 602	Strategic Planning	3
Elective		3
Total Combined Credits		**34**

* Interprofessional collaborative core course

Master of Science in Nursing – Administration

Pennsylvania College of Health Sciences offers graduate degree programs to meet the needs of the ever-changing field of health care. Woven through the coursework are nine competencies including Communication, Finance, Systems Thinking, Teamwork, Change Management, Decision Making, Creative Innovation, Analytics and Informatics, and Legal and Ethical Behavior.

Central to the vision of PA College, graduate programs integrate interprofessional courses in which students from all master's degree programs collaborate and learn together, just as health care professionals do in their work settings. Courses are taught in an asynchronous online format designed to meet the needs of the practicing professional who has work, family and other commitments. The online experience is enhanced through Integrating Experiences.

Introduction to Graduate Studies

During their first or second week of class, new students attend a four-hour live online orientation that provides important information on registration, using the Library, online learning and program requirements. Upon completion of IPC 500, along with two Integrating Experience courses, students receive one academic credit.

Integrating Experience

Students participate in two live online or on campus Integrating Experiences. During these educational events, graduate students at all levels network with colleagues and faculty, learn through hands-on workshops, and present their scholarly work. Completion of IPC 500, IPC 550 and IPC 655 is required for graduation. Students receive one academic credit for meeting this requirement.

Applied Practice

The Applied Practice is a semester-long field experience that gives the students the opportunity to synthesize skills, interests and abilities developed during their studies to impact real-life professional situations through the application of research and theory in the practice environment. Working with a preceptor at a health care site, students further develop and apply knowledge acquired in their coursework.

Program Description

The Master of Science in Nursing – Administration Track prepares registered nurses to take on leadership roles in a variety of health care settings, including hospitals, managed care organizations, clinics and other agencies. The curriculum includes health care policy, finance, organization and management as well as population health, quantitative business analysis, strategic planning and leadership.

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care needs of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes

At the completion of the program, the graduate will:

- Integrate knowledge from nursing and other disciplines to plan patient-centered care that promotes health and improves health care outcomes.
- Apply leadership skills that foster ethical decision making, fiscal responsibility, and advocacy, interprofessional collaborative relationships and a systems perspective.
- Use technology to enhance communication and support quality of care and strategic decision making processes in practice.
- Apply patient-centered and culturally appropriate concepts to improve quality and safety, reduce health disparities, and improve health outcomes for diverse populations.
- Model behaviors that demonstrate professionalism and community engagement of self and others, through clinical scholarship and application of evidence-based recommendations in practice.
- Use evidence-based knowledge and appropriate professional standards to analyze, evaluate and influence outcomes and health care policy for individuals, populations or systems.

Curriculum

Courses		Credits
IPC 500*	Introduction to Graduate Studies	NC
IPC 501*	Health Promotion and Disease Prevention in a Diverse Society	3
IPC 504*	Communication and Technology	3
IPC 511*	Graduate Research	3
IPC 512*	Health Care Policy and Finance	3
IPC 550*	Integrating Experience I	NC
IPC 601*	Leadership in Healthcare	3
IPC 655*	Integrating Experience II	1
NHA 521	Health Systems Organization and Management	3
NHA 522	Organizational Behavior and Performance Improvement	3
NHA 601	Quantitative Business Analysis	3
NHA 602	Strategic Planning	3
NUR 620	Applied Practice in Nursing Administration	3
	Elective	3
Total Combined Credits		**34**

* Interprofessional collaborative course
NC = Non-Credit Bearing
NHA = Combined Nursing and Health Care Administration Course

Master of Science in Nursing – Education

Pennsylvania College of Health Sciences offers graduate degree programs to meet the needs of the ever-changing field of health care. Woven through the coursework are nine competencies including Communication, Finance, Systems Thinking, Teamwork, Change Management, Decision Making, Creative Innovation, Analytics and Informatics, and Legal and Ethical Behavior.

Central to the vision of PA College, graduate programs integrate interprofessional courses in which students from all master's degree programs collaborate and learn together, just as health care professionals do in their work settings. Courses are taught in an asynchronous online format designed to meet the needs of the practicing professional who has work, family and other commitments. The online experience is enhanced through Integrating Experiences.

Introduction to Graduate Studies

During their first or second week of class, new students attend a four-hour live online orientation that provides important information on registration, using the Library, online learning and program requirements. Upon completion of IPC 500, along with two Integrating Experience courses, students receive one academic credit.

Integrating Experience

Students participate in two live online or on-campus Integrating Experiences. During these educational events, graduate students at all levels network with colleagues and faculty, learn through hands-on workshops, and present their scholarly work. Completion of IPC 500, IPC 550 and IPC 655 is required for graduation. Students receive one academic credit for meeting this requirement.

Clinical Experience

The program has two semester-long field experiences that give the student the opportunity to synthesize skills, interests and abilities developed during their studies to impact real-life professional situations through application of research and theory in the clinical practice and academic environments. Working with a preceptor at a health care and academic educational site, students further develop and apply knowledge acquired in their coursework in both the clinical and academic settings.

Program Description

The Master of Science in Nursing – Education Track prepares registered nurses to provide nursing education in academia or clinical practice settings. The program provides cutting-edge educational theory in clinical and adult learning, including curriculum design, teaching strategies, educational assessment, leadership, advanced pathophysiology, pharmacology and health assessment.

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care needs of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes

At the completion of the program, the graduate will:

- Integrate knowledge from nursing and other disciplines to plan patient-centered care that promotes health and improves health care outcomes.
- Apply leadership skills that foster ethical decision making, fiscal responsibility, and advocacy, interprofessional collaborative relationships and a systems perspective.
- Use technology to enhance communication and support quality of care and strategic decision making processes in practice.
- Apply patient-centered and culturally appropriate concepts to improve quality and safety, reduce health disparities, and improve health outcomes for diverse populations.
- Model behaviors that demonstrate professionalism and community engagement of self and others, through clinical scholarship and application of evidence-based recommendations in practice.
- Use evidence-based knowledge and appropriate professional standards to analyze, evaluate and influence outcomes and health care policy for individuals, populations or systems.

Curriculum

Courses		Credits
IPC 500	Introduction to Graduate Studies	NC
IPC 501*	Health Promotion and Disease Prevention in a Diverse Society	3
IPC 504*	Communication and Technology	3
IPC 511*	Graduate Research	3
IPC 512*	Health Care Policy and Finance	3
IPC 550 *	Integrating Experience I	NC
IPC 601*	Leadership in Healthcare	3
IPC 655*	Integrating Experience II	1
NHE 531	Curriculum Design	3
NHE 532	Teaching Strategies	3
NHE 611	Educational Assessment	3
NUR 631	The Nurse Educator in Clinical Practice	2
NUR 632	The Nurse Educator in the Academic Setting	3
NUR 640	Advanced Pathophysiology	3
NUR 641	Advanced Pharmacology	3
NUR 642	Advanced Assessment and Clinical Reasoning	3
Total Combined Credits		**39**

* Interprofessional collaborative core course
NC = Non-Credit Bearing
NHE = Combined Nursing and Health Science Education Course

Post-Master's Certificate in Nursing Education

The Post-Master's Certificate in Nursing Education program prepares nurses who hold an MSN in an area other than nursing education to practice as educators in the academic setting. The program provides cutting-edge educational theory in clinical and adult learning, including curriculum design, teaching strategies and assessment. Students also validate the acquisition of nurse educator competencies through an educational experience in the academic setting.

The program takes approximately one year to complete over three or four semesters, depending when the student begins the program and what courses are available in each semester. Courses can be taken in any order, with the exception of NUR 632, which must be taken last. The curriculum also includes a doctoral-level course, offering a stepping-stone to a terminal degree, should a student decide to pursue a doctorate.

Curriculum

Courses		Credits
NHE 531	Curriculum Design	3
NHE 532	Teaching Strategies	3
NHE 611	Educational Assessment	3
NUR 632	The Nurse Educator in the Academic Setting	3
NUR 809	Health Information Technology	3
Total Combined Credits		**15**

Master of Science in Nursing – Nurse Practitioner

Program Description

The Nurse Practitioner program prepares nurses to act as advanced practice leaders within the health care system capable of providing high quality, comprehensive care to individuals and families within their population of focus. Graduates use evidence-based practice recommendations to provide patient-centered care for health promotion, improved patient health outcomes, reduction of health disparities among diverse populations and improvement of patient safety.

At the successful completion of the MSN-NP program, students are eligible to take the American Nursing Credentialing Center (ANCC) [for Acute Care, Psych and FNP] or the American Association of Nurse Practitioners (AANP) [for FNP] board exams.

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care needs of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes

At the completion of the program, the graduate will:

- Integrate knowledge from nursing and other disciplines to plan patient-centered care that promotes health and improves health care outcomes.
- Apply leadership skills that foster ethical decision making, fiscal responsibility, and advocacy, interprofessional collaborative relationships and a systems perspective.
- Use technology to enhance communication and support quality of care and strategic decision-making processes in practice.
- Apply patient-centered and culturally appropriate concepts to improve quality and safety, reduce health disparities, and improve health outcomes for diverse populations.
- Model behaviors that demonstrate professionalism and community engagement of self and others, through clinical scholarship and application of evidence-based recommendations in practice.
- Use evidence-based knowledge and appropriate professional standards to analyze, evaluate and influence outcomes and health care policy for individuals, populations or systems.

Curriculum

Students entering the Nurse Practitioner program choose one of the population-focused tracks and complete all courses to meet eligibility requirements to become nationally certified and licensed as a Nurse Practitioner. The curriculum consists of MSN core courses, nurse practitioner core courses and courses specific to the chosen track. The curriculum is organized to continue the development of values, understanding, knowledge and skills needed in all aspects of practice as an NP and emphasizes specialty areas. It is also consistent with State Board content requirements, and all courses reflect each of those content elements. The following indicates the number of credits and the number of clinical hours for each track:

- Adult-Gerontology Acute Care: 52 total credits, 720 total clinical hours
- Family-Individual Across the Lifespan: 53 total credits, 720 total clinical hours
- Psychiatric-Mental Health: 51 total credits, 720 total clinical hours

Sample Curricular Plan – Adult-Gerontology Acute Care Nurse Practitioner

First Year

Fall Semester		Credits
IPC 511	Graduate Research	3
IPC 512	Health Care Policy and Finance	3
Total		**6**

Spring Semester		Credits
IPC 601	Leadership in Healthcare	3
NUR 700	Epidemiology & Population Health	3
Total		**6**

Summer Semester		Credits
NUR 643	Health Promotion in an Integrated Care Model	3
Total		**3**
Total Combined Credits		**15**

Second Year

Fall Semester		Credits
NUR 640	Advanced Pathophysiology	3
Total		**3**

Spring Semester		Credits
NUR 641	Advanced Pharmacology	3
NUR 500	Nurse Practitioner Role Development	1
Total		**4**

Summer Semester		Credits
NUR 642	Advanced Assessment and Clinical Reasoning	3
NUR 652	Advanced Pharmacology for Critical Care	3
Total		**6**
Total Combined Credits		**28**

Third Year

Fall Semester		Credits
NUR 740	Adult-Gerontology Acute Care NP I	4
NUR 741	Adult-Gerontology Acute Care NP Practicum I	4
Total		**8**

Spring Semester		Credits
NUR 742	Adult-Gerontology Acute Care NP II	4
NUR 743	Adult-Gerontology Acute Care Practicum II	4
Total		**8**

Summer Semester		Credits
NUR 744	Adult-Gerontology Acute Care NP III	4
NUR 745	Adult-Gerontology Acute Care Practicum III	4
Total		**8**
Total Combined Credits		**52**

Sample Curricular Plan – Family Across the Lifespan Nurse Practitioner

First Year

Fall Semester		Credits
IPC 511	Graduate Research	3
IPC 512	Health Care Policy and Finance	3
Total		**6**

Spring Semester		Credits
IPC 601	Leadership in Healthcare	3
NUR 700	Epidemiology & Population Health	3
Total		**6**

Summer Semester		Credits
NUR 643	Health Promotion in an Integrated Care Model	3
NUR 644	Application of Integrated Care Concepts	2
Total		**5**
Total Combined Credits		**17**

Second Year

Fall Semester		Credits
NUR 640	Advanced Pathophysiology	3
Total		**3**

Spring Semester		Credits
NUR 641	Advanced Pharmacology	3
NUR 500	Nurse Practitioner Role Development	1
Total		**4**

Summer Semester		Credits
NUR 642	Advanced Assessment and Clinical Reasoning	3
NUR 651	Advanced Psychopharmacology	2
Total		**5**
Total Combined Credits		**29**

Third Year

Fall Semester		Credits
NUR 720	Family Nurse Practitioner Across the Lifespan I	4
NUR 721	Family Nurse Practitioner Practicum I	4
Total		**8**

Spring Semester		Credits
NUR 722	Family Nurse Practitioner Across the Lifespan II	4
NUR 723	Family Nurse Practitioner Practicum II	4
Total		**8**

Summer Semester		Credits
NUR 724	Family Nurse Practitioner Across the Lifespan III	4
NUR 725	Family Nurse Practitioner Practicum III	4
Total		**8**
Total Combined Credits		**53**

Sample Curricular Plan – Psychiatric-Mental Health Nurse Practitioner

First Year

Fall Semester		Credits
IPC 511	Graduate Research	3
IPC 512	Health Care Policy and Finance	3
Total		**6**

Spring Semester		Credits
IPC 601	Leadership in Healthcare	3
NUR 700	Epidemiology & Population Health	3
Total		**6**

Summer Semester		Credits
NUR 643	Health Promotion in an Integrated Care Model	3
NUR 644	Application of Integrated Care Concepts	2
Total		**5**
Total Combined Credits		**17**

Second Year

Fall Semester		Credits
NUR 640	Advanced Pathophysiology	3
NUR 650	Neuroscience of Mental Health Disorders	1
Total		**4**

Spring Semester		Credits
NUR 641	Advanced Pharmacology	3
NUR 500	Nurse Practitioner Role Development	1
Total		**4**

Summer Semester		Credits
NUR 642	Advanced Assessment and Clinical Reasoning	3
NUR 651	Advanced Psychopharmacology	2
Total		**5**
Total Combined Credits		**30**

Third Year

Fall Semester		Credits
NUR 730	Psych/Mental Health NP I	3
NUR 731	Psych/Mental Health NP Practicum I	4
Total		**7**

Spring Semester		Credits
NUR 732	Psych/Mental Health NP II	3
NUR 733	Psych/Mental Health NP Practicum II	4
Total		**7**

Summer Semester		Credits
NUR 734	Psych/Mental Health NP III	3
NUR 735	Psych/Mental Health NP Practicum III	4
Total		**7**
Total Combined Credits		**51**

Post-Master's Nurse Practitioner Certificate (Advanced Standing)

Certificate options are available for all applicants with an MSN. A gap analysis is completed at the time of admission to develop an individualized plan of study based on previous coursework and clinical experiences.

A gap analysis is a process that involves portfolio review at the time of admission and determination of appropriateness for waiver of didactic and practicum requirements, based on the previous coursework and clinical experiences. This process will be used for students who are MSN-prepared. The purpose of the gap analysis is to build on previously attained skills, to maximize the student's academic experience, and to avoid unnecessary redundancy.

RN to MSN Bridge

Program Description

The RN to MSN Bridge fills a need for those who already have a baccalaureate degree in a field other than nursing and who are currently licensed as registered nurses. Those who successfully complete this course sequence are eligible to begin MSN studies at PA College. **A BSN is not awarded through completion of the bridge program.**

Educational Outcome

At the completion of the curriculum, the learner will:

- Demonstrate skills and knowledge that are expected of an entrant to the MSN program.

