



Addendum to
Academic Bulletin
for Undergraduate and Graduate Studies
2022-23
(Issued August 2022)

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Please note: Any changes made to policies in this *Academic Bulletin* during the academic year will come into effect upon their approval. These new policies will be communicated to all students, faculty, and staff and will replace what is in this document.

Contents

Major Changes in this Addendum	4
The College	6
Core Requirements	9
Division of Arts and Sciences	19
Department of Human Biology	20
Post-Bachelor's Degree-to-Prelicensure Bachelor of Science in Nursing (Accelerated BSN).....	21
RN-to-Bachelor of Science in Nursing (RN-to-BSN)	23
Division of Health Professions.....	29
Department of Radiologic Sciences and Imaging.....	30
Nuclear medicine technology	31
Department of Respiratory Care.....	33
Bachelor of Science in Health Sciences.....	35
Graduate Outcomes	64
Graduate Program: Master of Physician Assistant Studies.....	66
Graduate Program: Occupational Therapy Doctorate	67
Course Descriptions	72

Major Changes in this Addendum

1. College vision statement updated (Page 13 in 2022-23 Bulletin)
2. Diversity statement updated to match the website (Page 14 in 2022-23 Bulletin)
3. Pillars added to the College outcomes (Page 14 in 2022-23 Bulletin)
4. BASIC outcomes removed; PEAC requirements removed from degrees; history requirements updated and degree core requirements corrected for Health Sciences and BSN completion (Pages 69-79 in 2022-23 Bulletin)
5. BASIC replaced with Pillars in Division of Arts and Sciences (Page 83 in 2022-23 Bulletin)
6. Chair updated in Department of Human Biology (Page 86 in 2022-23 Bulletin)
7. Admission requirements updated for the Accelerated BSN (Pages 136–137 in 2022-23 Bulletin)
8. RN-to-BSN program updated with the approved changes to the curriculum (Pages 142-147 in 2022-23 Bulletin)
9. Corrections made to the degrees offered for Health Sciences (Page 148 in 2022-23 Bulletin)
10. Corrections made to the faculty listing for Radiologic Sciences and Imaging (Page 149 in 2022-23 Bulletin)
11. Curriculum updated for Nuclear Medicine (Pages 165–166 in 2022-23 Bulletin)
12. Program of study updated for BS completion with an emphasis in respiratory care (Pages 177-178 in 2022-23 Bulletin)
13. Department of Health Sciences updated with new majors; additional corrections (Pages 198–218 in 2022-23 Bulletin)
14. BASIC replaced with Pillars in Graduate Outcomes (Page 222 in 2022-23 Bulletin)
15. PHAS 650 course title corrected (Page 252 in 2022-23 Bulletin)

16. Program policies updated in Occupational Therapy (Pages 250-263 in 2022-23 Bulletin)
- Application Process
 - Progression Requirements
 - Conditions for Dismissal
17. Program of study updated for Occupational Therapy (Page 266 in 2022-23 Bulletin)
18. Several course descriptions corrected (Pages 273-345 in 2022-23 Bulletin)
- Prerequisites for BIOL 263
 - Removal of HESC courses no longer offered
 - Addition of new RN-to-BSN courses; removal of old ones
 - Corrections to OTD clinical course descriptions
 - Removal of all PEAC courses
 - Corrections to course description for PHAS 633 and course title for PHAS 650

The College

Kettering College, occupying a suburban campus near Dayton in southwest Ohio, is owned by the Kettering Medical Center and chartered by the Seventh-day Adventist Church. When the College first opened its doors in 1967, more than 100 freshmen were enrolled, many of whom became the first graduates in 1969. The state charter granted in 1968 empowered the College, as the educational component of Kettering Medical Center, to conduct instruction in the arts, sciences, and health professions.

“It must be an educational center as well as a medical service center, involved in preparing young people for satisfying lives of service here and in other institutions of the world.” These were some of the words with which Eugene W. Kettering set aside 35 acres of the family estate as the campus for a proposed medical center to commemorate the name and ideas of his father, Charles F. Kettering, soon after the great inventor’s death in 1958.

The historic pattern of education in medical institutions has been one of apprenticeship, in-service training, and service-oriented lectures. Over the years, however, the strength of academic methods, organization, and presentation of instruction in health professions and nursing curricula has been effectively demonstrated. Thus, it was determined by the founders that the educational purpose of the medical center should be served by the establishment of an academic institution offering curricula in a variety of health careers, as well as arts and sciences.

Physical facilities for the College were constructed on the campus adjacent to the Charles F. Kettering Memorial Hospital, the clinical component of the Kettering Medical Center, which was opened to patients in 1964. As qualified leaders were acquired for administrative and faculty positions in the College, the counsel of many authorities in education and in the professions was retained to ensure that its concept and programs would, from the outset, be both academically sound and in keeping with the Kettering tradition of innovation. In 2015, Kettering College expanded to include a second facility in Greene County, Ohio, for the occupational therapy doctoral program.

COLLEGE MISSION

Kettering College, born out of Adventist faith, offers graduate and undergraduate degrees in health science. Upholding Christ, the College educates students to make service a life calling and to view health as harmony with God in body, mind, and spirit.

COLLEGE VISION

We transform lives through innovative healthcare education.

KETTERING COLLEGE VALUES

As educators, we especially value trustworthiness, innovation, caring, competence, and collaboration.

TRUSTWORTHINESS

- We value personal and professional integrity and accountability in all relationships.

INNOVATION

- We value an approach to health sciences education that promotes advances in the effective practice and delivery of healthcare.
- We value creative, future-oriented preparation of healthcare professionals to meet the challenges of providing comprehensive and compassionate healthcare.

CARING

- We value spiritual wholeness and nurture personal spiritual growth.
- We value and respect the dignity of all people as being made in the image of God.
- We value being called to Christian service through the ministry of healthcare as a reflection of Christ's unconditional love.

COMPETENCE

- We value excellence in teaching and clinical competence evidenced in personal and professional growth.
- We value promptness and effectiveness in responding to the needs of others.
- We value lifelong learning as an integral part of our professional calling and personal growth.

COLLABORATION

- We value social responsibility and service to others.
- We value partnerships that foster enhanced service to our community.

KETTERING COLLEGE PILLARS

Each student who successfully completes their program-specific outcomes and curriculum will be able to demonstrate degree-level-appropriate competencies in the identified domains for each outcome. Students will:

FAITH

- Gain self-awareness of their faith journey within the context of a Christian community and learn the skills to holistically care for self and others.

SERVICE

- Engage in service and service-learning opportunities that have a positive impact on communities and that foster self-awareness.

SCHOLARSHIP

- Conduct ethical scholarship that involves gathering and evaluating evidence in order to draw and disseminate a conclusion.

LEADERSHIP

- Work effectively with and through others by recognizing distinctive contributions each individual brings to forge superior solutions and results.

DIVERSITY STATEMENT

As an institution of higher education guided by Christian principles, Kettering College actively seeks, values, and celebrates individuals from diverse backgrounds and beliefs. We believe that the rich diversity among our students, faculty, and staff greatly enhances the educational experience and produces innovative, superior graduates who are passionate for service and for providing high-quality, whole-person care.

DEGREES/CERTIFICATES OFFERED

Courses of study offered at the College lead to six different degrees: the Associate of Science; the Bachelor of Science; the Bachelor of Science in Health Sciences; the Bachelor of Science in Nursing; the Master of Physician Assistant Studies; and the Doctorate in Occupational Therapy. In addition, some departments offer courses leading to certificates of completion. Refer to specific departments for details.

Core Requirements

Kettering College offers pre-professional and professional healthcare education leading to associate, bachelor's, master's, and doctoral degrees. As a fully accredited institution of higher education, the College provides its students with learning experiences that prepare them not only to be highly qualified professionals, but also to be successful citizens of character, able to adapt in an ever-changing world. To accomplish this, the College has identified four institutional outcomes, known as the Pillars, that are woven throughout the College curricula of all the degrees.

KETTERING COLLEGE INSTITUTIONAL OUTCOMES

Each student who successfully completes their program-specific outcomes and curriculum will be able to demonstrate degree-level-appropriate competencies in the identified domains for each outcome. Students will:

FAITH (F)

- Gain self-awareness of their faith journey within the context of a Christian community and learn the skills to holistically care for self and others.