Courses		Credits
IPC 401	Research in Health Care	3
NUR 420	Nursing Leadership and Management	3
NUR 430	Nursing in a Global Society	3
Total Combined Credits		**9**

Doctor of Nursing Practice

Program Description

PA College's Doctor of Nursing Practice program is designed for learners who already hold an MSN and are ready to advance their nursing career to the highest level of nursing practice. This program is ideal for nurses in roles such as nurse educators, nurse administrators, nurse practitioners, clinical nurse specialists, nurse anesthetists, nurse informatics specialists or nurse midwives.

Students whose previous MSN programs did not emphasize clinical practice will enter the Clinical Leadership Track and complete the program in three to five years. Students whose previous MSN program had a clinical focus, such as advanced practice registered nursing or nurses holding some type of advanced nursing certification, can complete the program in two to five years. Courses are offered in an online format.

Mission

The faculty of the Division of Nursing ascribe to the mission and educational policies of Pennsylvania College of Health Sciences. The mission of the Division of Nursing is to prepare nurses at the associate, baccalaureate and graduate levels who are competent, caring and socially responsive to current and future health care demands of individuals, groups and communities. This mission is accomplished through nursing education, scholarship and service.

Educational Outcomes

At the completion of the program, the graduate will:

- Integrate knowledge from nursing and other disciplines to plan innovative practice initiatives that improve health outcomes in various clinical settings.
- Develop the leadership skills to influence health care organizations, policy makers and health care providers to adopt cost-efficient, ethical, quality and patient-centered services to health care consumers.
- Analyze, select and evaluate patient care technologies that support quality of care in various practice settings.
- Synthesize and apply individual and aggregate-level data to reduce health disparities and improve health outcomes for diverse populations.
- Develop clinical scholarship through practice inquiry and translation of evidence into practice.
- Demonstrate advanced clinical leadership in decision-making competencies for safe and quality patient or population-centered care.

Integrating Experiences

Students participate in two live online or on campus Integrating Experiences. During these educational events, graduate students at all levels network with colleagues and faculty, learn through workshops, and present their scholarly work. Orientation to graduates studies addresses important information on registration, using the Library, online learning and program requirements. Completion of IPC 500, IPC 750 and IPC 850 are required for graduation.

Clinical Requirements

A minimum of 1,000 post-baccalaureate clinical hours is required to complete the DNP. These hours include any hours completed during the student's MSN or APRN program. A minimum of 360 clinical hours must be completed at PA College. Plans of study are individualized based on the clinical hours students bring from their MSN or APRN program, and may include additional credits in the variable courses listed below.

Doctor of Nursing Practice

The DNP curriculum includes common courses taken by all DNP students, regardless of their track. The Clinical Leadership track includes additional clinical courses for students to reach the required 1,000 clinical hours to obtain a DNP degree.

Prerequisites		Credits
IPC 511	Graduate Research	3
	Clinical Hours from MSN Degree	Varies

Clinical Leadership and APRN/NP Tracks

DNP Common Courses		Credits
IPC 500	Introduction to Graduate Studies	NC
IPC 512	Health Care Policy and Finance	3
IPC 750	Doctoral Integrating Experience I	NC
IPC 850	Doctoral Integrating Experience II	NC
MAT 600	Statistics for Evidence-Based Practice	3
NHA 522	Organizational Behavior and Performance Improvement	3
NUR 700	Epidemiology & Population Health	3
NUR 801	Introduction to the Doctor of Nursing Practice	2
NUR 803	Nursing Leadership for Quality and Safety	3
NUR 806	Leadership Practicum	2
NUR 807*	Independent Study in Leadership*	3*
NUR 809	Health Information Technology	3
NUR 815	Evidence-Based Practice: Research Translation	3
NUR 816	DNP I Project Planning and Development	3
NUR 817	DNP II Project Implementation	3
NUR 818	DNP III Project Evaluation & Dissemination	2
NUR 819	Knowledge Dissemination	1
Total Credits		**34 (minimum)**

* For the APRN/NP track, NUR 807 may be needed to reach the required 1,000 clinical hours to obtain a DNP degree.

Clinical Leadership Track Additional Courses

Clinical Courses		Credits
NUR 811	Clinical Role Immersion I	3
NUR 813	Clinical Role Immersion II +	Waived or 3
Total Credits		**3 (minimum)**

+ For the clinical leadership track, NUR 813 is waived or 3 credits with the intention of providing the necessary clinical exposure to reach the required 1,000 clinical hours to obtain a DNP degree.

NC = Non-Credit Bearing

Course Descriptions

BIO 105 Human Biology

3-credit course. This course is an introductory course to the biology of the human body. Topics include overviews of the circulatory, digestive, respiratory, nervous, reproductive, excretory and musculoskeletal systems. Not open for students with credit in BIO 175 or BIO 176.
Prerequisite: None
Co-requisite: BIO 105L

BIO 105L Human Biology Laboratory

0-credit lab course. Hands-on laboratory activities give practical experience in understanding concepts about how the human body functions as presented in the lecture component of Human Biology. Not open for students with credit in BIO 175 or BIO 176.
Prerequisite: None
Co-requisite: BIO 105

BIO 175 Human Anatomy & Physiology I

4-credit course. This course studies the fundamental elements of human structure and function including cellular physiology, tissue organization, integumentary system, skeletal system, muscular system, nervous system and senses. Unifying themes, such as homeostasis, will be covered.
Prerequisite: None
Co-requisite: BIO 175L

BIO 175L Human Anatomy & Physiology I Laboratory

0-credit lab course. The laboratory component provides hands-on experiences, which encourage critical thinking, the understanding of scientific methodology and the application of scientific principles as presented in the lecture component of Human Anatomy & Physiology I.
Prerequisite: None
Co-requisite: BIO 175

BIO 176 Human Anatomy & Physiology II

4-credit course. This course is a continuation of Human Anatomy & Physiology I (BIO 175) and includes the cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and metabolism, renal system, fluid/electrolyte and acid/base balance and reproductive system. Unifying themes, such as homeostasis, will be expanded upon.
Prerequisite: BIO 175
Co-Requisite: BIO 176L

BIO 176L Human Anatomy & Physiology II Laboratory

0-credit lab course. The laboratory component provides hands-on experiences, which encourage critical thinking, the understanding of scientific methodology and the application of scientific principles as presented in the lecture component of Human Anatomy & Physiology II.
Prerequisite: BIO 175
Co-requisite: BIO 176

BIO 185 Microbiology

3-credit course. This course provides an introduction to microbiology with an emphasis on the basic principles and concepts including anatomy, classification, physiology and practical uses of microorganisms. Students will develop an understanding of how microorganisms affect our lives by causing disease,

destroying things that we consider important or contributing to improving our quality of life. The importance of the prevention of the transmission of infections will be emphasized.
Prerequisite: BIO 175 or BIO 105
Co-requisite: BIO 185L

BIO 185 L Microbiology Laboratory

0-credit lab course.
Prerequisite: None
Co-requisite: BIO 185

BIO 230 Immunology

3-credit course. This course will cover principles of immunology, both at the molecular and cellular level, and will address aspects of cell mediated immunity in health and disease. Emphasis will be placed on specific and non-specific immunity and how the systems interact with each other. Other aspects of immunology, such as cancer, autoimmunity, immunology tools and the mechanisms pathogens use to avoid the immune system, will be covered.
Prerequisites or Co-Requisites: BIO 185, BIO 175, BIO 105

BIO 250 Nutrition for Life

3-credit course. This course covers the role of nutrition in human health. Students will explore food composition, biochemistry of nutrients, nutrient metabolism and utilization in the body, and the changing nutritional needs throughout the life span. Nutrition as part of health promotion will be emphasized in this course.
Prerequisite: None

BIO 376 Pathophysiology

3-credit course. This course examines the etiology, signs, symptoms, diagnosis, therapy and prognosis of common disease states. Organized by system, the course will review the normal physiology, then explore common pathologies within those systems. Students will focus in depth on a specific pathology to research and critique commonly available information.
Prerequisite: BIO 176

BIO 380 Epidemiology

3-credit course. This course will introduce the basic principles of epidemiology and the methods and techniques to address public health problems. The emphasis of this course will be on, but not limited to, infectious diseases.
Prerequisites: BIO 185 or BIO 230

BIO 499 Independent Study in Biology

1-3 credit course. Independent Study in Biology offers an advanced approach on current concepts and breakthroughs in the biology community.
Prerequisite or Co-Requisite: 11 credits in Biology and chair permission CHE 100 General Chemistry I
3-credit course. CHE 100 introduces topics in both general and organic chemistry, including atomic structure, dimensional analysis, the mole, organic nomenclature, chemistry of gases, and introduces equilibrium.
Prerequisite: None

CHE 100 General Chemistry I

3-credit course. CHE 100 introduces topics in both general and organic chemistry, including atomic structure, dimensional analysis, the mole, organic nomenclature, chemistry of gases, and introduces equilibrium.
Prerequisite: None

CAS 113 Echo Lab I

1-credit course This course will introduce the student to the skills needed to perform sonograms of normal cardiac structures.
Prerequisite: None

CSS 101 College Studies Seminar

3-credit course. This course imparts knowledge and skills in digital and information literacy, critical thinking, communication, collaboration, and engagement with diverse communities and resources in order to promote learner success at PA College.
Prerequisite: None

CVT 202 Introduction to Radiation Physics and Safety

1-credit course. Students will study the science of x-ray imaging and the basics of radiation safety and protection for patients and health care workers.
Prerequisite: None

CVT 204 Cardiovascular Simulation Lab

1-credit course. Students will apply entry level skills to perform diagnostic procedures in a simulated cardiac lab environment and will be introduced to other cardiac care areas within the health system.
Co-requisite: CVT 205

CVT 205 Cardiac Invasive Procedures

3-credit course. Students will learn necessary skills to enter and safely function in the cardiovascular lab.
Co-requisite: CVT 204

CVT 206 Cardiac A&P

3-credit course. The purpose of this course is to explore in detail the construction and dynamics of the cardiovascular system. In addition, this course will prepare the cardiovascular student to recognize the pathological processes and congenital defects of the cardiovascular system as depicted in an invasive cardiovascular laboratory.
Prerequisite: None

CVT 207 Advanced Procedures

3-credit course. Students will be introduced to the equipment, mechanics, function and deployment of interventional equipment.
Prerequisite: CVT 205

CVT 208 Introduction to Radiography

2-credit course. Students will study the science of x-ray imaging and the resultant biological effects to patients and health care workers.
Prerequisite: None

CVT 212 Cardiovascular Clinical I

6-credit course. Students will apply theoretical concepts to clinical practice, while performing procedures to demonstrate competence.
Prerequisite: HSC 160, CVT 204, CVT 205

CVT 215 Clinical I

4-credit course. Students will apply theoretical concepts to clinical practice, while performing procedures to demonstrate competence.
Prerequisite: HSC 160, CVT 204, CVT 205

CVT 216 Cardiac Device Theory

3-credit hours. Students will learn the fundamentals of internal cardiac devices.
Prerequisite: CVT 212, CVT 225

CVT 217 Cardiovascular Hemodynamics

3-credit course. Students will learn normal and abnormal hemodynamic waveforms, provide analysis and perform hemodynamic calculations.
Prerequisite: CVT 205

CVT 218 Implantable Cardiac Device Theory

3-credit course. Students will learn the fundamentals of internal cardiac devices.
Prerequisite: CVT 215

CVT 219 Cardiac Arrhythmia Therapies

3-credit course. Students will build upon their knowledge of cardiac rhythms and identify best practices for the treatment of cardiac arrhythmias.
Prerequisite: CVT 212

CVT 221 Cardiac Arrhythmias & Treatments

3-credit course. Students will build upon their knowledge of cardiac rhythms and identify best practices for the treatment of cardiac arrhythmias.
Prerequisite: CVT 215

CVT 222 Cardiovascular Clinical II

6-credit course. Students will build upon prior clinical practice and apply theoretical concepts while performing procedures to master skills and demonstrate competence in the cardiovascular lab and electrophysiology lab.
Prerequisite: CVT 212

CVT 225 Cardiac Pharmacology

3-credit course. Students will learn the fundamentals of pharmacology and the most frequently used drugs in the cardiovascular laboratory.
Prerequisite: CVT 217

CVT 228 Radiation Biology

1-Credit course. Students will study the damage electromagnetic radiation causes to the cells and tissues.
Prerequisite: CVT 202

CVT 230 Clinical II

5-credit course. Students will build upon prior clinical practice and apply theoretical concepts while performing procedures to master skills and demonstrate competence.
Prerequisite: CVT 215

CVT 232 Cardiovascular Clinical III

3-credit course. Students will continue to apply theoretical concepts and build upon prior clinical experiences to master skills to become competent in select procedures.
Prerequisite: CVT 222

CVT 235 Clinical III

6-credit course. Students will continue to apply theoretical concepts and build upon prior clinical experiences to master skills to become competent in select procedures.
Prerequisite: CVT 230

DMS 111 Introduction to Sonography

1-credit course. This course will introduce the student to the basic concepts of ultrasound physics, knobology and function of the ultrasound machine. Cross-sectional anatomy will be introduced.
Prerequisite: None
Co-requisites: DMS 112 or VAS 112

DMS 112 Abdominal Sonography I

3-credit course. This course includes a review of normal anatomy and function of abdominal structures and an introduction to their ultrasound appearances.
Prerequisite: None
Co-requisites: DMS 111, DMS 113

DMS 113 Ultrasound Lab I

1-credit course. This course will introduce the skills needed to perform sonograms of normal abdominal structures.
Prerequisites: None
Co-requisites: DMS 111, DMS 112

DMS 221 Ultrasound Physics

3-credit course. This course will provide the student with a practical understanding of the principles of ultrasound physics as they apply to diagnostic medical imaging.
Co-requisites: DMS 222, DMS, 223, DMS 224, DMS 225, DMS 227

DMS 222 Abdominal Sonography II

2-credit course. This course will prepare the student to recognize and describe abdominal pathology on a sonogram.
Prerequisite: DMS 112
Co-requisites: DMS 221, DMS, 223, DMS 224, DMS 225, DMS 227

DMS 223 Obstetrical & Gynecological Sonography I

3-credit course. This course will prepare the student to perform sonograms of the normal pregnant and non-pregnant female pelvis. Didactic instruction includes a review of pelvic anatomy and an introduction to obstetrical imaging.
Co-requisites: DMS 221, DMS 222, DMS 224, DMS 225, DMS 227

DMS 224 Ultrasound Clinical I

4-credit course. This course will prepare the student to perform sonograms of both the pregnant and non-pregnant female pelvis and abdomen in the clinical setting.
Prerequisite: DMS 113
Co-requisites: DMS 221, DMS 222, DMS 223, DMS 225, DMS 227

DMS 225 Ultrasound Lab II

1-credit course. This course will prepare the student to perform sonograms of the pregnant and non-pregnant female pelvis in a simulated clinical environment.
Prerequisite: DMS 113
Co-requisites: DMS 221, DMS 222, DMS 223, DMS 224, DMS 227

DMS 226 Obstetrical & Gynecological Sonography II

3-credit course. This course will provide the student with an understanding of the abnormalities that may occur in the pregnant and non-pregnant female pelvis. Emphasis is given to etiology and significance of the abnormality as well as its sonographic appearance.
Prerequisite: DMS 223
Co-requisites: DMS 229, DMS 230, DMS 231, DMS 233

DMS 227 Common Vascular Procedures

1-credit course. This course will prepare the student to perform sonograms of extracranial arteries and veins of the extremities. Emphasis will include applying Doppler principles to imaging.
Prerequisite: DMS 111

DMS 228 Ultrasound Clinical II

4-credit course. This course will prepare the student to perform sonograms and further develop their scanning skills in the clinical setting. Imaging of the thyroid gland, breasts, testicles, carotid arteries, and peripheral extremity veins will be introduced.
Prerequisite: DMS 224
Co-requisites: DMS 226, DMS 229, DMS 230, DMS 231

DMS 229 Ultrasound Lab III

1-credit course. This course will prepare the student to perform sonograms of the thyroid gland, extracranial arteries and peripheral extremity veins in a simulated clinical setting.
Prerequisite: DMS 225
Co-requisites: DMS 226, DMS 230, DMS 231, DMS 233

DMS 230 Superficial Structures

2-credit course. This course will prepare the student to perform sonograms on the following superficial structures: thyroid gland, breast, testicles, prostate and neonatal head.
Prerequisite: DMS 222
Co-requisites: DMS 226, DMS 229, DMS 231

DMS 231 Ultrasound Seminar

2-credit course. Students will prepare for entrance into Diagnostic Medical Sonography by exploring topics related to career development and continuing education. Guest lecturers from the field will provide insights into professional practice. Content review and mock registry testing will prepare students for the credentialing exams.
Prerequisite: DMS 222
Co-requisites: DMS 226, DMS 229, DMS 230

DMS 232 Ultrasound Clinical III

6-credit course. This course will provide continued clinical setting experience to perfect the student's scanning skills. The students will apply knowledge learned throughout the DMS Program to demonstrate clinical competency in specified sonographic procedures.
Prerequisite: DMS 228

DMS 233 Ultrasound Clinical II

6-credit course. This course will prepare the student to perform sonograms and further develop their scanning skills in the clinical setting. Imaging of the thyroid gland, breasts, testicles, carotid arteries, and peripheral extremity veins will be introduced.
Prerequisite: DMS 224
Co-requisites: DMS 226, DMS 229, DMS 230, DMS 231

DMS 234 Ultrasound Clinical III

4-credit course. This course will provide continued clinical setting experience to perfect the student's scanning skills. The students will apply knowledge learned throughout the DMS Program to demonstrate clinical competency in specified sonographic procedures.
Prerequisite: DMS 233

DMS 320 Musculoskeletal Sonography Fundamentals

3-credit course. This course is intended for the practicing or graduate sonographer to develop a comprehensive understanding of musculoskeletal sonography. Normal anatomy, sonographic evaluation, and basic pathology concepts of the musculoskeletal systems will be reviewed.
Prerequisite: Graduate from an accredited DMS program, RDMS registered or with the approval of the DMS Program Director.

DMS 340 Vascular Sonography

3-credit course. The course provides an introduction to vascular sonography. Successful students will be prepared to take the Vascular Technology American Registry of Diagnostic Medical Sonography registry exam.
Prerequisite: Graduate of an accredited DMS Program or with permission of the instructor

ECO 150 Survey of Economics

3-credit course. This course is an introduction to the economic way of thinking that includes both micro and macroeconomic topics and their application internationally. Major topics to be covered include microeconomic concepts such as supply and demand analysis, market structures, and the impact of government intervention on markets, and macroeconomic concepts such as inflation, unemployment, economic growth and monetary and fiscal policy. This course will help students understand the economic environment in which they live, work and vote.
Prerequisite: None

ECO 310 American Health Care System

3-credit course. This course is an introduction to the structure, operation and financing of the American health care system. It examines the major industry participants, how health care services are allocated and financed, the factors that influence the cost and quality of care, how American health care compares to health care in other countries and opposing positions on the future of health care reform.
Prerequisite: None

ECO 350 The Economics of Health Care

3-credit course. This course is an introduction to the applications of the economic principles to the field of health care. Students explore the demand for services in health care and wellness, the economic factors that influence the behavior of the healthcare providers, and the role of third-party payers and government in the healthcare delivery system. Students also examine how public policies influence the economy of health care.
Prerequisite or Co-Requisite: ECO 150 or microeconomics

EMS 201 Paramedic Basic Curriculum I

0-credit course. This course prepares the student for assessment and treatment of specific individual body systems for out-of-hospital emergency medical care. This course primarily focuses on adult patients.
Prerequisite: Must be enrolled in the Paramedic program
Co-requisite: EMS 201L

EMS 201L Paramedic Basic Curriculum I Laboratory

0-credit course. This course supports the classroom instruction of EMS 201 with the opportunity to practice and demonstrate the hands-on skills required for the professional paramedic.
Prerequisite: Must be enrolled in the Paramedic program
Co-requisite: EMS 201

EMS 202 Paramedic Basic Curriculum II

0-credit course. This course prepares the student to assess and treat out-of-hospital patients in a holistic manner. Students will assess and treat traumatic injury. This course focuses on treating patients across the life span.
Prerequisite: EMS 201, EMS 201L
Co-requisite: EMS 202L

EMS 202L Paramedic Basic Curriculum II Laboratory

0-credit course. This course supports the classroom instruction of EMS 202 with the opportunity to practice and demonstrate the hands-on skills required for the professional paramedic.
Prerequisite: EMS 201, EMS 201L
Co-requisite: EMS 202

EMS 203 Paramedic Basic Curriculum III

0-credit course. This course provides information regarding multidisciplinary facets of emergency medical services operations. Students must function in the role of team leader during their clinical experiences.
Prerequisite: EMS 202, EMS 202L

ENG 100 English Composition

3-credit course. This course provides guided practice in writing with emphasis on thoughtful analysis of subject matter, clear understanding of the writing situation, flexible use of rhetorical strategies and development of stylistic options, particularly those related to an understanding of a variety of purposes and voices. Students gain knowledge and develop skills that assist them to communicate more effectively.
Prerequisite: None

ENG 202 Advanced Communication

3-credit course. This course connects critical thinking skills with reading, writing, and public speaking. Rhetorical situations will focus on a variety of communication modes and advanced research skills.
Prerequisite: ENG 100

ENG 300 Advanced Composition for Health Care

3-credit course. The goal of this course is to understand how writing can be used in the professional health care setting and to apply that understanding to personal practice. Students will examine professional writing samples from a variety of sources, distinguish the components of professional writing and ultimately compose professional articles.
Prerequisite: ENG 100

ENG 310 Business Communication

3-credit course. This course focuses on helping students become more efficient communicators in business settings. Students will be challenged to think critically about how to communicate in the written and spoken word.
Prerequisite: ENG 100

ENG 350 Health Care Stories

3-credit course. This course builds narrative competencies to increase communication in healthcare settings. It provides creative resources for honoring patient and staff healthcare stories. Storytelling facilitates empathy and staff self-care in healthcare interactions.
Prerequisite: None

HCA 200 Principles of Health Care Administration

3-credit course. Introduces students to various managerial concepts, skills, and practices within entry-level healthcare administration roles. Emphasis is on establishing a foundation of healthcare administration knowledge for students to build on.
Prerequisite: None

HCA 301 Health Care Marketing

3-credit course. This course will focus on analyzing the health care marketing and management environment, identifying and ranking primary marketing challenges in the health care environment, developing strategies to address those challenges and making tactical decisions that will achieve the strategy selected.
Prerequisite: HCA 200

HCA 305 Data Analysis

3-credit course. Students will be introduced to fundamental and intermediate data analysis skills, techniques, and tools. Students will transform raw data into meaningful information in a hands-on format.
Prerequisite: None

HCA 335 Human Resources in Health Care

3-credit course. This course introduces students to the basic legal and organizational human resource issues often encountered in U.S. health care organizations.
Prerequisite: HCA 200

HCA 340 Legal Issues in Health Care

3-credit course. This course provides the student an opportunity to examine corporate structure and legal issues relating to patients, professionals and health care institutions.
Prerequisite: HCA 200

HCA 350 Leading Change in Health Care

3-credit course. This course will provide theories, models and case studies of the change process of health care systems. Emphasis will be placed on leading change in structures, regulatory requirements, markets, products, services and organizational culture.
Prerequisite: HCA 200

HCA 400 Health Information Management

3-credit course. This course is designed to introduce the student to the framework of health information, including the content, function, structure, and uses of health information and how health information is managed. Topics include an introduction to health care information systems, fundamentals of information systems, information systems for managerial and clinical support, electronic health records, information security, health care data sets, secondary data sources, clinical vocabularies and application of emerging information technology.
Prerequisite: HCA 200

HCA 410 Health Care Quality

3-credit course. This course will explore quality assurance and performance management activities in the health care setting. Students will gain an understanding for the need to improve the value proposition of health care activities.
Prerequisite: HCA 200 and junior/senior standing.

HCA 415 Health Care Finance

3-credit course. This course is designed to provide an overview of fundamental health care finance principles and concepts. Students will apply health care financial management and analysis skills from an operational perspective.
Prerequisite: None

HCA 420 Health Care Policy and Planning

3-credit course. This course provides an introduction to methods used in policy development and planning for health care services. Topics include the process of policymaking, including agenda setting, government response, program response, implementation and evaluation; planning at the organizational level in such areas as facilities and staffing; and strategic planning in health care delivery.
Prerequisites: HCA 200, ECO 310

HCA 430 Current Issues in Health Care

3-credit course. This course offers students an opportunity to identify and study current trends and issues confronting the health care industry and its stakeholders. Through this course, students will have a better understanding of the challenges and changes facing health care, and evaluate their role in improving it.
Prerequisite: Junior or senior status in a baccalaureate degree program

HCA 431 Health Care Seminar

1-credit course. This seminar style course offers students an opportunity to study specific challenges and issues confronting professionals and leaders in today's health care systems.
Prerequisites: Junior or senior status in BSN, BSHS or BSHA program, enrollment in the Foundations in Health Informatics certificate program or with permission of advisor

HCA 448 Introduction to Internship

1-credit course. Students will explore the components of the internship. Focus will be placed on developing and initiating plans for an appropriate internship and refining the professional competencies needed for successful completion.
Prerequisites: ENG 300, HCA 200
Prerequisite or Co-Requisite: HCA 305

HCA 449 Internship in Health Care Administration

2-credit course. This course includes a structured management-level internship in a hospital, long-term care facility, insurance facility, government agency or other health care organization as approved by the BSHA Program Chair.
Prerequisites or Co-Requisites: Successful completion of HCA 448, ECO 150, Permission of Advisor

HCA 499 Independent Study in Health Care Administration

3-credit course. Students in consultation with the instructor will develop a project proposal to address an identified issue relating to an area of healthcare operations or an area of interest in health management research. Students will be expected to begin project implementation during the course.
Prerequisites: HCA 200

HCA 620 Applied Practice in Health Care Administration

3-credit course. In this course, students apply knowledge and demonstrate competency in health care administration through research and practice.
Prerequisites or Co-Requisites: NHA 521, NHA 522, NHA 601, NHA 602, IPC 601

HLT 150 Wellness for Life

3-credit course. This course offers a comprehensive investigation of the theoretical models and dimensions of wellness. It also provides practical opportunities to assess personal health status and adopt a wellness lifestyle.
Prerequisite: None

HSC 100 Medical Terminology

1-credit course. This is an introductory course of medical terms designed to develop familiarity and confidence in using medical terminology. A self-directed learning approach is used through interactive exercises to develop the ability to correctly spell, pronounce and use medical terms.
Prerequisite: None

HSC 101 Methods of Patient Care

1-credit course. This course is designed to instruct students in the basics of patient care. Topics to be covered include communication, patient moving and transportation, infection control, venipuncture, vital signs, medications, support systems and emergency care.
Prerequisite: Students must be enrolled in a clinical program

HSC 103 Introduction to Health Professions

1-credit course. In this course, students will survey multiple health professions, their educational requirements, and their roles in patient care. Students will be encouraged to explore a variety of career options and to create a plan for entering one or more health fields.
Prerequisite: None

HSC 150 Phlebotomy

3-credit course. This course advances the learner's knowledge of the role of the phlebotomist, phlebotomy techniques, safety precautions and the application of best practices. Completion of this course provides the educational basis for certification; however, students will need to achieve practice hours outside of the classroom in order to sit for certification.
Prerequisite: None

HSC 151 Phlebotomy Clinical

2-credit course. This course is the supervised application of skills acquired in HSC 150. The student learns to function competently as a phlebotomist at an affiliated clinical training site.
Prerequisite: HSC 150

HSC 160 Rhythm & 12-Lead ECG Analysis

3-credit course. Students will learn to analyze and interpret cardiac rhythms.
Prerequisite: BIO 176 (Breanna)

HSC 195 Cross-Sectional Anatomy

1-credit course. In this course the student studies gross anatomical structures viewed in sagittal, axial and coronal planes utilizing CT scan, MRI and line drawing images. The basic structures and functions of major organ systems are described along with common pathologies of each organ system.
Prerequisite: BIO 176

HSC 200 Advanced Cardiac Life Support

1-credit course. Students will learn appropriate early treatment for cardiopulmonary arrest and cerebrovascular stroke using the Advanced Cardiac Life Support algorithms.
Prerequisite: None

HSC 300 Organizational Behavior

3-credit course. This course will examine the management of complex organizations and requires an understanding of the nature of human behavior in corporate and other organizations, styles of motivations, company leadership, power and authority, strategies of organizational design and change, teamwork and collaboration, and the measurement of organizational effectiveness.
Prerequisite: None

HSC 402 Healthcare Leadership

3-credit course. Students will explore concepts of leadership and essential skills in theory and practice required to become an effective leader in health care. This course provides the opportunity for personal development through exercises in identifying leadership competence and strengths, effective communication, and solving real world issues.
Prerequisite: None

HUM 210 World Religions

3-credit course. This course will focus on primal religions and the major religion of the West, Christianity; the Middle East, Judaism and Islam; and India and the Far East, Hinduism, Buddhism, Confucianism and Taoism. The course will cover the development of each system of belief and its approach to life and death, the afterlife, and good and evil.
Prerequisite: None

HUM 310 Death, Dying & Bereavement

3-credit course. The purpose of this course is to acquaint students with the issues and implications of death and dying. It is based on the premise that death education helps one to live more fully and serve others in a more meaningful way. This course will enable students in the health care professions to better relate to those they serve, in addition to examining their own views on death and dying.
Prerequisite: 40 credits completed or in progress and enrolled in a program

IPC 302 Introduction to Capstone

1-credit course. This course prepares the student to explore the meaning, benefits and components of service learning. Students will explore potential ideas for development of a service-learning project which will be implemented prior to completion of the curriculum.
Prerequisite: Must be enrolled in a baccalaureate program

IPC 310 Aging & Health Care

3-credit course. This course provides students in healthcare fields with an overview of the life changes associated with aging and the pertinent issues and policies involved in caring for the older adult population (65+). Physiological, psychosocial and economic changes associated with aging, health related issues and outcomes, and quality of and access to healthcare for this age group are examined.
Prerequisite: 30 credit hours

IPC 322 Teaching and Learning

3-credit course. This course prepares the health care professional to educate patients, peers and/or others in the healthcare setting or community. Students will examine characteristics of learners, adult learning principles, teaching methodologies, strategies for implementation, and evaluation methods. Barriers to learning, including readiness to learn and literacy concerns will be discussed.
Prerequisite or Co-Requisite: Must be enrolled in baccalaureate program