SERVICE (V)

- Engage in service and service-learning opportunities that have a positive impact on communities and that foster self-awareness.

SCHOLARSHIP (S)

- Conduct ethical scholarship that involves gathering and evaluating evidence in order to draw and disseminate a conclusion.

LEADERSHIP (L)

- Work effectively with and through others by recognizing distinctive contributions each individual brings to forge superior solutions and results.

CORE CURRICULAR OUTCOMES

Upon the successful completion of the core curriculum, students will demonstrate mastery in the following areas:

- I. Physical and biological world

- a. Demonstrate knowledge of concepts and theories of the physical and biological world
- b. Demonstrate knowledge of mathematical skills and reasoning (S)
- II. Human behavior and culture
 - a. Apply theories of individual behavior, social interactions, and history (L)
 - b. Interact effectively in a diverse and multicultural world (V)
 - c. Analyze creative and literary works and their roles in cultural development
- III. Communication skills
 - a. Construct sustained, coherent arguments and explications in a variety of genres (S)
 - b. Deliver purposeful presentations that inform and persuade
- IV. Information literacy skills
 - a. Evaluate appropriate sources of information (S)
 - b. Ethically use sources of information (S)
- V. Spiritual development
 - a. Demonstrate the ability to think reflectively, informed by theological, scriptural, and philosophical resources (F)
 - b. Demonstrate compassion and integrity in personal and professional contexts (F)

DEGREE REQUIREMENTS

The following section enumerates the core coursework, credits, and residency requirements for the associate and bachelor's degrees offered by the College. See the *Graduate Bulletin* for core requirements for the master's and doctoral degrees.

Degree requirements are in addition to core requirements and make the actual number of credits required higher than the core requirements alone. Degree requirements are described separately in the appropriate degree sections of this *Bulletin*.

ASSOCIATE OF SCIENCE DEGREE CORE

Statement of purpose: Kettering College's Associate of Science degree provides students with quality prelicensure healthcare education integrated with Christian principles and values.

Degree description: Kettering College's prelicensure curricula prepare qualified, highly competent healthcare professionals committed to whole-person care and compassionate service, graduates who continue to grow as contributing members of their profession and community.

Credits and residency requirements: The Associate of Science degree requires a minimum of 64 credits for graduation; 34 credits must be taken from Kettering College.

Core curriculum: The foundational courses in the core curriculum reflect the mission and objectives of the College and foster an interdisciplinary approach to inquiry and learning. The following courses are required of students pursuing an Associate of Science degree at Kettering College. Students must achieve a grade of C or better in all core courses listed below for graduation

- I. **Composition and Communication**..... 6 credits required
 - Required courses
 - A. Writing and Rhetoric I
 - B. One of the following; refer to the individual major for specific requirements:
 - 1. Writing and Rhetoric II
 - 2. Medical and Scientific Discourse and Research
 - 3. Communication
- II. **Mathematics** 3 credits required
 - Requirement may be met by one of the following:
 - A. Fundamentals of Mathematics (MATH 105), College Algebra (MATH 155), or College Algebra and Trigonometry (MATH 165) with a grade of C or above.
 - B. Transfer credit equivalent to MATH 105 or higher
- III. **Natural sciences** 8 credits required
 - All students must take two science courses that include a laboratory component.
- IV. **Religion** 6 credits required
 - A. RELB 101, Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ (3 credits)
 - B. Additional religion elective to bring group total to 6
 - (Note: Only religion courses from faith-based institutions may be considered for transfer credit to meet the religion core requirement.)
- V. **Social sciences** 3 credits required
 - Coursework in psychology or sociology

BACHELOR OF SCIENCE DEGREE CORE

Statement of purpose: The Bachelor of Science degree provides students with the breadth of educational experiences needed for a variety of entry-level positions in the work force or for graduate and professional study.

Degree description: The Bachelor of Science degree offers a liberal arts curriculum designed to build character, integrity, and a strong academic foundation for healthcare-related professional studies.

Credits and residency requirements: The Bachelor of Science requires at least 125 credits, including general education, with at least 40 credits in the upper division. Required major courses and elective major courses must total at least 40 credits, with at least 20 credits in the upper division; 68 credits must be taken at Kettering College.

Core curriculum: The foundational courses in the core curriculum reflect the mission and objectives of the College and foster an interdisciplinary approach to inquiry and learning. The following courses are required of students pursuing a Bachelor of Science degree at Kettering College. Students must achieve a grade of C or better in all core courses listed below for graduation:

I. **Composition and Communication** (9 credits required)

Must include:

ENGL 101 Writing and Rhetoric I 3 credits

One of the following (refer to the individual major) 3 credits

ENGL 102 Writing and Rhetoric II

ENGL 118 Writing and Research in the Health Care Professions

ENGL 218 Writing and Research in the Sciences

COMM 215 Introduction to Human Communication 3 credits

II. **Humanities** (21 credits required)

A. Group I: Religion Courses 12 credits

Must include:

RELB 101 Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ

RELP 254 Morality and Medicine

RELP 316 Spirituality in Healing and Health Care

Additional religion elective to bring group total to 12 credits

(Note: Only religion courses from faith-based institutions may be considered for transfer credit to meet the religion core requirement.)

B. Group II: History, Literature, and Art 9 credits

Must include:

A history course (3 credits)

Humanities such as literature, philosophy, music, art, theater, or foreign language.

III. **Mathematics** (3 credits required)

May be satisfied by one of the following (see requirements for each major):

College Algebra (MATH 155) with a grade of C or above

College Algebra and Trigonometry (MATH 165) with a grade of C or above

Transfer credit equivalent to MATH 155, MATH 165, or higher (as required by major)

IV. **Natural Sciences** (12 credits required)

Including:

One-year laboratory course sequence with BIOL, CHEM,

or PHYS prefix 8 credits

Remaining 4 credits determined by the major

V. **Social Sciences** (9 credits required)

Required courses:

PSYC 112 General Psychology 3 credits

SOCI 115 Principles of Sociology 3 credits

Social sciences elective to bring total to 9 credits

BACHELOR OF SCIENCE IN NURSING DEGREE CORE (PRELICENSURE DEGREE)

Statement of purpose: The purpose of the BSN prelicensure degree is to prepare nursing graduates for professional nursing practice to individuals, families, communities, and populations in the spirit of Christian caring and service. Graduates are prepared for NCLEX-RN licensure.

Credits and residency requirements: The Bachelor of Science in Nursing degree requires 125 credits, including general education. Required major courses must total at least 60 credits at the upper division; at least 68 credits must be taken at Kettering College.

Core curriculum: The foundational courses in the core curriculum reflect the mission and objectives of the College and foster an interdisciplinary approach to inquiry and learning. The following courses are required of students pursuing a BSN prelicensure degree at Kettering College. Students must achieve a grade of C or better in all core courses listed below for graduation.

I. **Composition and Communication** (9 credits required); must include:

ENGL 101 Writing and Rhetoric I 3 credits

ENGL 102 Writing and Rhetoric II 3 credits

COMM 215 Introduction to Human Communication 3 credits

II. **Humanities** (18 credits required)

Group I: Religion Courses (12 credits)

Must include:

- RELB 101 Seventh-day Adventist Fundamental Beliefs and
the Healing Ministry of Christ..... 3 credits
- RELP 316 Spirituality in Healing and Health Care..... 3 credits
- RELP 306 Spiritual Dimensions of Death and Dying..... 3 credits

One additional religion elective to bring group total to 12 credits

(Note: Only religion courses from faith-based institutions may be considered for transfer credit to meet the religion core requirement.)