IPC 330 Health Informatics and Technology

3-credit course. This course will introduce the student to the integral relationship between health care science, technology, and information science. Students will examine how professional practice is advancing through the use of health care technologies and information systems. Current trends and issues related to planning, utilizing, managing and evaluating health care information and technology will be explored.
Prerequisite: None

IPC 335 Substance Use, Abuse and Health Care

3-credit course. Students explore perspectives on substance use, disorders, and addiction, with an emphasis on analyzing the impact on health care. Perspectives on use, prevention, education, and treatment will be discussed.
Prerequisite: 30 or more credits

IPC 401 Research in Health Care

3-credit course. This course focuses on the role of research as it informs professional health care practice. Students will have an opportunity to analyze, critique and interpret quantitative and qualitative research. It serves as a means to incorporate evidence-based practice in the evaluation and modification of current practice.
Prerequisites: ENG 202 or ENG 300 and MAT 260

IPC 414 Holistic Health Modalities

3-credit course. This course is designed to expand the students' perspective of health by considering the whole person. Emphasis is placed on physical, mental, emotional, social and spiritual aspects. Insight will be gained which fosters a cooperative relationship among allopathic, complementary and alternative health care models.
Prerequisite: 30 or more credits

IPC 447 Project Management

3-credit course. This course will introduce students to the fundamental concepts, knowledge, skills, tools and techniques commonly used for effective management of a project across its life cycle.
Prerequisite: Junior or senior standing in a baccalaureate program

IPC 450 Capstone

3-credit course. This culminating course is designed to allow students to creatively analyze, synthesize and evaluate learning across the curriculum. The course integrates knowledge, skills, and experiential learning obtained through the service learning project.
Prerequisites: IPC 302, IPC 401; should be the last course taken in your program, according to the specific progression policies of your particular bachelor's program

IPC 500 Introduction to Graduate Studies

0-credit course. This course provides a half day introduction and orientation to students enrolled in MHA, MSN-A, MSN-E, and DNP programs.
Prerequisite: None

IPC 501 Health Promotion and Disease Prevention in a Diverse Society

3-credit course. This course focuses on social determinants of health for diverse populations and critical analysis of various theories and practices for health promotion and disease prevention. Levels of prevention, population health, environmental health, epidemiology and culture are addressed. Health disparities and vulnerable populations are considered.
Prerequisite: None

IPC 504 Communication and Technology

3-credit course. This course focuses on advanced aspects of communication with stakeholders in healthcare. It examines the development and implementation of newly emerging communication and information sharing technologies that are reshaping provision of care.
Prerequisite: None

IPC 511 Graduate Research

3-credit course. This course provides an overview of quantitative and qualitative research methods commonly used for systematic inquiry in health care. Current research literature is evaluated. Quantitative and qualitative techniques of data analysis are also examined.
Prerequisite: None

IPC 512 Health Care Policy and Finance

3-credit course. This course analyzes policy issues and policy making relating to current economic, political, societal, and technological realities affecting health care. Theories and techniques of financial management are critically examined.
Prerequisite: None

IPC 550 Integrating Experience I

0-credit course. This seminar brings students from all graduate programs together to work collaboratively on solving problems and dealing with scenarios drawn from health care. During this seminar, students will also share experiences in the graduate programs, provide feedback, and network with colleagues and faculty.
Prerequisites: 9 credits of graduate work; 6 of the 9 credits must be from IPC 500, IPC 501, IPC 502, IPC 504, IPC 511, IPC 512

IPC 601 Leadership in Healthcare

3-credit course. This course emphasizes effective leadership competencies in interprofessional healthcare teams. Theoretical leadership concepts are synthesized in relation to personal and professional values with emphasis placed on leading diverse teams for healthcare improvement.
Prerequisites: None

IPC 655 Integrating Experience II

1-credit course. This one-day campus conference brings students from all graduate programs together to work collaboratively on solving problems and dealing with scenarios drawn from health care. During this seminar, students will present summaries of their Applied Practice projects, share experiences in the graduate programs, provide feedback, and network with colleagues and faculty.
Prerequisite: HCA 620 or NUR 620 or NUR 630 or NUR 632 and IPC 500 and IPC 550

IPC 750 Doctoral Integrating Experience I

0-credit course. This seminar brings students from Graduate Programs together to discuss, in a collaborative setting, issues relevant to health care and areas of scholarly research.
Prerequisite: None

IPC 850 Doctoral Integrating Experience II

0-credit course. This seminar brings students from Graduate Program together to discuss and present in a collaborative setting, issues relevant to health care and areas of scholarly research.
Prerequisite: NUR 818
Co-requisite: IPC 818

MAP 100 Introduction to Medical Assisting and the Healthcare Setting

0-credit course. This course will provide an overview of healthcare professions and the role of the Medical Assistant within a healthcare setting. The history of medicine, professionalism, communications, behaviors, government agency directives, and duties will be discussed.
Prerequisite: Enrollment in the Medical Assistant program

MAP 105 Medical Assistant Law and Ethics

0-credit course. This course will provide fundamental knowledge of legal and ethical responsibilities of a medical assistant.
Prerequisite: MAP 100

MAP 110 Medical Assistant Terminology

0-credit course. This course is designed for students to build their medical vocabulary using word parts, prefixes, and suffixes. Body systems and their appropriate terminology will be discussed. Spelling, defining, and pronouncing medical terms accurately will be the focus.
Prerequisite: Enrollment in the Medical Assistant program

MAP 120 Medical Assistant Anatomy & Physiology I

0-credit course. This course introduces medical assistant students to the anatomical structures and physiological function of the body's cells, integumentary, skeletal, muscular, nervous, endocrine systems and the senses.
Prerequisite: Enrollment in the Medical Assistant program

MAP 125 Medical Assistant Anatomy & Physiology II

0-credit course. This course introduces medical assistant students to the anatomical structures and physiological function of the cardiovascular, lymphatic, respiratory, digestive, renal, and reproductive systems.
Prerequisite: MAP 120

MAP 130 Medical Assistant Administrative Procedures

0-credit course. Course will introduce the administrative duties and concepts needed by a medical assistant.
Prerequisite: MAP 100

MAP 150 Clinical Procedures I

0-credit course. Provide students with foundational knowledge and skills to be a successful medical assistant.
Prerequisites: MAP 100, MAP 110

MAP 160 Medical Assistant Laboratory Techniques

Students will be introduced to the concepts of collection, processing, and analysis of patient specimens. In addition, various imaging modalities and diagnostic tests are explored.
Prerequisite: MAP 150
Co-requisite: MAP 170

MAP 170 Clinical Procedures II

Building off knowledge from Clinical Procedures I, the student will continue to develop foundational skills. More complex medical assisting concepts and skills will be introduced.
Prerequisite: MAP 150

MAP 180 Medical Assistant Career Development and Skills Review

Course will prepare the student for program externship and future career by review of previous medical assisting concepts culminating in a mock credentialing exam. Students will explore resume building and interview techniques.
Prerequisites: MAP 160, MAP 170
Co-requisite: MAP 130

MAP 190 Medical Assistant Externship

Course will allow the student to demonstrate and enhance administrative, clinical, and professional skills in a clinical setting under the direction of healthcare professionals.
Prerequisite: MAP 180

MAT 100 Quantitative Reasoning and Skills

3-credit course. This course focuses on the application of mathematics and statistics to interpret and analyze quantitative information. An emphasis is placed on critical thinking and applying conceptually-grounded skills to solve problems in context.
Prerequisite: None

MAT 150 Clinical Mathematics for the Health Sciences

3-credit course. This course is a study of mathematics applications in the health sciences using arithmetic, algebra and statistics. Problem-solving techniques will be illustrated to give students insight into the practical applications of mathematics in addressing real-life problems.
Prerequisite: None

MAT 160 College Algebra

3-credit course. This course involves the study of algebra including its applications and graphs. Course topics include algebraic expressions, linear equations and inequalities, polynomial and rational functions, quadratic equations and inequalities, exponential and logarithmic functions, systems of equations, relations and functions and radical and root functions.
Prerequisites: High School Algebra I & II

MAT 260 Statistics

3-credit course. This course introduces the basic concepts of statistical reasoning and computer-based techniques for organizing and interpreting data. Topics covered include measures of central tendency and variation, probability, the normal distribution, correlation, estimating population parameters and hypothesis testing.
Prerequisite: College-level math or statistics course

MAT 600 Statistics for Evidence-based Practice

3-credit course. Application of descriptive and inferential statistical methods necessary for understanding, evaluating and transforming research findings into practice are emphasized.
Prerequisite: None

MLS 401 Fundamental Operations of the Clinical Laboratory

2-credit course. The learner will be introduced to clinical laboratory techniques including the requisites of medical terminology, ethical behavior, personal safety, specimen integrity and quality assurance.
Prerequisite: Admission to the MLS Program

MLS 402 Clinical Parasitology and Mycology

2-credit course. The learner will study medically significant parasites and fungi including specimen collection and safe handling, isolation and growth requirements and methods of identification for diagnosis, disease causation and treatment.
Prerequisite or Co-Requisite: MLS 401

MLS 411 Clinical Microbiology I

4-credit course. The learner is provided with a comprehensive study of aerobic bacteria involved in human disease encompassing specimen collection, handling, culture requirements, current identification methods and antimicrobial testing used in the clinical laboratory.
Prerequisite: Admission to the MLS Program

MLS 412 Clinical Microbiology II

4-credit course. The learner will continue the study of clinically important microorganisms including fastidious bacteria and viruses, addressing identification by molecular diagnostic procedures and incorporating a body system approach.
Prerequisite: MLS 411

MLS 421 Clinical Laboratory Hematology I

4-credit course. This course introduces leukocytes, erythrocytes, thrombocytes and hemostasis. Diseases and disorders of erythrocytes will be analyzed as causes of anemia.
Prerequisite: Admission to the MLS Program

MLS 422 Clinical Laboratory Hematology II

4-credit course. This course builds upon Clinical Laboratory Hematology I and includes the study of hematology instrumentation, special tests, leukocyte disorders and abnormalities in hemostasis. Analysis of body fluid production and function is included.
Prerequisite: MLS 421

MLS 431 Medical Laboratory Chemistry I

4-credit course. The course presents general principles of the chemical analysis of blood and body fluids, including instrumentation and quality control. Principles of testing assays and the physiologic/biochemical changes occurring in disease states are covered as they relate to the specific analytes discussed.
Prerequisite: Admission to the MLS Program

MLS 432 Medical Laboratory Chemistry II

3-credit course. Building on MLS 431, this course focuses on analyses used to assess major organ system function. The principles of testing methods and the physiologic and biochemical changes that occur in disease states are covered.
Prerequisite: MLS 431

MLS 441 Medical Laboratory Immunology/Serology

2-credit course. The course examines aspects of the immune response and the principles of serologic procedures, with attention to disorders of the immune response and the serological diagnosis of infectious diseases.
Prerequisite: Admission to the MLS Program

MLS 442 Medical Laboratory Immunohematology

3-credit course. This course applies the concepts of blood group antigens and antibodies to transfusion protocols and certain clinical disease states. Emphasis is placed on integrating theory of testing procedures with their clinical significance. The transfusion process is covered from donor suitability and blood collection/component preparation through pretransfusion and compatibility testing.
Prerequisite: MLS 441

MLS 451 Clinical Laboratory Practicum I

3-credit course. The MLS student will be introduced to the clinical laboratory. Students will apply classroom theory to practice under direct supervision of a preceptor.
Prerequisite: Admission to the MLS Program

MLS 452 Clinical Laboratory Practicum II

3-credit course. MLS students will continue to develop critical thinking skills, in technique and instrumentation, required to accurately assess patient results while under the direct supervision and guidance of a preceptor.
Prerequisite: MLS 451

MLS 453 Clinical Laboratory Practicum III

3-credit course. MLS students will apply classroom concepts to laboratory analysis of patient specimens and recognize anomalies. Students will be provided opportunities for autonomy in developing troubleshooting skills and techniques.
Prerequisite: MLS 452

MLS 454 Clinical Laboratory Practicum IV

3-credit course. This clinical rotation prepares the MLS student as an entry level laboratory professional incorporating integrity and reliability while working with minimal supervision.
Prerequisite: MLS 453

MLS 471 Medical Laboratory Leadership Skills

2-credit course. This interactive course is designed to foster the skills and knowledge required to become managers and leaders, with an emphasis on the clinical laboratory environment. Topics of current focus and relevance in the MLS field will be presented.
Prerequisite: Admission to MLS Program

NHA 515 Health Care Law

3-credit course. In this course, students analyze the legal framework and environment and their impact upon the delivery and funding of health care in the United States.
Prerequisite: None

NHA 521 Health Systems Organization and Management

3-credit course. This course explores design and implementation issues within current health care delivery systems including management and leadership techniques to address them.
Prerequisite: None

NHA 522 Organizational Behavior and Performance Improvement

3-credit course. This course examines the concepts of managing human behavior and approaches to quality assurance and performance improvement within health care organizations.
Prerequisite: None

NHA 601 Quantitative Business Analysis

3-credit course. This course provides the tools necessary to analyze and interpret data in the business environment. Content focuses on the design, operations and control of business processes.
Prerequisite: IPC 550

NHA 602 Strategic Planning

3-credit course. This course provides an overview of skills, concepts, and methods required for a leader to think, plan, and act strategically. The course will focus on formulating, developing, and assessing the strategies that promote long-range success for organizations in today’s changing environment.
Prerequisite: IPC 550

NHA 611 Healthcare Human Resource Management

3-credit course. This course provides a framework of human resource tools and the knowledge of utilization of those tools in appropriate situations. The learner will gain an understanding of linking strategies to human resources practices in an ever-changing global, healthcare environment.
Prerequisite: IPC 550

NHE 531 Curriculum Design

3-credit course. This course explores how theory and practice impact curriculum design. The course considers the internal and external influences on curriculum design, trends, issues, and the revision of curricula.
Prerequisite: None

NHE 532 Teaching Strategies

3-credit course. This course examines the teaching-learning process including a variety of instructional methods and delivery modalities in higher education and learning organizations.
Prerequisite: None

NHE 540 Online Teaching Strategies

3-credit course. This course provides the foundational knowledge and skills for teaching effectively in an online environment.
Prerequisites: NHE 531, NHE 532, NHE 611

NHE 542 Simulation Learning

3-credit course. This course provides healthcare professionals with knowledge of simulation based learning strategies and the skills to integrate them into a curriculum.
Prerequisite: None

NHE 611 Educational Assessment

3-credit course. This course focuses on the application of assessment, measurement, evaluation and testing, and the integral part that assessments play in the teaching and learning process.
Prerequisite: IPC 550

NMT 201 Nuclear Medicine Theory I

4-credit course. This is an introductory course in the fundamental concepts of nuclear medicine. This course is a study of the basic sciences that apply to nuclear medicine. Topics include nuclear physics, mathematics, instrumentation, radiation biology and procedures.
Prerequisite: None

NMT 202 Nuclear Medicine Theory II

6-credit course. This course is designed to build on the knowledge gained in NMT 201. Topics in this course include radiation safety, radiopharmacy and more advanced procedures.
Prerequisite: None

NMT 203 Nuclear Medicine Theory III

2-credit course. This course provides a comprehensive review of topics covered throughout the year in order to prepare the students for the national registry exam.
Prerequisite: None

NMT 211 Nuclear Medicine Clinical I

5-credit course. This course is designed to introduce the beginning student to the profession of nuclear medicine technology. Practicum takes places at the clinical affiliates. Students learn by observing and assisting the technologist in the performance of nuclear medicine imaging and associated tasks. Various clinical competencies and five procedure competencies are required in this course.
Prerequisite: None

NMT 212 Nuclear Medicine Clinical II

5-credit course. The student will continue to work toward demonstrating competency in the more frequently performed nuclear medicine studies. They will observe and assist the technologist in the performance of complicated studies. Various clinical competencies and ten additional procedure competencies are required in the course.
Prerequisite: NMT 211

NMT 213 Nuclear Medicine Internship

6-credit course. This final session of practical learning allows the student to fine tune their skills and apply all they have learned in Nuclear Medicine Theory. The student is expected to be able to perform most studies with limited supervision. Various clinical competencies and ten additional procedure competencies are required for this course.
Prerequisite: NMT 212

NUR 110 Concepts of Health and Illness I

2-Credit course. This course provides opportunities for the student to explore fundamental nursing principles, concepts and skills. Classroom and clinical learning experiences provide a framework for the student to provide client centered care.
Prerequisites: BIO-175, CSS-101, ENG-100, BIO-176, PSY-100, BIO-185, MAT-150, SOC-100, BIO-176

NUR 120 Concepts of Health and Illness II

2-Credit course. This course provides opportunities for the student to apply knowledge related to nursing concepts and to develop the skills necessary for providing client centered care.
Prerequisites: NUR-110, BIO-176

NUR 130 Concepts of Health and Illness III

3-Credit course. This course provides the student the opportunity to explore professional nursing identity and concepts related to homeostasis and oxygenation. The student will apply theoretical knowledge to organize and prioritize safe, holistic client care.
Prerequisites: NUR-110, NUR-120, NUR-280

NUR 140 Concepts of Health and Illness IV

3-Credit course. This course provides opportunities for the student to explore concepts with a focus on protection. Classroom and clinical learning experiences provide a framework for the student to provide client centered care.
Prerequisites: NUR-110, NUR-120, NUR-280

NUR 160 History and Theory of Nursing Practice

3-credit course. The evolution of professional nursing as it relates to history, theories, laws, policies and ethics is explored with emphasis on professional responsibility, clinical decision making and implementation of caring, holistic nursing practice.
Prerequisite: Must be enrolled in a baccalaureate nursing program

NUR 170 Foundational Nursing I

3-credit course. This course provides opportunities for students to develop foundational nursing principles, concepts, and skills. Classroom and clinical learning experiences provide a framework for students to provide safe, client-centered care.
Prerequisite or Co-Requisite: MAT 150 and BIO 175

NUR 201 Acute and Chronic Health Problems

7-credit course. This course focuses on the concepts and principles underlying the nursing care of adult health problems. Concepts of the nursing process are integrated as they relate to specific acute and chronic pathophysiologic processes. Emphasis is placed on the developing skills in organization, clinical judgment, and problem solving as well as community concepts.
Prerequisites: BIO 176, NUR 102, NUR 112
Prerequisite or Co-Requisite: BIO 250
Co-requisite: NUR 211

NUR 202 Crisis and Complex Health Problems

7-credit course. This course focuses on advanced concepts and principles underlying the nursing care and management of those with complex health issues, traumatic injuries and organic and societal mental health issues. Emphasis is placed on utilizing skills in communication, clinical judgment, prioritization, and decision-making for these populations.
Prerequisites: BIO 185, NUR 201, NUR 211
Prerequisite or Co-Requisite: SOC 100
Co-requisite: NUR 212

NUR 203 Acute and Chronic Health Problems Part 1

4-credit course. This course focuses on the concepts and principles underlying the nursing care of adult health problems. Concepts of the nursing process are integrated as they relate to specific acute and chronic pathophysiologic processes. Emphasis is placed on the developing skills in organization, clinical judgment and problem solving as well as community concepts.
Prerequisite: Successful completion of all first-year nursing courses
Prerequisite or Co-Requisite: BIO 250
Co-requisite: NUR 213

NUR 204 Acute and Chronic Health Problems Part 2

3-credit course. This course is a continuation of the concepts and principles underlying the nursing care of adult health problems taught in Acute and Chronic Nursing Part 1.
Prerequisite: Successful completion of all first-year nursing courses.
Co-requisite: NUR 214

NUR 205 Crisis and Complex Health Problems Part 1

4-credit course. This course focuses on advanced concepts and principles underlying the nursing care and management of those with complex health issues, traumatic injuries and organic mental health issues. Emphasis is placed on utilizing skills in communication, clinical judgment, prioritization and decision making for these populations.
Prerequisites: NUR 203; NUR 204; NUR 213; NUR 214, or NUR 201 and NUR 211; and BIO 185
Prerequisite or Co-Requisite: SOC 100
Co-requisite: NUR 215

NUR 206 Crisis and Complex Health Problems Part 2

3-credit course. This course is a continuation of Crisis and Complex Health Problems: Part I and focuses on advanced concepts and principles underlying the nursing care and management of those with complex health issues, traumatic injuries and societal mental health issues. Emphasis is placed on utilizing skills in communication, clinical judgment, prioritization, and decision making for these populations.
Prerequisite: NUR 205
Co-requisite: NUR 216

NUR 210 Concepts of Health and Illness V

4 Credit course. This course provides opportunities for the student to explore concepts of adaptation and psychological alteration. Concepts of community and mental health nursing are introduced in this course.
Prerequisites: BIO-176, BIO-185, NUR-130, NUR-140

NUR 211 Acute and Chronic Health Problems: Clinical Laboratory

4-credit course. This course focuses on the nursing care of clients with acute and chronic health problems in various health care settings. Emphasis is placed on application of the nursing process in developing organization, problem solving and clinical judgment.
Prerequisites: BIO 176, NUR 102, NUR 112
Prerequisite or Co-Requisite: BIO 185
Co-requisite: NUR 201

NUR 212 Crisis and Complex Health Problems: Clinical Laboratory

5-credit course. This course focuses on the application of nursing leadership skills as well as organization, delegation, prioritization and clinical judgment for clients with complex physical health problems and/or organic and societal mental health issues.
Prerequisites: BIO 185, NUR 201, NUR 211
Prerequisite or Co-Requisite: PHI 210
Co-requisite: NUR 202

NUR 213 Acute and Chronic Health Problems Part 1: Clinical Laboratory

2-credit course. Emphasis is placed on application of the nursing process in developing organization, problem solving, clinical judgment, and community concepts.
Prerequisite: Successful completion of all first-year nursing courses
Co-requisite: NUR 203

NUR 214 Acute and Chronic Health Problems Part 2: Clinical Laboratory

2-credit course. This course focuses on the nursing care of clients with acute and chronic health problems in various health care settings. Emphasis is placed on application of the nursing process in developing organization, problem solving and clinical judgment.
Prerequisite: Successful completion of all first-year nursing courses
Prerequisite or Co-Requisite: BIO 185
Co-requisite: NUR 204

NUR 215 Crisis and Complex Health Problems Part 1: Clinical Laboratory

2-credit course. This course focuses on the application of nursing leadership skills as well as organization, delegation, prioritization, and clinical judgment for clients with complex physical health problems and/or organic mental health issues.
Prerequisites: NUR 203, NUR 204, NUR 213, NUR 214 or NUR 201 and NUR 211
Prerequisite or Co-Requisite: PHI 210
Co-requisite: NUR 205

NUR 216 Crisis and Complex Health Problems Part 2: Clinical Laboratory

3-credit course. This course is a continuation of Crisis and Complex Nursing Part I: Clinical Laboratory and focuses on the application of nursing leadership skills as well as organization, delegation, prioritization and clinical judgment for clients with complex physical health problems and/or societal mental health issues.
Prerequisite: NUR 215
Co-requisite: NUR 206

NUR 220 Concepts of Health and Illness VI

4 Credit course. This course expands on the student's knowledge of health promotion and illness prevention with a focus on human development. Classroom and clinical experiences focus on client centered care of child-bearing families, pediatric clients, and specialized populations.
Prerequisite: BIO-176, NUR-130, NUR-140

NUR 230 Concepts of Health and Illness VII

5 Credit course. This course provides the student the opportunity to expand their knowledge of oxygenation, homeostasis, and adaptation while providing client centered care focusing on acute and chronic health processes.
Prerequisite: BIO-176, BIO-185, NUR-130, NUR-140

NUR 240 Concepts of Health and Illness VIII

5 Credit course. This course provides the student with the opportunity to explore concepts of health and illness with specific focus on diversity and psychological alterations.
Prerequisite: NUR-210, NUR-220, NUR-230, NUR-290

NUR 250 Concepts of Health and Illness IX

3 Credit course. This course provides the student the opportunity to synthesize previously learned knowledge, skills, and concepts into managing the holistic care of clients with complex health problems.
Prerequisite: NUR-210, NUR-220, NUR-230, NUR-290

NUR 260 Pharmacology

3-credit course. This course introduces the learner to the principles of pharmacology with an emphasis on the clinical application of medication administration. Topics include: pharmacodynamics, pharmacokinetics, mode of action, indications, effects, interactions, contraindications, lifespan considerations, and nursing implications.
Prerequisite: NUR 270 and BIO 176

NUR 265 Health Assessment

3-credit course. In this course, learners develop health history and physical assessment skills. Assessment findings and common variations, cultural differences, life span changes, disease prevention, and health promotion interventions are discussed.
Prerequisite: BSN: BIO 175, NUR 170 ASN: BIO 175 & 3 credits Humanities/Science
Prerequisite or Co-Requisite: BSN & ASN: BIO 176

NUR 270 Foundational Nursing II

3-credit course. Learners apply theoretical knowledge to organize and prioritize safe, holistic client care.
Prerequisites: NUR 170
Prerequisite or Co-Requisite: NUR 265 and BIO 176

NUR 271 Foundations of Health and Illness

4-credit course. Learners apply theoretical knowledge to organize and prioritize safe, holistic client care.
Prerequisites: Nur 275, Nur 295

NUR 275 Health and Illness I

5-credit course. This course provides learners the opportunity to explore wellness and illness concepts with a focus on adaptation and regulatory mechanisms.
Prerequisites: NUR 270, PSY 100

NUR 280 Concepts of Pathophysiology

3-credit course. This course focuses on concepts of pathophysiology essential to understanding the disease and disabling conditions that can affect the body systems across the lifespan. Content will enhance the learner's comprehension of the scientific complexity and associations of nursing assessments, clinical manifestations, and holistic interventions for various conditions.
Prerequisites: BIO 176
Prerequisite or Co-Requisite: NUR 170

NUR 290 Transitions to Practice

3 credit course. This course focuses on the role of the nurse as a leader in practice incorporating collaboration as a member of the interprofessional health care team.
Prerequisites: NUR-210, NUR-220, NUR-230, NUR-240, NUR-250

NUR 295 Health and Illness II

6-credit course. This course provides learners the opportunity to explore wellness and illness concepts with a focus on protection, psychological alterations, and regulatory mechanisms
Prerequisite or Co-Requisite: NUR 270, PSY 100

NUR 301 Conceptual Foundations of Nursing Practice

3-credit course. This course explores the historical and theoretical foundations of nursing. Characteristics of the profession, critical thinking, and the concepts of safety and quality as they apply to nursing practice, are examined and analyzed.
Prerequisite: Must be enrolled in the RN to BSN Track

NUR 312 Human Diversity and Cultural Care in Nursing

Students will investigate nursing care to promote health equity for all populations by examining the impact of their beliefs and values on culturally competent care, while understanding factors impacting diverse populations.
Prerequisite: Acceptance into the BSN program, 30 or more credits

NUR 325 Chronic Illness and Health Care

3-credit course. This course is designed to explore chronic illness as it affects the client, family, community, health care provider and health care system.
Prerequisite: 30 or more credits

NUR 340 Comprehensive Health Assessment

3-credit course. This course is designed to assist the learner in building on prior health assessment skills and knowledge with an emphasis on the critical appraisal of health assessment data. Interprofessional collaboration strategies, patient- and family-centered approaches, and evidence-based practice techniques will be emphasized.
Prerequisite: Must be enrolled in the RN to BSN Track

NUR 349 Nursing Internship

3-credit course. This course is a structured internship that allows learners to be immersed in the clinical environment while they investigate a clinical nursing specialty. Learners have opportunities to gain experience and confidence as they actively engage in the interdisciplinary health care team.
Prerequisites: NUR 275 or NUR 295, NUR 280 and NUR 260
Prerequisite or Co-Requisite: BIO 185

NUR 355 Health and Illness III

6-credit course. This course expands on the learners' knowledge of health promotion and illness prevention with a focus on human development across the lifespan. Concepts of community health nursing are introduced.
Prerequisites: NUR 275, NUR 295, SOC 100

NUR 405 Health and Illness IV

5-credit course. This course provides learners the opportunity to expand their knowledge of regulatory mechanisms and psychological alterations. Learners synthesize previously learned knowledge, skills, and concepts into managing the holistic care of clients with complex health problems.
Prerequisites: NUR 275, NUR 295

NUR 406 Clinical Decision Making

1-credit course. This course focuses on the concepts and principles underlying nursing knowledge, theory, and practice to refine critical thinking skills for the provision of nursing care in simulated client case situations. Emphasis is placed on synthesizing the application of nursing process, nursing diagnoses, and interdisciplinary collaboration for clients with complex multidimensional health needs.
Prerequisites: Completion of 105 credits, must be taken in final semester of program

NUR 410 Issues and Trends in Nursing

3-credit course. This course analyzes issues, trends and forces that influence the nursing practice. Resolution strategies for current issues will be discussed.
Prerequisite: ENG 300 or ENG 202 and enrolled in a baccalaureate nursing program

NUR 412 Women and Health

3-credit course. This course focuses on the physical and psychosocial health issues of women. Factors that influence women's health will be explored.
Prerequisite: 30 or more credits

NUR 416 Palliative Care Nursing

3-credit course. The student explores the principles of palliative care nursing with an emphasis on providing care across the life span that is individualized to the patient and family rather than the diagnosis.
Prerequisite: 30 nursing or IPC credits

NUR 420 Nursing Leadership and Management

3-credit course. This course focuses on leadership and management theory and provides practical applications in today's health care settings. Course content focuses on management skills, including problem solving, decision making, team building, communication, facilitating change and conflict resolution. Concepts related to interdisciplinary collaboration and application of management strategies in diverse settings are addressed. Strategies for managing stressors within today's health care environment, as well as strategies for building a professional nursing career, are incorporated.
Prerequisites: ENG 300 and enrolled in the RN to BSN track

NUR 421 Leadership and Transition into Practice

3-credit course. This course focuses on leadership and management theory and provides practical applications in today's health care settings. Course content includes management skills such as problem solving, decision making, team building, communication, facilitating change, and conflict resolution. Management skills are applied to interdisciplinary collaboration and care coordination in diverse settings. Strategies for transition into practice in today's health care environment, continued professional development, and life-long learning are incorporated.
Co-Requisites: NUR 355 or NUR 405, must be taken in final year of program

NUR 422 Professional Leadership Development and Transition into Practice

3-credit course. This course focuses on leadership and management theory, provides practical applications in today's health care settings, and emphasizes the synthesis of nursing process, nursing diagnoses, and interdisciplinary collaboration and care for clients with complex multidimensional health needs. Course content includes management skills such as problem solving, decision making, team building, communication, facilitating change critical thinking, and conflict resolution. Strategies for transition into practice in today's health care environment, continued professional development, and life-long learning are incorporated.
Prerequisites: NUR 405 or NUR 355

NUR 430 Nursing in a Global Society

3-credit course. This course exposes the student to the major concepts and topics related to the specialty of community/public health nursing. The health of the community as a client is explored using wellness principles, epidemiology, emerging health risks, and health policy. Strategies to promote, protect and preserve a community's health are formulated. Current issues surrounding the social, cultural, political and environmental influences on global health will be examined.
Prerequisites: ENG 300 or ENG 202 and enrolled in a baccalaureate nursing program