Group II: May include literature, history, philosophy, fine arts, foreign language (6 credits)

III. **Mathematics** (3 credits required)

- MATH 105 Fundamentals of Mathematics 3 credits

IV. **Natural Sciences** (12 credits required)

- BIOL 119 & 129 Anatomy and Physiology I & II 8 credits
- CHEM 105 Chemistry for the Health Sciences..... 4 credits

V. **Social Sciences** (9 credits required)

- PSYC 112 General Psychology..... 3 credits
- PSYC 138 Human Growth and Development..... 3 credits
- SOCI 115 Sociology 3 credits

NOTE: a student with a baccalaureate degree from a regionally accredited institution fulfills the following BSN prelicensure core curriculum requirements through the completion of that baccalaureate degree:

- I. **Composition and Communication** (9 credits required)
- II. **Humanities** (12 credits required)
- III. **Mathematics** (3 credits required)
- V. **Social Sciences** (6 credits required)

Those students still need to meet the following BSN prelicensure core curriculum requirements:

- II. **Humanities** (6 credits required)
 - RELP 316 Spirituality in Healing and Health Care..... 3 credits
 - RELP 306 Spiritual Dimensions of Death and Dying..... 3 credits
- IV. **Natural Sciences** (12 credits required)
 - BIOL 119 & 129 Anatomy and Physiology I & II 8 credits

CHEM 105 Chemistry for the Health Sciences..... 4 credits

V. **Social Sciences** (3 credits required)

PSYC 138 Human Growth and Development..... 3 credits

BACHELOR OF SCIENCE IN NURSING RN-TO-BSN DEGREE CORE (COMPLETION TRACK)

Statement of purpose: The purpose of the RN-to-BSN degree is to prepare registered nurses to provide professional nursing care to clients, families, and communities in the spirit of Christian caring and service. Graduates are prepared to be citizen leaders in the community. The degree provides a general and professional education to enhance professional growth, facilitate career mobility, and serve as a foundation for graduate education.

Credits and residency requirements: The Bachelor of Science in Nursing RN-to-BSN track requires 31 credits beyond the Associate of Science nursing degree (or its equivalent) for graduation and at least 30 upper-division credits; 30 credits must be taken from Kettering College. Completion of pathophysiology and/or humanities/elective courses at another institution of higher learning may necessitate completion of additional coursework to achieve the graduation requirement. The track requires 120 semester credits with 77 credits awarded for the previously earned associate degree in nursing or equivalent including 40 credits in nursing and 37 credits in Arts & Sciences. To achieve the 120 total credit hours required for graduation, students may need to take elective courses.

Core curriculum: The foundational courses in the core curriculum reflect the mission and objectives of the College and foster an interdisciplinary approach to inquiry and learning. The following courses are required of students pursuing a Bachelor of Science in Nursing RN-to-BSN track. Students must achieve a grade of C or better in all core courses listed below for graduation.

I. **Humanities** 3 credits

May include courses from literature, history, philosophy, music, art, theater, or foreign language. Any humanities credits earned as part of an associate degree program cannot be utilized as humanities credits for the BSN completion degree.

II. **Religion** 3 credits

RELP 316 Spirituality in Healing and Health Care

Note: Only religion courses from faith-based institutions may be considered for transfer credit.

III. **Mathematics** 3 credits

Requirements may be met by one of the following:

MATH 201 Probability and Statistics

Transfer credit equivalent to MATH 201

BACHELOR OF SCIENCE IN HEALTH SCIENCES DEGREE (NON-COMPLETION TRACK)

Statement of purpose: The Bachelor of Science in Health Sciences program (BSHS) at Kettering College provides high-quality, values-based baccalaureate education in health-related fields with the spirit of Christian caring and service.

Degree description: Kettering College offers a Bachelor of Science in Health Sciences designed for those who want a bachelor's degree in a health science major.

The Bachelor of Science in Health Sciences requires at least 120 semester credits, including general education, with at least 40 credits in the upper division. Required major courses and elective major courses must total at least 40 credits, with at least 20 credits in the upper division; 68 credits must be taken at Kettering College.

MINIMUM CORE REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN HEALTH SCIENCES DEGREE

I. Composition and communication: 9 credits required

Required:

ENGL 101 Writing and Rhetoric I	3 credits
ENGL 102 Writing and Rhetoric II	3 credits
COMM 215 Intro to Human Communication.....	3 credits

II. Humanities: 21 credits required

Group I: Religion courses 12 credits

Required:

RELB 101 Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ

RELP 254 Morality and Medicine

RELP 316 Spirituality in Healing and Health Care

RELT 305 World Religions for Health Care Professionals

(Note: Only religion courses from faith-based institutions may be considered for transfer credit to meet the religion core requirement)

Group II: History, Literature, and Art..... 9 credits

Must include:

One history course (3 credits)

Non-history humanities course such as art, literature, or music;
one applied course may be included (6 credits)

III. **Mathematics:** 3 credits required

College Algebra (MATH 155) with a grade of C or above

OR

College Algebra and Trigonometry (MATH 165) with a grade of C or above

Transfer credit equivalent to MATH 155 or higher

(See major for details)

IV. **Natural Sciences:** 8 credits required

Two semesters of laboratory courses chosen from:

BIOL 151; CHEM 105; PHYS 131; or BIOL 119 and BIOL 129

(See major for details)

V. **Social Sciences:** 9 credits required

Required:

PSYC 112 General Psychology..... 3 credits

SOCI 115 Principles of Sociology..... 3 credits

SOCI 375 Cultural Diversity in Healthcare..... 3 credits

TOTAL

50 credits

BACHELOR OF SCIENCE IN HEALTH SCIENCES DEGREE CORE (COMPLETION TRACK)

Statement of purpose: The Bachelor of Science in Health Sciences degree at Kettering College provides high-quality, values-based baccalaureate education in health-related fields with the spirit of Christian caring and service.

Degree description: Kettering College offers a Bachelor of Science in Health Sciences designed for those who have obtained an associate degree or its equivalent in healthcare and wish to pursue a Bachelor of Science degree. The course of study is the equivalent to the junior and senior years of a four-year baccalaureate program. Students may choose a full-time or part-time pace of study, in an online learning environment.

Students who wish to enroll in the BSBS program without earning an associate degree will be reviewed individually to establish credit equivalent to an associate degree.

The Bachelor of Science in Health Sciences degree requires a minimum of 52 credits; however, different majors may require more credits. Those working toward bachelor's completion must take a minimum of 30 credits at Kettering College, and at least 36 credits must be from the upper division. Students must achieve a grade of C or better in all core courses listed below for graduation.

CORE CURRICULUM

- I. **Humanities** 6 credits
May include courses from literature, history, philosophy, music, art, theater, or foreign language

- II. **Religion** 6 credits
REL 316 Spirituality in Healing and Health Care (3 credits)
REL 306 Spiritual Dimensions of Death and Dying (3 credits)
Note: Only religion courses from faith-based institutions may be considered for transfer credit.

- III. **Social sciences** 3 credits
Required: SOCI 375 Cultural Diversity in Healthcare
or transfer credit equivalent to SOCI 375

- IV. **Mathematics** 3 credits
Requirements may be met by one of the following:
MATH 201 Probability and Statistics
Transfer credit equivalent to MATH 201
Recommended prior coursework: a college-level mathematics course in the past five years

Division of Arts and Sciences

MISSION STATEMENT

As an integral part of Kettering College, the faculty of the Division of Arts and Sciences is dedicated to assisting students in constructing a strong spiritual, philosophical, and academic foundation based on Christian principles on which to build personal and professional study and growth.

GOALS AND OBJECTIVES

The courses in the Division of Arts and Sciences meet two distinct needs. One is to provide a liberal arts background on which to build technical information leading toward a degree in a health care field. The other is to provide a Bachelor of Science degree that prepares students for admissions and success in professional schools such as medical, physician assistant, physical therapy, dental, etc.

The faculty strives to help students achieve the institutional outcomes, known as the Pillars (faith, service, scholarship, and leadership), through a variety of courses and learning activities.

The division is divided into three departments: humanities and social sciences; mathematics and sciences; and human biology.

HUMANITIES AND SOCIAL SCIENCES DEPARTMENT

Cory Wetterlin, PhD, Chair; Anne Collier-Freed, PhD; Duane Covrig, PhD; Vail McGuire, PhD; Laura Miller, MA; David Price, MS; Maria Rankin-Brown, PhD

MATHEMATICS AND SCIENCES DEPARTMENT

Paul DeLange, PhD, Chair; Ericka Brandau, MS; Laurie Bromagen, MS; Jonathan Engelman, PhD; Jane Nesbit, MA; Randi Quale, MS; Daniel Schoun, MS

Department of Human Biology

Loren Barnhurst, PhD, Interim Chair; Chishimba Nathan Mowa, PhD

MISSION STATEMENT

The human biology major at Kettering College provides an academically challenging curriculum ideal for students entering academic or professional graduate healthcare-related programs. Beyond intellectual growth, students will strengthen their spiritual connection to Christ and integrate their learning with their community.

BACHELOR OF SCIENCE WITH A MAJOR IN HUMAN BIOLOGY

As an accredited college directly affiliated with Kettering Medical Center, Kettering College offers a unique learning opportunity for persons interested in health-related careers. Students have numerous opportunities to evaluate their career choices through interaction with students and faculty in the health professions and nursing programs.

The human biology department offers a Bachelor of Science degree with a major in human biology. This degree provides the student with extensive preparation for professional or graduate studies in any field that works with the human organism. While the natural sciences are emphasized, students receive a thorough background in social sciences, cultural studies, and the humanities. In addition, graduates with a human biology major have an understanding of healthcare disciplines and the qualifications they demand.

There are two distinct curricular programs of study for the Bachelor of Science degree with a major in human biology. Students interested in medicine, physician assistant studies, physical therapy, dentistry, and other health-related professions that require baccalaureate or graduate degrees will receive a thorough preparation for admission to professional school by completion of the four-year program of study. Upon completion of the four-year program of study at Kettering College, the student may apply to a professional school or university to complete the required graduate study necessary for entry into the chosen profession. The second curricular program of study for the Bachelor of Science with a major in human biology is the "3+2"-year accelerated curriculum leading to the Master of Physician Assistant Studies at Kettering College. This program is designed for students who begin with freshman courses at Kettering College. Students considering transferring to Kettering College should contact the admissions office to speak to an advisor in the Department of Human Biology.

Post-Bachelor's Degree-to-Prelicensure Bachelor of Science in Nursing (Accelerated BSN)

DESCRIPTION OF DEGREE

The post-bachelor's degree-to-prelicensure Bachelor of Science in Nursing track (accelerated BSN) is designed to prepare individuals who currently hold a bachelor's degree in another field for professional registered nurse practice and leadership. The curriculum can be completed in four semesters after prerequisites. This nursing track is fast-paced and rigorous. Therefore, employment while enrolled in this track is highly discouraged. The track requires 125 semester credits — 69 credits beyond the initial degree with 56 credits awarded for the previously earned bachelor's degree and completion of prerequisite courses.

COLLEGE CORE

Students pursuing the post-baccalaureate degree-to-prelicensure Bachelor of Science in Nursing (Accelerated BSN) do not have required core courses; however, each student must complete all prerequisites and all courses required for the completion of the program.

APPROVAL AND ACCREDITATION

The program is approved by the Ohio Board of Nursing, 17 S. High St., Suite 660, Columbus, OH 43215-3466, and accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326; 404-975-5000; www.acenursing.org.

ADMISSION

- Applicants must meet all admission requirements for Kettering College.
- Admission occurs one time a year in the fall semester.
- All applicants must submit official transcripts showing completion of a minimum of a bachelor's degree from a regionally accredited college or university.
- To be considered for admission prior to completion of all prerequisite courses, college transcripts must reflect completion of at least one prerequisite science course that meets admission criteria.

DEADLINES

Kettering College offers rolling admission to the accelerated BSN track fall entry. Rolling admission means:

- Applications are evaluated on a first-come, first-served basis when an applicant has achieved the minimum requirements for admission.
- Offers of admission are granted on a first-come, first-served basis whereby a student is ranked according to when the application was submitted, and transcripts received.
- Registration typically opens by June.
- Final transcript(s) are due by mid-August.

ADMISSION CRITERIA

Applicants are considered for admission based on the following criteria:

1. Applicants must meet all Kettering College admission requirements.
2. Applicants must present college transcripts reflecting:
 - A cumulative GPA of 3.0 (*GPA 2.95 or greater will be rounded up) or above (on a 4.0 scale) in the previous degree, a minimum grade of C in all required prerequisite courses, and a minimum prerequisite GPA of 2.8.
 - Science prerequisite courses (taken within five years, a minimum grade of C, and a cumulative GPA of 2.8). Science courses taken more than five years ago will be considered for acceptance on an individual basis with documentation of recent experiences in a healthcare field.

BIOL 119	Human Anatomy and Physiology I	4 credits
BIOL 129	Human Anatomy and Physiology II	4 credits
CHEM 105	Chemistry for the Health Sciences	3-4 credits
BIOL 151	Microbiology	4 credits
 - Other required general education prerequisite courses (minimum grade of C)

BIOL 350	Pathophysiology	3 credits
MATH 201	Probability and Statistics	3 credits
PSYC 138	Human Growth and Development.....	3 credits
3. Past failures and withdrawals in prerequisite courses or other nursing program courses will impact consideration for admission into the accelerated BSN track.
4. Students accepted into the program must maintain all admission requirements from the time of acceptance until their program start date.
5. The applicant must present official transcript(s) showing completion of a bachelor's degree.

RN-to-Bachelor of Science in Nursing (RN-to-BSN)

PURPOSE STATEMENT

The purpose of the RN-to-Bachelor of Science in Nursing (BSN) track is to prepare registered nurses to provide professional nursing care to clients, families, and communities in the spirit of Christian caring and service. Graduates are prepared to be citizen leaders in the community. The degree provides a general and professional education intended to enhance professional growth, facilitate career mobility, and serve as a foundation for graduate education.

DESCRIPTION OF THE RN-TO-BSN TRACK

Student entry to the RN-to-BSN track can occur in the fall, winter, or summer semester. Students may choose a full-time or part-time pace of study. All required courses for the RN-to-BSN track are offered online. Required arts and sciences courses may also be available in face-to-face delivery on campus.

All coursework must be completed within five (5) years of first enrollment. NRSA 311, BSN Success Strategies, must be the first nursing course taken after the student is admitted to this track. NRSA 450, Leadership Seminar & Capstone, must be taken in the last semester of the RN-to-BSN track as it focuses on the achievement of end-of-program student learning outcomes.

Students will participate in two practicum experiences when taking the courses NRSA 420, Population Health, and NRSA 440, Leadership in Healthcare. A student may be able to complete the practicum experience near their location of residence depending on state and institution regulations. If the state or institution does not allow for practicum experiences to be performed from an out-of-state education program, the student will be required to perform the practicum experience on or near the Kettering College campus.

ACCREDITATION

The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326; 404-975-5000; www.acenursing.org.

ADMISSION REQUIREMENTS

Applicants to the RN-to-BSN track must meet the following requirements to be considered for admission:

- Meet all Kettering College admission requirements.

- Submit transcripts reflecting completion of an associate degree or diploma in nursing.
- Possess and maintain a current and unrestricted registered nurse license in a U.S. state.
- Provide a current copy of a government-issued photo ID.
- Successfully complete a statistics course with a grade of C or higher.

Note: Students who request to defer admission for one year or longer must reapply.

APPLICATION DEADLINES

Admission occurs three times per year. Application deadlines are:

- Dec. 1 for admission to the winter semester
- April 1 for admission to the summer semester
- Aug. 1 for admission to the fall semester

ENROLLMENT REQUIREMENTS

To enroll, a student must:

1. Have computer proficiency: All students are expected to be proficient in computer skills required for document and spreadsheet preparation, presentation software, internet usage and email functions.
2. Have a reliable internet connection and an email address.
3. Meet computer technical requirements as stipulated in the Information Technology section of the College website.
4. Demonstrate current certification of cardiopulmonary resuscitation (CPR)/basic life support (BLS for the Healthcare Provider) issued by the American Heart Association or the American Red Cross.
5. Complete a background check performed by a Kettering College-approved service no more than six months prior to the semester of entry to the program.
6. Provide documentation of compliance with all health requirements.

REQUIREMENTS FOR PROGRESSION

Students who earn a grade less than a C, WP, or WF from any course will be removed from the RN-to-BSN track. A grade of W does not apply to this situation. Students will need to reapply according to the criteria in the readmission policy.

To progress in the nursing program track, a student will:

- Continue to demonstrate professional and ethical behavior.
- Achieve a minimum grade of C in all courses required for the RN-to-BSN program track (includes nursing and arts and sciences courses). A grade lower than a C in any

required course is considered a course failure and will result in dismissal from the program track.