NUR 500 Nurse Practitioner Role Development

1-credit course. Students are introduced to the advanced practice registered nurse (APRN) role and the population-focused nurse practitioner competencies. The historical and theoretical foundations for the evolution of advanced nursing practice are explored.
Prerequisite: None

NUR 620 Applied Practice in Nursing Administration

3-credit course. In this course students apply knowledge and demonstrate competency in nursing administration through research and practice in a nursing setting.
Prerequisites or Co-Requisites: NHA 521, NHA 522, NHA 601, NHA 602, IPC 601

NUR 630 Applied Practice in Nursing Education

3-credit course. In this course students expand knowledge in a focused area of nursing. In addition, students demonstrate competency in curriculum development, teaching and evaluation.
Prerequisites or Co-Requisites: NHE 531, NHE 532, NHE 611, NUR 612, NUR 613, IPC 601

NUR 631 The Nurse Educator in Clinical Practice

2-credit course. In this course, students will create an individualized plan to integrate previous knowledge as well as increase expertise within a focused area of nursing care.
Prerequisites: NHE 531, NHE 532, NHE 611, IPC 550 and IPC 511, NUR 640 and NUR 641
Co-Requisite: NUR 642

NUR 632 The Nurse Educator in the Academic Setting

3-credit course. In this course students apply knowledge of best practices in nursing education. Emphasis is placed on professional role development and socialization of becoming a nurse educator within the academic setting.
Prerequisites: NUR 631, IPC 601, IPC 501, IPC 504, IPC 512

NUR 640 Advanced Pathophysiology

3-credit course. Pathophysiologic processes of diseases across the lifespan are explored within the context of health promotion, disease prevention and evidence-based practice.
Prerequisite: None

NUR 641 Advanced Pharmacology

3-credit course. The pharmacokinetics, pharmacodynamics, adverse drug effects, precautions and drug interactions of broad categories of drugs are examined. Safe prescribing of therapeutic agents are addressed within the context of specific populations.
Prerequisite: NUR 640

NUR 642 Advanced Assessment and Clinical Reasoning

3-credit course. This course focuses on developing advanced health assessment skills needed to formulate differential diagnoses in the care of individuals across the lifespan.
Prerequisite: None

NUR 643 Health Promotion in an Integrated Care Model

3-credit course. The focus of this course is on the theoretical and scientific basis for health promotion of diverse populations across the lifespan.
Prerequisite: None

NUR 644 Application of Integrated Care Concepts

2-credit course. This course focuses on practical application of concepts of integrated care. Emphasis is on evidence-based brief therapeutic interventions that can be used to influence positive behavioral change and promote a healthy lifestyle.
Prerequisite: None

NUR 650 Neuroscience of Mental Health Disorders

1-credit course. This course focuses on the neuroscientific concepts underlying common mental health disorders. The relationships between neuroanatomy, neurophysiology, and neurochemistry to neuropsychiatric symptoms and behaviors are emphasized.
Prerequisite: NUR 640

NUR 651 Advanced Psychopharmacology

2-credit course. This course provides an in-depth study of the pharmacologic management of mental health disorders for safe prescribing.
Prerequisite: NUR 641

NUR 652 Advanced Pharmacology for Critical Care

3-credit course. This course addresses the pharmacological management of acute physiologic dysfunction and/or failure of young adults through older adults. Emphasis is on pharmacological strategies for physiologic system stabilization and achievement of optimal outcomes
Prerequisite: NUR 641

NUR 700 Epidemiology & Population Health

3-credit course. Advanced concepts and methods of epidemiology and related topics as they relate to population-based practice are emphasized. Social determinants of health and illness are examined within the context of care delivery for individuals and aggregates/populations.
Prerequisite: None

NUR 720 Family Nurse Practitioner Across the Lifespan I

4-credit course. This diagnosis and management course introduces the student to strategies for health promotion, disease prevention, assessment and management of selected episodic and chronic diseases commonly encountered in the primary care setting.
Prerequisites: NUR 640, NUR 641, NUR 642
Co-requisite: NUR 721

NUR 721 Family Nurse Practitioner Practicum I

4-credit course. Pathophysiologic processes of diseases across the lifespan are explored within the context of health promotion, disease prevention and evidence-based practice.
Prerequisites: NUR 640, NUR 641, NUR 642
Co-Requisite: NUR 720

NUR 722 Family Nurse Practitioner Across the Lifespan II

4-credit course. This second diagnosis and management course in primary care focuses on increasing competence in the analytic skills used for clinical decision-making in assessment and management of individuals and families presenting with selected episodic and chronic diseases.
Prerequisites: NUR 720, NUR 721
Co-Requisite: NUR 723

NUR 723 Family Nurse Practitioner Practicum II

4-credit course. In this second clinical practicum, students demonstrate increased competency in the diagnosis and management of episodic and chronic medical conditions for individuals across the lifespan. Improved accuracy in data collection, depth of knowledge and efficiency of performance are emphasized.
Prerequisites: NUR 720, NUR 721
Co-Requisite: NUR 722

NUR 724 Family Nurse Practitioner Across the Lifespan III

4-credit course. This final diagnosis and management course in primary care focuses on refinement of analytic skills used for clinical decision-making in assessment and management of individuals and families presenting with selected episodic and chronic diseases commonly encountered in the primary care setting.
Prerequisites: NUR 722, NUR 723
Co-requisite: NUR 725

NUR 725 Family Nurse Practitioner Practicum III

4-credit course. In this final practicum course, students demonstrate proficiency and flexibility of thinking in the analytical skills required for clinical decision making in the primary care setting. Emphasis is on skills needed for smooth transition to practice as a nurse practitioner.
Prerequisites: NUR 722, NUR 723
Co-Requisite: NUR 724

NUR 730 Psych/Mental Health NP I

3-credit course. This diagnosis and management course introduces strategies for health promotion, disease prevention and management of selected mental health conditions commonly encountered in mental health settings. The theoretical basis for the application of individual psychotherapeutic approaches is emphasized.
Prerequisites or Co-Requisites: NUR 640, NUR 641, NUR 642
Co-Requisite: NUR 731

NUR 731 Psych/Mental Health NP Practicum I

4-credit course. Students begin integrating the Psychiatric/Mental Health Nurse Practitioner competencies in the clinical setting. Emphasis is on the performance of the comprehensive psychiatric evaluation and the application of psychotherapeutic modalities needed for accurate diagnosis and management of mental health disorders across the lifespan.
Prerequisites: NUR 640, NUR 641, NUR 642
Co-Requisite: NUR 730

NUR 732 Psych/Mental Health NP II

3-credit course. This second diagnosis and management course in psychiatric/mental health care focuses on increasing competence in the analytic skills used for clinical decision-making in assessment and management of individuals and families presenting with selected mental health conditions. Emphasis is on the theoretical basis for family-centered psychotherapeutic modalities.
Prerequisites: NUR 730, NUR 731
Co-requisite: NUR 733

NUR 733 Psych/Mental Health NP Practicum II

4-credit course. In this second clinical practicum, students demonstrate increased competency in the diagnosis and management of mental disorders. Emphasis is on improved accuracy in data collection, depth of knowledge and efficiency of performance.
Prerequisites: NUR 730, NUR 731
Co-Requisite: NUR 732

NUR 734 Psych/Mental Health NP III

3-credit course. This final diagnosis and management course in psychiatric/mental health care focuses on refinement of analytic skills used for clinical decision-making in assessment and management of individuals and families presenting with selected mental health conditions. Emphasis is on the theoretical basis for group psychotherapeutic modalities.
Prerequisites: NUR 732, NUR 733
Co-Requisite: NUR 735

NUR 735 Psych/Mental Health NP Practicum III

4-credit course. In this final clinical practicum, students demonstrate proficiency in the diagnosis and management of mental disorders. Emphasis is on skills needed for smooth transition to practice as a nurse practitioner.
Prerequisites: NUR 732, NUR 733
Co-Requisite: NUR 734

NUR 740 Adult-Gerontology Acute Care NP I

4-credit course. This diagnosis and management course introduces the student to the critical thinking needed for assessing and managing the care of acute and complex chronically ill young adults through older adults with medical illness.
Prerequisites: NUR 640, NUR 641, NUR 642, NUR 652
Co-requisite: NUR 741

NUR 741 Adult-Gerontology Acute Care NP Practicum I

4-credit course. Students begin integrating the Adult-Gerontology Acute Care Nurse Practitioner competencies in the clinical setting. Emphasis is on the refinement of skills needed for accurate diagnosis and initial management of acute and/or complex chronic medical illness in young adults through older adults.
Prerequisites: NUR 640, NUR 641, NUR 642, NUR 652
Co-Requisite: NUR 740

NUR 742 Adult-Gerontology Acute Care NP II

4-credit course. This second diagnosis and management course focuses on increasing competence in the care of acute and complex chronically ill young adults through older adults with emphasis on selected illnesses related to medical and surgical sub-specialties. System influences on health outcomes are emphasized.
Prerequisites: NUR 740, NUR 741
Co-Requisite: NUR 743

NUR 743 Adult-Gerontology Acute Care Practicum II

4-credit course. In this second clinical practicum, students demonstrate increased competency in the diagnosis and management of acute and/or complex chronic illness in young adults through older adults in medical and surgical sub-specialties. Improved accuracy in data collection, depth of knowledge and efficiency of performance are emphasized.
Prerequisites: NUR 740, NUR 741
Co-Requisite: NUR 742

NUR 744 Adult-Gerontology Acute Care NP III

4-credit course. This final diagnosis and management course in acute care focuses on increasing competence in the analytic skills used for clinical decision-making in assessment and management of the critical and/or unstable, complex chronically ill young adults through older adults.
Prerequisites: NUR 742, NUR 743
Co-Requisite: NUR 745

NUR 745 Adult-Gerontology Acute Care Practicum III

4-credit course. In this final clinical practicum students demonstrate proficiency in managing complex adult and older adult patients in critical care settings with conditions that may result in rapid physiologic deterioration or life-threatening instability. Emphasis is on skills needed for smooth transition to practice as a nurse practitioner.
Prerequisites: NUR 742, NUR 743
Co-Requisite: NUR 744

NUR 801 Introduction to the Doctor of Nursing Practice

2-credit course. This course will provide an overview of the Doctor of Nursing Practice Degree requirements and the Doctor of Nursing Practice Essentials.
Prerequisite: None

NUR 803 Nursing Leadership for Quality and Safety

3-credit course. This doctoral level course will provide an overview of quality and safety concerns in the health care environment. Students will develop leadership strategies to address quality and safety concerns.
Prerequisite: None

NUR 806 Leadership Practicum

2-credit course. Students participate in decision-making, policy-making and organizational change through mentored clinical experiences with a health care leader. Students will apply problem-solving skills to propose innovation changes to improve health care delivery.
Prerequisite: IPC 750

NUR 807 Independent Study in Leadership

3-credit course. Students incorporate knowledge of clinical leadership in the practice environment. In collaboration with a health care leader and their faculty advisor, students develop personalized learning outcomes that will enhance their professional expertise.
Prerequisite: NUR 806

NUR 809 Health Information Technology

3-credit course. Health care technologies used in clinical decision-making, improvement of health information literacy, assessment of population health data, and evaluation of quality of care are investigated. Ethical use of technology in health care and the value of telehealth technologies for improvement of care are emphasized.
Prerequisite: None

NUR 811 Clinical Role Immersion I

3-credit course. Students integrate knowledge of health policy, evidence-based practice, leadership skills, informatics, and population health as appropriate for the clinical setting.
Prerequisite: None

NUR 813 Clinical Role Immersion II

3-credit course. In this culminating clinical immersion, students fully integrate knowledge of health policy, evidence-based practice, leadership, informatics, and population health in a clinical area of interest while providing direct patient care.
Prerequisite: None

NUR 815 Evidence-Based Practice: Research Translation

3-credit course. This course provides the basis for clinical scholarship development. Students will explore the concept of practice-based knowledge and the process of translation of research into practice.
Prerequisites: MAT 600

NUR 816 DNP I Project Planning and Development

3-credit course. Students plan and develop an evidence-based practice change that improves health outcomes in a practice setting. Knowledge of organizational structures and behaviors, program planning and evaluation and translation methods are applied in leading an implementation team.
Prerequisite: NUR 815

NUR 817 DNP II Project Implementation

3-credit course. Students lead the implementation of their approved scholarly project.
Prerequisite: NUR 816

NUR 818 DNP III Project Evaluation & Dissemination

2-credit course. Students analyze outcomes data for the practice change and disseminate results to the academic and professional community.
Prerequisite: NUR 817

NUR 819 Knowledge Dissemination

1-credit course. Enhanced oral and written communication skills are utilized to disseminate outcomes of practice innovations and promote adoption of improved care delivery models.
Co-requisite: NUR 818

PHI 210 Ethical and Legal Dimensions in the Health Sciences

1-credit course. This course will present students with the opportunity to investigate legal aspects of professional practice and ethical dilemmas that occur in patient care. Content includes laws and policies that define and regulate professional practice, criminal and civil actions involving health care providers and the legal responsibilities related to executing job responsibilities. Emphasis is placed on patients' rights and the professional duty to safeguard them. This course also explores ethical decision-making and the resolution of ethical dilemmas encountered in professional practice.
Prerequisite: None

PHI 330 Ethical Issues in Health Care

3-credit course. This course examines ethical dilemmas and problems that arise in health care. The course will emphasize the practical application of ethical theories and principles to issues of biomedical ethics.
Prerequisites or Co-Requisites: PHI 210 or NUR 270 and 45 credits completed

PHS 220 Introduction to Public Health

3-credit course. This course introduces public health concepts and describes foundations of public health professional practice. The impact of environment and behavior on the health of communities, evaluation of public health initiatives, principles of epidemiology, and current issues in global health are discussed.
Prerequisite: None

PHY 150 Physics

3-credit course. This course provides an algebra-based introduction to physics, exemplifying the scientific method and leading toward an understanding of technical applications. It includes topics such as measurement, dimensional analysis, systems of units, describing motion, circular and rotational motion, scalars and vectors, laws of motion, force, work, energy, momentum, simple harmonic motion, waves, sound, temperature, heat and heat transfer.
Prerequisites: MAT 150 or MAT 160
Co-requisite: PHY 150L

PHY 150L Physics Laboratory

0-credit lab course.
Prerequisite: None
Co-requisite: PHY150

PSY 100 General Psychology

3-credit course. This course explores the basics of psychology to improve the students' understanding of human behavior. Topics covered include history, research, biological bases, sensation and perception, consciousness, learning, memory, language and thought, intelligence, emotion, development, personality, psychological disorders and treatment and social behavior.
Prerequisite: None

RAD 101 Radiographic Procedures I

4-credit course. This is an introductory radiography course which includes fundamentals such as patient positioning, equipment manipulation, terminology and radiographic image review. Students will also be introduced to the requirements of the profession.
Prerequisite: None
Co-requisites: RAD 122, RAD 131

RAD 104 Clinical Practice II

3-credit course. This clinical course is designed to reinforce the fundamentals of performing radiographic procedures. In addition, contrast agents used to enhance anatomical structures will be introduced.
Prerequisite: RAD 122
Co-requisite: RAD 123

RAD 122 Clinical Practice I

3-credit course. This clinical course is designed to introduce the student to the fundamentals of radiographic positioning. Basic terminology and radiographic examinations will be emphasized.
Prerequisite: None
Co-requisites: RAD 101, RAD 131, HSC101