- Not enroll more than twice in any course.
 - A grade of W does not apply.
 - If a student withdraws (WP/WF) and at the time of withdrawal has less than a C grade equivalency, the WP/WF is considered the same as a course failure.
 - A grade of WP or WF counts as enrollment in a course.
- Maintain compliance with technical standards.
- Maintain health requirements and current immunization status.
- Maintain clearance of background check.

IN PROGRESS GRADE OR LEAVE OF ABSENCE STATUS

Students receiving a grade of IP (in progress) or I (incomplete) or taking a leave of absence (not registering for required courses for one semester or longer) must communicate their intent for resuming coursework in the RN-to-BSN track to their academic advisor or program chair according to the following deadlines:

- March 1 for reentry into fall semester
- June 1 for reentry into winter semester
- Nov. 1 for reentry into summer semester

Students who do not engage in coursework for one year or greater will need to reapply.

General College policies on tuition and fees for remediation of courses will apply.

READMISSION

- Students wishing to apply for readmission must submit a readmission form to the director of admissions.
- If readmitted, a student may repeat a course only once.
- A course must be repeated the next term in which the course is offered. Absences longer than one semester require an application for a leave of absence.
- Requests for readmission will be evaluated on an individual basis.
- The decision to readmit a student will be based on the following criteria:
 - Available space within the track.
 - Review and evaluation of the student's professional and ethical behavior as well as academic and clinical performance at the time of withdrawal or dismissal.

- Cumulative GPA of at least 2.0 (a higher GPA may be needed to be competitive).
Note: Calculation of readmission GPA will not include the failing letter grade of the last course where the student was not successful.
- Submission of evidence demonstrating potential for academic success.
- Students are not eligible for readmission following failure of two courses required for the RN-to-BSN program track. A student may not enroll more than twice in any course.
 - A grade of W does not apply.
 - If a student withdraws (WP/WF) and at the time of withdrawal has less than a C grade equivalency, the WP/WF is considered the same as a course failure.
 - A grade of WP or WF counts as enrollment in a course.
- A plan of success will be developed on an individual basis.
- Readmitted students enter under the curriculum, program policies, and Academic Bulletin in place during the semester of reentry into the track.

REQUIREMENTS FOR GRADUATION

- To graduate, the student must satisfactorily complete at least 31 semester credits (30 credits at the upper-division level).
- The student must meet all other graduation requirements as specified in this *Academic Bulletin*.

PROGRAM OF STUDY FOR RN-TO-BSN TRACK

Prerequisites

Statistics	One course	3
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TOTAL	3
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Required nursing courses

NRSA 311	BSN Success Strategies	2
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NRSA 326	Trends and Issues in Healthcare	3
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NRSA 340	Evidence-Based Nursing Practice	4
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NRSA 350	Health Assessment & Health Promotion	3
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NRSA 420	Population Health	4
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NRSA 440	Leadership in Healthcare	4
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NRSA 450	Leadership Seminar & Capstone	2
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TOTAL	22
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Required general education courses

BIOL 350	Pathophysiology	3
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RELP 316	Spirituality in Healing and Health Care	3
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Humanities	One course from literature, history, philosophy, music, art, theater, or foreign language	3
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TOTAL	9
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Total semester credits for the RN-to-BSN track	34
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**COURSE AVAILABILITY FOR DIVISION OF NURSING RN-BSN TRACK
7-WEEK ONLINE DELIVERY FORMAT — FALL, WINTER, AND SUMMER SEMESTERS**

Nursing Courses

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
NRSA 311 BSN Success Strategies (3 credits)	NRSA 326 Trends & Issues in Healthcare (3 credits)	NRSA 311 BSN Success Strategies (3 credits)	NRSA 340 Evidence-Based Nursing Practice (4 credits)	NRSA 311 BSN Success Strategies (3 credits)	NRSA 450 Leadership Seminar & Capstone (2 credits)
NRSA 350 Health Assessment & Promotion (3 credits)	NRSA 450 Leadership Seminar & Capstone (2 credits)	NRSA 420 Population Health (4 credits)	NRSA 450 Leadership Seminar & Capstone (2 credits)	NRSA 350 Health Assessment & Promotion (3 credits)	
NRSA 440 Leadership in Healthcare (4 credits)				NRSA 440 Leadership in Healthcare (4 credits) Only if full-time	

Arts and Sciences Courses

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
Humanities elective (3 credits)		Humanities elective (3 credits)		Humanities elective (3 credits)	
BIOL 350 Pathophysiology (3 credits)		BIOL 350 Pathophysiology (3 credits)		BIOL 350 Pathophysiology (3 credits)	RELP 316 Spirituality in Healing & Healthcare (3 credits)
Fall Semester (15 weeks)		Winter – 7A		Summer Semester (10 weeks)	
MATH 201 Probability & Statistics (3 credits)		MATH 201 Probability & Statistics (3 credits)		MATH 201 Probability & Statistics (3 credits) May need to be taken from another institution	

Division of Health Professions

Tuta Ionescu, PhD, RT(R)(CT), Chair, Radiologic Sciences and Imaging

Alisa French, MBA, RRT-NPS, COI, Chair, Respiratory Care

Susan Price, PhD, RDMS, Chair, Diagnostic Medical Sonography

Liz Golba, EdD, MEd, RRT-RCP, NPS, RPFT, Chair, Health Sciences

DEGREES OFFERED

- Associate of Science with a major in radiologic sciences and imaging
- Associate of Science with a major in nuclear medicine technology
- Bachelor of Science with a major in respiratory care
- Bachelor of Science with a major in diagnostic medical sonography
- Bachelor of Science in Health Sciences with a major in Healthcare Management and optional concentration in:
 - Pre-occupational therapy
- Bachelor of Science in Healthcare Studies with a concentration in:
 - Pre-physician assistant
 - Pre-physical therapy
- Bachelor of Science in Health Sciences completion degree (BSHS) with emphasis in:
 - Management
 - Education
 - Advanced imaging
 - Respiratory care
 - Pre-MBA/Pre-MHA

Department of Radiologic Sciences and Imaging

Tuta Ionescu, EdD, RT(R)(CT), Chair; Rob Hoover, MA, RT(R); Samantha Fullen B.S., RT(R)(CT)(MRI); Idamae Jenkins, MA, RT(R)

MISSION STATEMENT

The radiologic sciences and imaging department is dedicated to educating students who are committed to becoming caring, competent, and professional imaging specialists. It is our commitment, through accredited student education, to provide the healthcare community with imaging specialists who are skilled professionals, serving human needs in the Christian context.

RADIOLOGIC SCIENCES AND IMAGING PROGRAMS

Radiologic technologists, nuclear medicine technologists, and advanced imaging technologists are dedicated to providing patients with the highest-quality care and supporting physicians and other medical professionals in conserving life and preventing disease. They use a variety of procedures and sophisticated equipment for imaging body structures and organs as well as perform interventional procedures designed to treat various disease processes.

Kettering College radiologic sciences and imaging programs are competency-based. They provide a combination of didactic theory and clinical applications of that theory to prepare students to meet the challenges of advancing technology in the current healthcare environment.

Kettering College offers the following:

Radiologic technology: Prepares students to perform radiographic procedures, administer basic levels of patient care, and qualify for the American Registry of Radiologic Technologists (ARRT) registry examination.

Nuclear medicine technology: Prepares students for matriculation into the University of Findlay Nuclear Medicine Institute, where they learn to perform nuclear medicine procedures, administer basic patient care, and qualify for the ARRT registry examination in nuclear medicine technology or the Nuclear Medicine Technology Certification Board (NMTCB) examination.

Advanced imaging technology: Prepares graduates of accredited radiologic technology, nuclear medicine, or radiation therapy programs to perform imaging procedures in one or more of the following modalities; CT, MRI, vascular interventional, and cardiovascular interventional technologies.

Nuclear medicine technology

SUGGESTED COURSE OF STUDY

FIRST YEAR, FALL

BIOL 119	Human Anatomy and Physiology I	4
CHEM 105	Chemistry for the Health Sciences	4
MATH 155	College Algebra	3
RTCA 121	Medical Terminology	1

TOTAL 12

FIRST YEAR, WINTER

BIOL 129	Human Anatomy and Physiology II	4
ENGL 101	Writing and Rhetoric I	3
PHYS 131	Survey of Physics	4
RELB 101	Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ	3

TOTAL 14

FIRST YEAR, SUMMER

COMM 215	Introduction to Human Communication	3
ENGL 102	Writing and Rhetoric II	3
RELP 254	Morality and Medicine	3
SOCI 115	Principles of Sociology	3

TOTAL 12

Second-year courses offered at NMI are listed and taught at the 400 level. These courses are not offered at Kettering College and are subject to change.

SECOND YEAR, FALL

NMED 406	Molecular Imaging Mathematics	3
NMED 416	Molecular Imaging Physics	2
NMED 425	Molecular Imaging Radiobiology	1

NMED 435	Molecular Imaging Radiation Protection	2
NMED 445	Molecular Non-Imaging Procedures	3
NMED 455	Molecular Imaging Procedures	5
NMED 462	Radionuclide Therapies	1
NMED 465	Radiochemistry and Radiopharmaceuticals	3
NMED 472	Molecular Imaging Instrumentation	3
NMED 475	Molecular Imaging SPECT	1
NMED 477	Molecular Imaging PET	1

TOTAL		25
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SECOND YEAR, WINTER

NMED 485	Clinical Nuclear Medicine I	12
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TOTAL		12
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SECOND YEAR, SUMMER

NMED 486	Clinical Nuclear Medicine II	12
NMED 487	Molecular Imaging Capstone	1

TOTAL		13
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BACHELOR OF SCIENCE COMPLETION

Graduates of accredited nuclear medicine programs who are certified by either the ARRT or NMTCB may apply for certain advanced imaging technologies tracks or completion of a Bachelor of Science in Health Sciences at Kettering College.

Department of Respiratory Care

BACHELOR OF SCIENCE IN HEALTH SCIENCES: RESPIRATORY CARE EMPHASIS

SAMPLE FULL-TIME PROGRAM OF STUDY

(See advisor for part-time program of study)

FALL

RESA 3XX	Required emphasis course	3
HESC 381	Introduction to the Health Sciences Program	3
HESC 340	Legal and Ethical Considerations in Health Care	3
RELP 316	Spirituality in Healing and Health Care	3
MATH 201	Probability and Statistics	3

TOTAL 15

WINTER

SOCI 375	Cultural Diversity in Health Care	3
RESA 3XX	Required emphasis course	3
HESC 435	Community Health Perspectives	3
RELP 306	Spiritual Dimensions of Death and Dying	3

TOTAL 12

FALL

RESA 3XX	Required emphasis course	3
HESC 310	Health Care Economics and Finance	3
HESC 348	Concepts of Management and Leadership in Healthcare	3
HESC	Elective	3
HUMN	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3

TOTAL 15

WINTER

HESC	Elective	3
HESC 318	Introduction to Health Care Research	3
HESC 481	Capstone/Senior Project	1
HUMN	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
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	TOTAL	10
	TOTAL CREDITS	52

Bachelor of Science in Health Sciences

Chair: Liz Golba, EdD, MEd, RRT-RCP, NPS, RPFT

Advisors and Faculty: John Nunes PhD, MBA; Justina Or PhD, MS, MSA; Taryn Talbott, EdD, MRSO(MRSC), RT(R)(CT)(MR), COI;

Advisor: Robin Clinefelter, BS

MISSION STATEMENT

The Bachelor of Science in Health Sciences program (BSHS) at Kettering College provides high-quality, values-based baccalaureate education in health-related fields with the spirit of Christian caring and service.

PROGRAMS

Available completion tracks and majors include:

- Bachelor's completion with an emphasis
- Healthcare management major
- Healthcare management major, pre-occupational therapy track
- Healthcare studies major, concentration in pre-physician assistant
- Healthcare studies major, concentration in pre-physical therapy

BACHELOR OF SCIENCE IN HEALTH SCIENCES (BACHELOR'S COMPLETION TRACK)

Kettering College offers a Bachelor of Science in Health Sciences designed for those who have obtained an associate degree or its equivalent in healthcare and wish to pursue a Bachelor of Science degree. The course of study is the equivalent to the junior and senior years of a four-year baccalaureate program. Students may choose a full-time or part-time pace of study in an online learning environment.

Attitudes and values fostered in this degree enhance career mobility within healthcare settings and may serve as a foundation for graduate education. Those seeking greater emphasis in specific healthcare disciplines may choose from:

- Management
- Education
- Sonography
- Advanced imaging (see advanced imaging in the radiology section of the *Bulletin*)
- Respiratory care (see respiratory care section of the *Bulletin*); any student taking this emphasis must be a Registered Respiratory Therapist (RRT).

- Medical informatics (emphasis or certificate)
- Pre-MBA/Pre-MHA

Students who wish to enroll in the BSHS completion program without having earned an associate degree are reviewed individually to establish credit equivalent to an associate degree.

ACCREDITATION

The degree advancement respiratory care program #510004 holds Provisional Accreditation from the Commission on Accreditation for Respiratory Care (www.coarc.com), 1248 Harwood Road, Bedford, TX 76021-4244; 817-283-2835.

This status signifies that a program with an Approval of Intent has demonstrated sufficient compliance with the Standards through submission of an acceptable Provisional Accreditation Self Study Report (PSSR) and any other documentation required by the CoARC, as well as satisfactory completion of an initial onsite visit. The program will remain on provisional accreditation until it receives continuing accreditation.

BACHELOR OF SCIENCE IN HEALTH SCIENCES, HEALTHCARE MANAGEMENT MAJOR

Kettering College offers a Bachelor of Science in Health Sciences designed for those who want a bachelor's degree in healthcare management. The course of study is the equivalent of a four-year degree taken in three years full time.

BACHELOR OF SCIENCE IN HEALTH SCIENCES, HEALTHCARE MANAGEMENT MAJOR, PRE-OCCUPATIONAL THERAPY TRACK

The pre-occupational therapy track prepares students for applying to an occupational therapy doctoral program. Students in this track must take a full sequence of anatomy and physiology, medical terminology, abnormal psychology, and human growth and development. Those courses that meet OTD prerequisites are noted with an asterisk in the program of study. Abnormal psychology must be taken outside Kettering College.

BACHELOR OF SCIENCE IN HEALTH SCIENCES, HEALTHCARE STUDIES MAJOR WITH A CONCENTRATION IN PRE-PHYSICIAN ASSISTANT

The healthcare studies major with a concentration in pre-physician assistant prepares students for applying to a physician assistant graduate program.

BACHELOR OF SCIENCE IN HEALTH SCIENCES, HEALTHCARE STUDIES MAJOR WITH A CONCENTRATION IN PRE-PHYSICAL THERAPY TRACK

The healthcare studies major with a concentration in pre-physical therapy prepares students for applying to a physical therapy doctoral program.

END-OF-DEGREE STUDENT LEARNING OUTCOMES

Graduates of the Bachelor of Science in Health Sciences (BSHS) program acquire advanced skills, knowledge, and values to expand their professional roles in the healthcare system while incorporating a comprehensive knowledge base as a healthcare professional.

The graduate earning the Bachelor of Science in Health Sciences degree:

1. Integrates communication skills in interprofessional teams within the healthcare industry.
2. Incorporates information technology skills in a variety of healthcare settings.
3. Engages in critical thinking, reflection, and problem solving through evidence-based practice in multiple healthcare settings.
4. Contributes to and advocates for continuous improvement of the healthcare system through promoting public policy.
5. Demonstrates respect and adaptability for cultural, ethnic, and individual diversity within a changing healthcare environment.
6. Incorporates current knowledge, theory, and research into health professions practice.
7. Demonstrates professional, ethical, spiritual, and compassionate service within the healthcare arena.
8. Integrates the Christian principles of service and citizenship for the benefit of society.
9. Empowers themselves and others through an integration of leadership, management, and teaching/learning skills in the healthcare environment.
10. Integrates population-based and preventive healthcare when working with individuals, families, and communities.
11. Integrates economic, accounting, financial and healthcare policy knowledge into the healthcare management practice (healthcare management major only).

PROGRAM GOAL FOR BACHELOR OF SCIENCE IN HEALTH SCIENCES: RESPIRATORY CARE EMPHASIS

To provide graduates with knowledge, skills, and attributes in leadership, management, education, research, or advanced clinical practice, both to meet their current professional goals and to prepare them for practice as advanced-degree respiratory therapists.