RAD 123 Radiographic Procedures II

4-credit course. This course is a continued study of radiographic anatomy, procedures and equipment manipulation in the department, operating room, and at the bedside. In addition, age appropriate imaging considerations will be presented.
Prerequisite: RAD 101
Co-requisite: RAD 104, RAD 132

RAD 131 Radiologic Science I

2-credit course. Radiographic imaging system and x-ray production will be discussed. Factors that govern the image production process will be identified.
Prerequisites or Co-Requisites: RAD 101, RAD 122

RAD 132 Radiologic Science II

3-credit course. Radiation physics and radiation protection are discussed. Instruction on the image production process is continued.
Prerequisite: RAD 131
Co-requisite: RAD 123, RAD 104

RAD 221 Advanced Radiographic Procedures I

4-credit course. This course is a study of the more complex radiographic procedures to include procedures utilizing contrast media and requiring imaging modifications. Radiographic pharmacology and ethics will also be discussed.
Prerequisite: RAD 123
Co-requisite: RAD 222, RAD 233

RAD 222 Clinical Education III

5-credit course. This clinical course is designed to allow students to gain proficiency when performing fundamental radiographic procedures. Imaging modifications when performing a non-routine examination and/or contrast administration will be emphasized.
Prerequisite: RAD 104, RAD 132
Co-requisite: RAD 221, RAD 233

RAD 223 Advanced Radiographic Procedures II

4-credit course. This course is the study of radiographic pathology and image analysis. Intravenous pyelograms and barium enema procedures will also be presented. In addition, radiographic procedural and science content is reviewed to prepare the student for the American Registry of Radiologic Technologist (ARRT) registry examination.
Prerequisite: RAD 221
Co-requisite: RAD 224, RAD 240

RAD 224 Clinical Education IV

5-credit course. This course is designed for the student to gain proficiency in the imaging examinations taught throughout the radiography curriculum. Image critique and radiographic pathology will be emphasized.
Prerequisite: RAD 222
Co-requisite: RAD 223, RAD 240

RAD 233 Radiologic Science III

1-credit course. Digital imaging acquisition and display and quality control procedures are presented.
Prerequisite: RAD 132
Co-requisites: RAD 221, RAD 222

RAD 240 Radiation Biology

1-credit course. This course includes an overview of cell biology and the damage electromagnetic radiation causes to the cell. In addition, early and late radiation effects on the organ systems are presented.
Prerequisite: RAD 233

RAD 301 Principles of Computed Tomography

3-credit course. The course includes in-depth instruction and guidance in the study of the principles of computerized tomography (CT). Successful students will be prepared to take the ARRT CT examination and will also be prepared for entry level practice as a CT technologist. Areas of instruction include imaging processes and procedures, CT physics, patient care and radiation protection processes.
Co-Requisite: RAD 302

RAD 302 Computed Tomography – Clinical

1- to 5-credit course. This course includes in-depth instruction and guidance in the study of the principles of Computerized Tomography (CT). Successful students will gain knowledge in imaging processes and procedures, CT physics, patient care, and reradiation protection to properly prepare them for the ARRT CT post-secondary certification exam.
Prerequisites: None
Prerequisite or Co-Requisite: RAD 301

RAD 311 Magnetic Resonance Imaging

3-credit course. The course provides an introduction to magnetic resonance imaging (MRI). Areas of instruction include patient care, imaging procedures and physics, instrumentation, and ARRT MRI registry preparation.

RAD 312 MRI Clinical

1- to 5-credit course (may be taken multiple times; minimum of 2 credits first time taken). This course is designed to provide the technologist with the clinical experience to apply for the ARRT advanced Magnetic Resonance Imaging certification examination. Instruction will emphasize screening and safety, pathology, imaging protocols, patient care and contrast media use and preparation explicit to MRI scanning.
Prerequisite: RAD 311

RAD 360 Mammography

3-credit course. This course is designed to provide radiologic technologists with specific education required for advanced certification in mammography. This course includes breast anatomy and physiology, fundamental mammography positioning, pathology and treatment of breast disease and interventional procedures. Additionally, the foundational concepts of both analog and digital mammographic equipment, quality assurance and quality control equipment and film critique will be discussed.

RAD 361 Mammography Clinical

1-credit course. Instruction in this course is designed to provide the radiologic technologist with the clinical experience required for advance certification in mammography. Students will engage in mammography exams, quality control tests, patient education, interventional and special examinations of the breast and radiographic image analysis.
Prerequisites: RAD 360, ARRT – Radiography registry

RCP 110 Respiratory Care Procedures I

3-credit course. Basic bedside respiratory care procedures, medications, and the role of the respiratory therapist in the care of the patient will be presented in this course.
Prerequisite: None

RCP 120 Respiratory Care Lab I

3-credit course. This course will provide an opportunity for students to demonstrate competency in basic respiratory procedures and medications administered in the lab and clinical setting.
Prerequisite: None

RCP 130 Respiratory Care Theory I

2-credit course. This course focuses on the broader concepts and diseases which involve the respiratory therapist. It will cover gas laws and application to the pulmonary system, gas safety and storage systems, oximetry and arterial blood gas sampling and assessment, obstructive lung diseases, infectious diseases and application of microbiology.
Prerequisite: None
Co-requisite: BIO 176

RCP 140 Respiratory Care Procedures II

2-credit course. This is a continuation of bedside respiratory care procedure concepts. Students will be introduced to advanced respiratory procedures and assessment.
Prerequisite: RCP 110

RCP 150 Respiratory Care Lab II

1-credit course. This course will require the student to demonstrate competency in the procedural concepts of arterial blood gas sampling, airway insertion, suctioning and non-invasive ventilation. The student will have directed instruction at the bedside with their instructor.
Prerequisites: RCP 110, RCP 120, RCP 130
Co-requisite: RCP 140

RCP 160 Respiratory Care Theory II

2-credit course. This course covers the cardiopulmonary physiology and concepts of spontaneous ventilation, non-invasive and invasive mechanical ventilation.
Prerequisites: RCP 110, RCP 120, RCP 130

RCP 201 Entry Level Review

2-credit course. This course will focus on the students' preparation for the entry-level Respiratory Therapist Exam. Respiratory care in non-hospital sites will be discussed.
Prerequisite: None

RCP 210 Respiratory Care Procedures III

3-credit course. This course will discuss the procedures used in pulmonary diagnostic measurements from bedside to PFT lab. Various diagnostic and other respiratory care procedures used in critical care and with mechanical ventilators will be reviewed.
Prerequisites: RCP 140, RCP 150, RCP 160
Co-requisite: RCP 220

RCP 220 Respiratory Care Lab III

2-credit course. This course will require the student to demonstrate competency in the procedural concepts including bedside weaning measurements; PFT calibration and measurement; and ventilator initiation, set up, circuit change and monitoring. Students will practice procedures in the clinical simulation laboratory and at the bedside.
Prerequisites: RCP 140, RCP 150, RCP 160
Co-requisite: RCP 210

RCP 230 Respiratory Care Theory III

2-credit course. This course will cover adult non-infectious diseases and application of mechanical ventilation to patients with chronic lung disease. Pediatric and neonatal diseases will be covered as they apply to respiratory care.
Prerequisites: RCP 140, RCP 150, RCP 160

RCP 240 Clinical Level I

2-credit course. This clinical will require the student to apply entry-level theory and procedures in the delivery of respiratory care at the bedside on the medical/surgical units.
Prerequisites: RCP 140, RCP 150, RCP 160

RCP 251 Respiratory Care Procedures and Diagnostics IV

3-credit course. Advanced pulmonary diagnostics and interpretation will be addressed. Additionally, mechanical ventilation and respiratory care of neonatal and pediatric patients will be discussed.
Prerequisite: RCP 210
Co-requisite: RCP 260

RCP 260 Respiratory Care Lab/Clinical IV

3-credit course. Students will develop competency in the procedural concepts of neonatal and pediatric respiratory care. Additionally, students will apply this knowledge in neonatal/adult critical care clinical settings.
Prerequisite: RCP 220

RCP 261 RC Internship I

0-credit course. This internship will provide selected students with the ability to gain additional clinical hours. Students eligible for this course will be selected by sponsoring clinical affiliate.
Prerequisite: RCP 240
Co-requisite: RCP 260

RCP 271 Respiratory Care Theory and Application IV

3-credit course. Students will explore topics in neonatal care, critical care pharmacology, hemodynamics, cardiology, and hyperbaric oxygen therapy.
Prerequisite: RCP 230
Co-requisite: RCP 260

RCP 280 Advanced Level Respiratory Care Review

2-credit course. This course will include a review of the basic respiratory therapist exam and prepare the student for the advanced respiratory therapist exams. Students must pass simulated credential exams.
Prerequisites: RCP 251, RCP 260, RCP 271

RCP 290 Clinical Level II

4-credit course. Students will have extensive clinical experience in adult critical care, neonatal and pediatrics.
Prerequisites: RCP 251, RCP 260, RCP 271

RCP 291 RC Internship II

0-credit course. This internship will provide selected students with the ability to gain additional clinical hours. Students eligible for this course will be selected by sponsoring clinical affiliate.
Prerequisite: RCP 260
Co-requisite: RCP 290

SOC 100 Introduction to Sociology

3-credit course. This course introduces basic concepts, theories, and research findings in sociology. It will help students gain a sociological and global perspective of the diverse world in which we live.
Prerequisite: None

SOC 200 Cultural Diversity

3-credit course. This course focuses on diversity consciousness. The emphasis is on awareness of cultural differences within and across particular US subcultures, understanding the impact those differences have on people's lived experiences, and recognizing the skills that lead to culturally competent interactions with people from diverse backgrounds.
Prerequisite: None

SOC 300 Social Problems

3-credit course. This course examines social problems to enhance critical thinking, deepen analytical skills, promote social learning and stimulate social commitment. Through the sociological analysis of the major problems of contemporary society, students gain an understanding of their causes, consequences and possible solutions.
Prerequisite: SOC 100, SOC 200 or NUR 310

SPA 150 Introduction to Medical Spanish

3-credit course. Students learn basic written/oral Spanish communication skills and gain cultural competence from real-world situations to further develop appropriate interactions with Spanish-speaking patients in healthcare settings. No previous Spanish experience required.
Prerequisite: None

SUR 100 Perioperative Services

2-credit course. This course introduces the hospital environment, roles and expected professional behaviors of health care workers. Students will also gain knowledge of the preoperative needs of surgical patients.
Prerequisite: None
Co-requisites: SUR 101, SUR 102

SUR 102 Perioperative Pharmacology

2-credit course. This course provides an introduction to the use of medications within the surgical department including those used by the anesthesia team.
Prerequisite: None

SUR 103 Surgical Armamentarium

2-credit course. This course introduces the student to the instruments, equipment and techniques available to the medical practitioner during surgical procedures.
Co-requisites: SUR 104

SUR 110 Intraoperative Patient Care

4-credit course. This course outlines the requirements for safe patient care within the operating room. Students will gain an understanding of the surgical technologist's responsibilities to the patient and all members of the surgical team.
Prerequisites: SUR 100, SUR 102
Co-requisite: SUR 111

SUR 115 Perioperative Services Lab

3-credit course. This course introduces the student to the perioperative services department. Students will demonstrate the duties of a Surgical Technologist in the scrubbed role during the perioperative phase of patient care.
Prerequisites: None
Co-requisite: SUR 110

SUR 212 Professionalism in Surgical Technology

1-credit course. This course provides the surgical technology student an opportunity to understand the hiring process and prepare for employment as an entry-level surgical technologist. Additionally, students will explore alternate roles a surgical technologist may fulfill inside and outside of the operating room.
Prerequisite:
Co-requisites: SUR 100

SUR 215 Perioperative Services Clinical I and Lab

4-credit course. This course allows the surgical technology student to apply theory and lecture materials to the surgical setting. Students will participate in a supervised clinical setting while developing the skills of a professional surgical technologist.
Prerequisite: SUR 115
Co-requisites: SUR 110

SUR 225 Perioperative Services Clinical II

6-credit course. This course focuses on continued application of lecture and laboratory material to the clinical setting. Students remain in supervised clinical specialty rotations, with a focus on more technical surgical procedures. Integration of the surgical technologist's role is emphasized.
Prerequisite: SUR 215

SUR 230 Surgical Procedures and Pathophysiology I

4-credit course. This course begins an intensive look at the pathophysiology affecting surgical patients and the procedures utilized to correct deformity or treat disease. Students also explore advancements in the surgical field
Prerequisite: SUR 110
Co-requisite: SUR 202

SUR 240 Surgical Procedures & Pathophysiology II

4-credit course. This course continues to look at the pathophysiology affecting surgical patients and the procedures utilized to correct deformity or treat disease. Students will explore theories on future advancements in surgery.
Prerequisite: SUR 230
Co-requisites: SUR 211

SUR 299 Certification Exam Review

1-credit course. This course focuses on the review of knowledge common to competent entry-level surgical technologists. SUR 299 is to be taken in the fourth semester of the program.

VAS 112 Vascular Sonography Procedures I

3-credit course. This course will prepare the student to perform indirect arterial testing. Normal and abnormal anatomy will be explored. In addition, basic vascular procedures will be discussed.
Co-requisite: VAS 113

VAS 113 Vascular Sonography Lab I

1-credit course. This course will introduce the skills needed to perform indirect arterial testing. The students will practice basic scanning procedures in a simulated clinical environment.
Co-requisite: VAS 113

VAS 224 Vascular Sonography Clinical I

4-credit course. This course is designed to introduce the student to the fundamental skills needed for vascular scanning. The student will perform specific vascular procedures in the clinical environment.
Prerequisite: VAS 113
Co-requisites: VAS 225, VAS 227, DMS 227

VAS 225 Vascular Sonography Lab II

1-credit course. This course will introduce the skills needed to perform arterial duplex vascular examinations. The student will practice arterial duplex vascular procedures in a simulated clinical environment.
Prerequisite: VAS 113
Co-requisites: VAS 224, VAS 227

VAS 227 Vascular Sonography Procedures II

3-credit course. This course will prepare the student to perform arterial duplex imaging. Normal and abnormal anatomy associated with arterial duplex imaging will be explored.
Prerequisite: VAS 112
Co-requisites: VAS 224, VAS 25, VAS 235, DMS 227

VAS 228 Vascular Sonography Clinical II

4-credit course. This course will introduce fundamental skills needed to perform vascular sonograms of the head and neck. In addition, various procedures related to the abdomen and extremities will be performed in the clinical environment.
Prerequisite: VAS 224
Co-requisites: VAS 229, DMS 227

VAS 229 Vascular Sonography Lab III

1-credit course. This course will introduce the skills needed to perform intracranial and extracranial arterial sonograms. Venous sonograms are also introduced in this course. The students will practice these procedures in the simulated clinical environment.
Prerequisite: VAS 225
Co-requisites: VAS 228, DMS 227

VAS 230 Vascular Sonography Advanced Topics

3-credit course. This course will prepare the student for professional practice. The students will learn about advancements in technology, disease process, clinical procedures, and professional development.
Prerequisite: VAS 227

VAS 231 Vascular Sonography Review

3-credit course. This course will prepare the student for the Vascular Sonography registry exam. Topics related to arterial and venous sonographic procedures will be discussed and reviewed.
Prerequisite: None

VAS 232 Vascular Sonography Clinical III

6-credit course. This course will allow students to refine skills in all previously studied arterial and venous sonograms in the clinical environment.
Prerequisite: VAS 228

VAS 233 Vascular Sonography Clinical II

6-credit course. This course will introduce fundamental skills needed to perform vascular sonograms of the head and neck. In addition, various procedures related to the abdomen and extremities will be performed in the clinical environment.
Prerequisite: VAS 224
Co-requisites: VAS 229,

VAS 234 Vascular Sonography Clinical III

4-credit course. This course will allow students to refine skills in all previously studied arterial and venous sonograms in the clinical environment.
Prerequisite: VAS 233

VAS 235 Vascular Sonography Lab II

1-credit course. This course will introduce the skills needed to perform arterial duplex vascular examinations and extracranial arterial sonograms. Venous sonograms are also introduced in this course. The students will practice these procedures in the simulated clinical environment.
Prerequisite: VAS 113
Co-requisites: VAS 224, VAS 227, DMS 227

VAS 236 Vascular Sonography Lab III

1-credit course. This course will introduce the skills needed to perform intra-abdominal and intracranial vascular sonograms. Venous and arterial sonograms are also expanded upon in this course. The students will practice these procedures in the simulated clinical environment.
Prerequisite: VAS 235
Co-requisites: VAS 233

Appendix:
Core Performance Standards

Cardiac Sonography, Diagnostic Medical Sonography and Vascular Sonography

Technical Standards
All candidates for the Cardiac Sonography (CAS), Diagnostic Medical Sonography (DMS) and Vascular Sonography (VAS) programs must possess the physical and mental skills and abilities to successfully complete the programs. The programs require students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation
- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Discriminate among black, gray, white, and various color combinations on display devices, film, and paper.
- Distinguish audible sounds and adequately view sonograms.
- Inspect and recognize minute details and small objects.
- Observe patients accurately and completely.