PRE-ENROLLMENT REQUIREMENTS

To enroll in health sciences (HESC) courses, the following requirements must be met:

1. All students enrolled in BSHS program are expected to be proficient in the computer skills required for document preparation, internet searching, and the use of email.
2. All students must have access to the internet.

3. A current associate-degree radiology student may submit a conditional-admit form to the admissions office to start the BSHS completion program during the associate degree program. Student must be in the second year of the radiology program to apply.

ADMISSION REQUIREMENTS: BACHELOR'S COMPLETION TRACK

- A. Complete the student personal statement form online at www.kc.edu/personalstatement.
- B. A current copy of a government-issued photo ID can be required to verify identity of students throughout the program.
- C. Meet College admission requirements.
- D. Complete two semesters of college English composition with a grade of C or better. If only one semester was taken, the student must take ENGL 102 within the first year in the program.
- E. Fulfill one of the following:
 1. Have associate degree or its equivalent. The equivalency degree is reviewed on a case-by-case basis, and the applicant knows the exact equivalency before admission to the BSHS completion program.
 2. Complete a certificate/diploma program (student may need to take additional hours to achieve graduation requirements)
 3. Apply to the program in the following manner:
 - a. Students new to Kettering College must complete the new-student admission process.
 - b. Students continuing from the radiology associate degree program may request conditional admission through the admissions office.

ADMISSION REQUIREMENTS: HEALTHCARE MANAGEMENT AND HEALTHCARE STUDIES MAJOR

- A. Complete the student personal statement online at www.kc.edu/personalstatement.
- B. Meet College admission requirements
- C. Math placement exam if needed*

*Note: In order to follow the suggested course of study, students must score at least 70% on the math placement test or provide transfer credit equivalent to MATH 105. If this is not met, MATH 105 must be taken before taking MATH 155 or MATH 165.

LEAVE OF ABSENCE

If a student is planning on taking a leave of absence for more than one semester (including summer semester), the student must fill out a leave of absence request. Students gone for two

semesters or more without completing the form must reapply to the College and, if reaccepted, meet the requirements of the current *Academic Bulletin* at the time of readmission.

PROGRESSION: BACHELOR'S COMPLETION PROGRAM

- Students must complete all requirements for the program in 6 years.
- A student must earn a grade of C or above in HESC 381, Introduction to the Health Sciences Program, or have permission from the program chair before continuing in any other HESC course in the program of study. To graduate from the health sciences completion program (Bachelor of Science in Health Sciences degree), a student must earn a grade of C or higher in all coursework.
- Progression requires a minimum cumulative GPA of 2.00. If a student receives a C- or below in a course, the course must be repeated; however, as long as a 2.00 or above is achieved in a semester, the student may progress. A student may not enroll in a course more than twice (a grade of W does not apply; a grade of WP or WF counts as re-enrolled in a course). Failing a didactic course twice is a failure to progress, and the student will be dismissed from the completion program.
- Kettering College associate degree radiology students who are conditionally admitted (see section on admissions) are required to take HESC 381 the first term of enrollment or they will be dropped from the program. The student may reapply upon completion of the associate degree.

PROGRESSION: HEALTHCARE MANAGEMENT AND HEALTHCARE STUDIES MAJOR

Students must complete the core curriculum. To graduate from the healthcare management major (Bachelor of Science in Health Sciences degree), a student must earn a grade of C or higher in all coursework. Progression requires a minimum GPA of 2.00 in each term. If a student receives a C- or below in a course, the course must be repeated; however, as long as a 2.00 or above is achieved in a semester, the student may progress. A student with a cumulative GPA of 2.50 or higher who does not successfully complete a required course may be allowed to remain in the program. The course must be repeated in the next term in which it is offered, as long as it is not a prerequisite to another course. A student may not enroll in a course more than twice (a grade of W does not apply; a grade of WP or WF counts as re-enrolled in a course). Failing a didactic course twice is a failure to progress, and the student will be dismissed from the healthcare management major.

READMISSION

Readmission requests must be made in writing to the admissions office. Requests will be evaluated individually and may be based on the following criteria:

1. Cumulative GPA of 2.3 or above
2. Patterns of attendance (online), withdrawals, repeats, and/or failures
3. Available space in the program
4. Evaluation of the student's standing relative to any revisions that may have occurred in the curriculum, courses, or requirements
5. Period of time out of the program
6. Submission of evidence demonstrating a plan for academic success (learning contract)
7. Failure of clinical rotations (if applicable).

Students will be readmitted under the current *Academic Bulletin*. A student is not eligible for readmission if he or she has received a second grade below C in any course unless readmission is approved by the program director and the Dean for Undergraduate Academic Affairs.

GRADUATION REQUIREMENTS

1. Students must achieve a minimum GPA of 2.0.
2. Students must achieve a C or better in all courses required for graduation.
3. If a student receives a grade of C- or below in any required curriculum course, the course must be retaken to count for graduation.

CHANGING AND/OR ADDING EMPHASES (BACHELOR'S COMPLETION TRACK ONLY)

A student may change or add emphases once admitted to the program with approval of their advisor. If a student is dismissed from the clinical portion of an emphasis (ADIM), the student will also be dismissed from the Health Sciences program.

COURSE OF STUDY: BACHELOR'S COMPLETION TRACK

The Bachelor of Science in Health Sciences degree requires a minimum of 52 credits; however, different emphases may require more credits. Bachelor's completion-seeking students are required to take a minimum of 30 credits at Kettering College to complete the degree, and at least 36 credits must be from the upper division.

All students must take:

1. HESC 381 as one of their first courses upon admission to the degree.
2. ENGL 102 if they have not taken two semesters of college English composition with a grade of C or better.

3. College core requirements (see College core requirements for Bachelor of Science in Health Sciences degree).
4. Health sciences core courses.
5. Courses as required by the emphasis (clinicals required for advanced imaging only).
6. Health sciences electives as stipulated by the emphasis.
7. Other courses as stipulated by the emphasis.

BACHELOR OF SCIENCE IN HEALTH SCIENCES DEGREE CORE

Arts and sciences courses (18 credits to meet core requirements)

Humanities (6 credits in literature, history, philosophy, music, art, theater, or foreign language)	6
Religion (6 credits)	
REL 316 Spirituality in Healing and Health Care	3
REL 306 Spiritual Dimensions of Death and Dying.....	3
Mathematics (3 credits)	
MATH 201 Probability and Statistics or its equivalent.....	3
Social Sciences (3 credits)	
SOCI 375 Cultural Diversity in Healthcare	3
Natural Sciences (3 credits) ADVANCED IMAGING: CT and/or MRI only	
BIOL 263 Sectional Anatomy	3

Health sciences core courses (19 credits required)

HESC 381 Introduction to the Health Sciences Program.....	3
HESC 310 Healthcare Economics and Finance	3
HESC 318 Introduction to Health Professions Research.....	3
HESC 340 Legal and Ethical Considerations in Healthcare	3
HESC 348 Concepts of Management and Leadership in Healthcare ..	3
HESC 435 Community Health Perspectives	3
HESC 481 Capstone/Senior Project	1

Health Sciences management emphasis courses (9 credits required)

HESC 421 Healthcare Personnel Management.....	3
HESC 448 Leadership Theory in Healthcare	3
HESC 451 Interdisciplinary Team Practice in Community-Based Care.....	3

Health Sciences education emphasis (9 credits required)