Communication
- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Follow verbal or written instructions in order to correctly and independently perform procedures.
- Clearly instruct patients prior to and during procedures.
- Respond to emergency situations.

Motor Function
- Use gross and fine motor function, manual dexterity, and physical strength to:
- Apply general care and emergency treatment to patients;
- Help lift patients who may be unable to move themselves in wheelchairs or beds to the examination table and vice versa;
- Lift and move objects (50 pounds or more routinely); and
- Manipulate ultrasound equipment, computers, and peripherals.
- Capacity to perform diagnostic maneuvers as required to meet curricular goals.

Cognitive
- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Comprehend multi-dimensional relationships and the spatial relationships of anatomic structures.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social
- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Cardiovascular Technology

Technical Standards

All candidates for the Cardiovascular Technology (CVT) program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Inspect and recognize minute details and small objects.
- Ability to quickly detect and react to slight motions and/or the ability to accurately distinguish colors.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Ability to monitor the condition of patients and medical equipment.
- Ability to recognize alarms and alert others of emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
- Apply general care and emergency treatment to patients;
- Help lift patients who may be unable to move themselves in wheelchairs or beds to the examination table and vice versa;
- Lift and move objects (50 pounds or more routinely); and
- Capacity to perform diagnostic maneuvers and manipulate equipment and instruments as required to meet curricular goals.

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Medical Assistant

Technical Standards

All candidates for the Medical Assistant program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, demonstrations, computer screens, and written documents.
- Inspect and recognize minute details in documents and reports.
- Observe patients completely to produce an accurate patient history.

Communication

- Effectively converse and communicate with faculty members, fellow students, clinical staff, and patients for the purpose of receiving information, responding to nonverbal communication, and describing changes in mood, activity, and posture.
- Follow verbal or written instructions to correctly and independently perform procedures and assist with examinations.
- Clearly instruct patients prior to and during examinations.
- Respond to emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
    - Apply general care and emergency treatment to patients.
    - Manually operate a blood pressure cuff and other handheld devices.
    - Assist patients who may be unable to move themselves in wheelchairs to the examination table and vice versa.
    - Maneuver machines and equipment through hallways and exam rooms.
- Capacity to perform diagnostic procedures as required to meet curricular goals.

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Comprehend the spatial relationships of anatomic structures.
- Efficiently process verbal information in written or spoken form.
- Attend and process information simultaneously for recall.
- Apply previous knowledge to assist with examinations.
- Sustain concentration to a task over an extended timeframe.
- Perform diagnostic procedures as required to meet curricular goals.
- Function effectively as a student in both online and in-person learning-environment, including procuring all necessary equipment and services to access course information.

Behavioral & Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the care of patients and the healthcare facility.
- Develop mature, sensitive, and effective relationships with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Medical Laboratory Science

Technical Standards

All candidates for the Medical Laboratory Science program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Inspect and recognize minute details and small objects.
- Ability to quickly detect and react to slight motions and/or the ability to accurately distinguish colors.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Ability to monitor the condition of patients' specimens and equipment.
- Ability to recognize alarms and alert others of emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
- Apply general care and emergency treatment to patients when applicable;
- To operate complex mechanical and electrical instruments (e.g., compound microscope, spectrophotometer, centrifuge, electronic balance, computer terminal, semi-automated pipetting device, etc.); and
- Perform manual techniques (e.g., drawing blood, plating bacterial cultures, manipulating microscope slides, test tubes, etc.)
- Capacity to perform diagnostic maneuvers and manipulate equipment and instruments as required to meet curricular goals.

Cognitive

- Apply knowledge and utilize critical thinking to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Nuclear Medicine Technology

Technical Standards

All candidates for the Nuclear Medical Technology (NMT) program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment, including clinical experiences, audiovisual presentations, experiments, and written documents.
- Possess the visual acuity necessary to monitor patient vital signs.
- Distinguish audible sounds and adequately view sonograms.
- Inspect and recognize minute details and small objects.
- Observe patients accurately and completely.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Respond to emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
- Apply general care and emergency treatment to patients;
- Position patients and operate nuclear medicine equipment;
- Inject radiopharmaceuticals and pharmaceuticals required for Nuclear Medicine diagnostic and therapeutic scans.
- Help lift patients who may be unable to move themselves in wheelchairs or beds to the examination table and vice versa;
- Lift and move objects (50 pounds or more routinely); and
- Push mobile gamma camera and computer system and maneuver the equipment into patient rooms;
- Capacity to perform diagnostic maneuvers as required to meet curricular goals.

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Comprehend multi-dimensional relationships and the spatial relationships of anatomic structures.
- Recognize potentially hazardous materials, equipment and situations and proceed safely to reduce risk of injury to patient or self.
- Minimize radiation exposure to patients, self, and others.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Nurse Practitioner

Technical Standards

All candidates for the Nurse Practitioner Program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, progression, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Interpret visual observations in the context of laboratory studies, patient care activities, and medication administration.
- Accurately and appropriately document observations and maintain records.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff, patients, caregivers, physicians, and other health care professionals in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Ability to read, write, comprehend and speak the English language to facilitate communication with patients, their families, and other professionals in health care settings.
- Verbal and written communication skills that permit effective communication with preceptors, faculty and other students in both the classroom and clinical setting.
- Ability to recognize alarms and alert others of emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
- Apply general care and emergency treatment to patients, including cardiopulmonary resuscitation, administration of intravenous medication, and application of pressure to stop bleeding;
- Assist in moving and lifting patients using proper body mechanics;
- Elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers;
- Manipulate small equipment and containers, such as syringes, vials, ampules, and medication packages;
- Capacity to perform diagnostic maneuvers and manipulate equipment and instruments as required to meet curricular goals, including cardiopulmonary resuscitation (CPR).

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Ability to synthesize knowledge and integrate the relevant aspects of a client's history, physical exam findings, and diagnostic studies.
- Comprehend three dimensional relationships and understand the spatial relationships of structures in order to understand normal and abnormal anatomy and physiology.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Display integrity, compassion, motivation, effective interpersonal skills, and concern for others.
- Exhibit personal comfort and acceptance of the role of the NP student functioning under the supervision of a clinical preceptor or faculty member.
- Ability to establish rapport and maintain sensitive, interpersonal relationships with individuals, families, and groups from a variety of social, cultural, emotional and intellectual backgrounds.
- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Demonstrate emotional stability to function effectively under stress and adapt to changing environments.

- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.
- Ability to adapt to and function effectively to stressful situations in both the classroom, simulation center and clinical settings, including emergency situations. Stressors may include, but are not limited to: personal, faculty/peer, program and patient care/family related.

Examinations:
Certain courses in the Nurse Practitioner Program require students to take timed and/or online examinations. Students may be required to take timed, online, or both types of examinations in a proctored, secure in-person or online setting, that is acceptable to the program.

Nursing (Associate and Bachelor Degrees)

Technical Standards

All candidates for the Pre-Licensure Nursing programs (associate and bachelor degrees) must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment, including clinical rotations, classroom lectures, audiovisual presentations, and written documents.
- Observe and learn from experiences in learning environments such as the following examples:
    - Accurately read gradients/calibrations on a syringe;
    - Measure medications accurately;
    - Accurately recognize color changes on chemical reaction strips;
    - Auscultate with a stethoscope heart, breath, abdominal sounds;
    - Assess normal and abnormal color changes in the skin;
    - Observe pupil changes; and
    - Observe digital or waveform readings.
- Observe and collect data from recording equipment and measuring devices.
- Detect unusual odors or bodily fluids.
- Identify anatomical abnormalities.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff, patients, caregivers, physicians, and other health care professionals in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Ability to recognize alarms and alert others of emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
    - Apply general care and emergency treatment to patients, including cardiopulmonary resuscitation, administration of intravenous medication, and application of pressure to stop bleeding;
    - Assist in moving and lifting patients using proper body mechanics;
    - Elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers;
    - Manipulate small equipment and containers, such as syringes, vials, ampules, and medication packages;
- Capacity to perform diagnostic maneuvers and manipulate equipment and instruments as required to meet curricular goals.

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Ability to synthesize knowledge and integrate the relevant aspects of a client's history, physical exam findings, and diagnostic studies.
- Comprehend three dimensional relationships and understand the spatial relationships of structures in order to understand normal and abnormal anatomy and physiology.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Demonstrate emotional stability to function effectively under stress and adapt to changing environments.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Paramedic

Technical Standards

All candidates for the Paramedic program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Assess normal and abnormal color changes in the skin (i.e., yellow, pale, ashen, grey, or bluish).
- Identify sounds related to bodily functions using stethoscope.
- Observe and collect data from recording equipment and measuring devices.
- Detect unusual odors or bodily fluids.
- Identify anatomical abnormalities.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Ability to monitor the condition of patients and medical equipment.
- Ability to recognize alarms and alert others of emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
- Apply general care and emergency treatment to patients;
- Help lift and move patients who may be unable to move themselves with and without equipment;
- Coordinate hand/eye movements;
- Navigate level surfaces, ramps, and stairs;
- Negotiate uneven surfaces;
- Maneuver in small areas;
- Manipulate small equipment and containers, such as syringes, vials, ampules, and medication packages;
- Step up to height of 14 inches (entry into ambulance); and
- Lift and move objects (50 pounds or more routinely).
- Capacity to perform diagnostic maneuvers and manipulate equipment and instruments as required to meet curricular goals, including cardiopulmonary resuscitation (CPR).

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Demonstrate emotional stability to function effectively under stress and adapt to changing environments.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Radiography

Technical Standards

All candidates for the Radiography program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Distinguish gray-scale changes for the purpose of radiographic film quality.
- Inspect and recognize minute details and small objects.
- Observe patients accurately and completely.

Communication

- Effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Follow verbal or written instructions in order to correctly and independently perform procedures.
- Clearly instruct patients prior to and during procedures.
- Respond to emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
    - Apply general care and emergency treatment to patients;
    - Help lift patients who may be unable to move themselves in wheelchairs or beds to the examination table and vice versa;
    - Lift and carry an image receptor plate that can weigh approximately 8-12 pounds at an extended arm's length from the body with relative ease;
    - Reach and adjust x-ray tube and equipment approximately 72-80 inches above the floor.
    - Lift and move objects; and
    - Manipulate and move radiography equipment, including portable fluoroscopic machines, computers, and peripherals.
    - Capacity to perform diagnostic maneuvers as required to meet curricular goals.

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Comprehend multi-dimensional relationships and the spatial relationships of anatomic structures.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize it effectively for recall.
- Sustain concentration to a task over an extended period of time.
- Perform diagnostic maneuvers as required to meet curricular goals.
- Function effectively as a student in both online and in-person learning-environment, including procuring all necessary equipment and services to access course information.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Develop mature, sensitive and effective relationships with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Respiratory Care

Technical Standards

All candidates for the Respiratory Care program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Identify sounds related to bodily functions using stethoscope.
- Observe and collect data from recording equipment and measuring devices.
- Recognize odors from patients (e.g., foul smelling drainage, infections, etc.)

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Monitor the condition of patients and medical equipment.
- Recognize alarms and alert others of emergency situations.
- Read analog and digital displays, patients' condition charts, and information systems.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
    - Apply general care and emergency treatment to patients;
    - Move and reposition patients and equipment;
    - Perform physical assessment accurately (e.g. auscultation, physical inspection, palpation, etc.);
    - Reach hospital equipment and electrical outlets, including oxygen administering systems.
    - Maneuver in small areas;
    - Manipulate small equipment and containers; and
    - Move objects (50 pounds or more routinely).
- Capacity to perform diagnostic maneuvers and manipulate equipment and instruments as required to meet curricular goals, including cardiopulmonary resuscitation (CPR).

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Demonstrate emotional stability to function effectively under stress and adapt to changing environments.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.

Surgical Technology

Technical Standards

All candidates for the Surgical Technology program must possess the physical and mental skills and abilities to successfully complete the program. The program requires students to possess minimal physical, mental, emotional, motor, and cognitive abilities. These technical standards are required for admission, promotion, and graduation.

Although these technical standards identify the required physical and mental abilities of all candidates, the technical standards are not intended to deter any prospective student for whom reasonable accommodation will allow the prospective student to access the curriculum.

Observation

- Observe materials presented in the learning environment including audiovisual presentations, experiments, and written documents.
- Understand muffled communications without visualization of the communicator's mouth/lips within 20 feet.
- Observe activation/warning signals on equipment and devices.
- Sufficient peripheral vision to anticipate and function while in a sterile surgical environment.
- Detect odors sufficient to maintain environmental safety and patient needs.

Communication

- Capacity to effectively converse and communicate with faculty members, fellow students, clinical staff and patients in order to receive information, respond to nonverbal communication, and describe changes in mood, activity, and posture.
- Ability to alert others of emergency situations.

Motor Function

- Use gross and fine motor function, manual dexterity, and physical strength to:
    - Bend and stoop;
    - Stand and/or sit for long periods of time in one location;
    - Assist lifting and moving patients who may be unconscious;
    - Load a fine (10-0) suture onto needle holder;
    - Manipulate instruments, supplies and equipment;
    - Maneuver in small areas;
- Refrain from nourishment or restroom breaks for periods of 6 hours or more.

Cognitive

- Apply knowledge and reasoning to solve problems as required by the curriculum.
- Efficiently process verbal information, either in written or spoken form.
- Attend and process information simultaneously and categorize this information effectively for recall.
- Sustain concentration to a task over an extended period of time.

Behavioral and Social

- Possess the emotional health to apply intellectual skill, exercise good judgment, and to complete all responsibilities attendant to the diagnosis and care of patients.
- Demonstrate emotional stability to function effectively under stress and adapt to changing environments.
- Develop a mature, sensitive and effective relationship with patients and colleagues.
- Behave in an ethical manner consistent with professional values and standards.
- Exhibit sufficient interpersonal skills, knowledge, and attitude to interact positively and sensitively with others.