HESC 430 Instructional Planning and Delivery.....	3
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HESC 431	Teaching Learners in Healthcare	3
HESC 432	Professional Development in Healthcare	3
Health Sciences respiratory care emphasis (choice of 3 courses from below)		
Must have the RRT credential to take these courses.		
RESA 310	Cardiopulmonary Assessment	3
RESA 311	Advanced Practice in Neonatal/ Pediatric Respiratory Care	3
RESA 320	Cardiopulmonary Monitoring	3
RESA 321	Pediatric Respiratory Care Case Management.....	3
RESA 330	Advanced Topics in Respiratory Care.....	3
RESA 495	Independent Study	1-3
Health Sciences advanced imaging emphasis (more credits required)		
For more information, see the radiologic technology program.		
ADIM 300	CT Theory	3
ADIM 404	Practicum I (CT)	3
ADIM 328	Clinical Aspects of CT	3
ADIM 305	MRI Theory	6
ADIM 315	Practicum II (MRI)	3
ADIM 425	Clinical Aspects of MRI	4.5
ADIM 311	Vascular Interventional Technology.....	3
ADIM 321	Practicum III (vascular interventional technology)	3
ADIM 413	Cardiovascular Interventional Technology.....	5
ADIM 432	Practicum IV (cardiovascular interventional technology)	3
BIOL 263	Sectional Anatomy (CT & MRI)	3
Pre-MBA/Pre-MHA (12 credits required)		
ECON 101	Fundamentals of Economics.....	3
ACCT 201	Survey of Accounting	3
MKTG 301	Marketing	3
FINC 301	Corporate Finance	3
Health Sciences additional elective study (6 credits depending on emphasis)		
Students choose from the following courses:		
HESC 315	Communication, Negotiations, and Conflict Resolution in Healthcare Organizations.....	3

HESC 330	Healthcare Organizational Systems.....	3
HESC 326	Trends and Issues in Healthcare	3
**HESC 345	History of Healthcare in the United States	3
HESC 350	Risk Management in Healthcare	3
HESC 370	Special Topics in Health Professions.....	3
#HESC 420	Healthcare Operations Problem & Lean Thinking.....	3
*HESC 421	Healthcare Personnel Management.....	3
*HESC 430	Instructional Planning and Delivery.....	3
*HESC 431	Teaching Learners in Healthcare	3
*HESC 432	Professional Development in Healthcare	3
HESC 440	Special Project in Health Professions	1-3
	(may be repeated up to 6 credits with permission of advisor)	
HESC 445	Healthcare and Government Policy	3
*HESC 448	Leadership Theory in Healthcare	3
*HESC 451	Interdisciplinary Team Practice in Community-Based Care.....	3
#HESC 491	Strategic Management in Healthcare.....	3

*May not be taken as an elective if taken as part of an emphasis requirement.

**HESC 345 is cross listed as HIST 345. This course can be used for either an elective HESC or humanities (HIST) but cannot count for both.

#By permission of the instructor.

MEDICAL INFORMATICS CERTIFICATE

Medical informatics can be taken as a certificate without taking the bachelor's completion degree.

REQUIREMENTS

- Meet all admission requirements for Kettering College
- Must have a minimum of associate degree, its equivalent, or five years of working experience in a related field
- To receive a certificate in medical informatics, students must take three courses (HESC 411, 412, 413) to be completed in three semesters.

COURSE AVAILABILITY FOR HEALTH SCIENCES

COMPLETION MAJOR — 7-WEEK ONLINE DELIVERY FORMAT: FALL, WINTER, AND SUMMER SEMESTERS

Health Sciences Core Courses

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
HESC 381 Introduction to Health Sciences Program (3 credits)	HESC 340 Legal & Ethical Considerations in Healthcare (3 credits)	HESC 381 Introduction to Health Sciences Program (3 credits)	HESC 318 Introduction to Health Profession Research (3 credits)	HESC 381 Introduction to Health Sciences Program (3 credits)	
HESC 310 Healthcare Economics & Finance (3 credits)	HESC 481 Capstone/ Senior Project (1 credit)	HESC 310 Healthcare Economics & Finance (3 credits)	HESC 481 Capstone/ Senior Project (1 credit)	HESC 318 Intro to Health Profession Research (3 credits)	
HESC 348 Concepts of Management & Leadership in Healthcare (3 credits)		HESC 340 Legal & Ethical Considerations in Healthcare (3 credits)		HESC 481 Capstone/ Senior Project (1 credit) Full Summer Term 10 weeks	
		HESC 435 Community Health Perspectives (3 credits)			
		HESC 348 Concepts of Management & Leadership in Healthcare (3 credits) Full Term 15 weeks			

Health Sciences Elective Courses

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
	HESC 330 Healthcare Organizational Systems (3 credits)	HESC 445 Healthcare & Government (3 credits)	HESC 326 Trends & Issues in Healthcare (3 credits)		
HESC 345 History of Healthcare in the United States (3 credits)	HESC 420 Healthcare Operations Problems and Lean Thinking (3 credits)	HESC 440 Special Project in Healthcare (1-3 credits)		HESC 350 Risk Management in Healthcare Organizations (3 credits)	
HESC 440 Special Project in Healthcare (1-3 credits)				HESC 440 Special Project in Healthcare (1-3 credits)	
				HESC 345 History of Healthcare in the United States (3 credits)	

Health Sciences Emphasis Courses

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
Management Emphasis					
	HESC 448 Leadership Theory in Healthcare (3 credits)		HESC 451 Interdisciplinary Team Practice in Community Based Care (3 credits)		HESC 421 Healthcare Personnel Management (3 credits)
Education Emphasis					
	HESC 431 Teaching Learners in Healthcare (3 credits)		HESC 432 Professional Development in Healthcare (3 credits)		HESC 430 Instructional Planning & Delivery (3 credits)
Pre-MBA/Pre-MHA Emphasis					
Fall		Winter		Summer	
ECON 101 Fundamentals of Economics (3 credits)		ACCT 201 Principles of Accounting (3 credits)		MKTG 301 Principles of Marketing (3 credits)	
FINC 301 Corporate Finance (3 credits)					

Respiratory Emphasis

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
	RESA 320 Cardiopulmonary Monitoring (3 credits)		RESA 310 Cardiopulmonary Assessment (3 credits)		RESA 311 Neonatal/ Pediatric Respiratory Care (odd years) (3 credits)
	RESA 495 Independent Study (3 credits)		RESA 495 Independent Study (3 credits)		RESA 321 Pediatric Respiratory Care Case Mgt (even years) (3 credits)
					RESA 495 Independent Study (3 credits)

Advanced Imaging Emphasis

Fall	Winter	Summer
ADIM 305 MRI Theory (6 credits)		ADIM 300 CT Theory (3 credits)
ADIM 315 Practicum II (MRI) (3 credits)		ADIM 328 Clinical Aspects of CT (4 credits)
ADIM 425 Clinical Aspects of MRI (5 credits)		ADIM 404 Practicum I (CT) (3 credits)
ADIM 396 Variable Independent Clinical (1-4 credits)	ADIM 396 Variable Independent Clinical (1-4 credits)	ADIM 396 Variable Independent Clinical (1-4 credits)
ADIM 311 Vascular Interventional Technology (3 credits)	ADIM 413 Cardiovascular Interventional Technology (5 credits)	
ADIM 321 Practicum III (Vascular Interventional Technology) (4 credits)	ADIM 432 Practicum IV (Cardiovascular Interventional Technology) (3 credits)	

Arts and Sciences Courses

Fall		Winter		Summer	
Session 7A	Session 7B	Session 7A	Session 7B	Session 7A	Session 7B
RELP 316 Spirituality in Healing & Healthcare (3 credits)	RELP 306 Spiritual Dimensions of Death & Dying (3 credits)	RELP 316 Spirituality in Healing & Healthcare (3 credits)	RELP 306 Spiritual Dimensions of Death & Dying (3 credits)	RELP 306 Spiritual Dimensions of Death & Dying (3 credits)	RELP 316 Spirituality in Healing & Healthcare (3 credits)
Humanities elective (3 credits)	SOC1 375 Cultural Diversity in Healthcare (3 credits)	Humanities elective (3 credits)	SOC1 375 Cultural Diversity in Healthcare (3 credits)	Humanities elective (3 credits)	SOC1 375 Cultural Diversity in Healthcare (3 credits)
MATH 201 Probability & Statistics (3 credits) (Full 15 weeks)		MATH 201 Probability & Statistics (3 credits)		MATH 201 Probability & Statistics (3 credits) Full summer term 10 weeks	
				BIOL 263 Sectional Anatomy (3 credits) Only offered this term Full summer term 10 weeks	

BACHELOR OF SCIENCE IN HEALTH SCIENCES

The Bachelor of Science in Health Sciences requires at least 120 semester credits, including general education, with at least 40 semester credits in the upper division. Required major courses and elective major courses must total at least 40 semester credits, with at least 20 semester credits in the upper division; 68 credits must be taken at Kettering College.

There are two majors within this degree: healthcare management and healthcare studies.

HEALTHCARE MANAGEMENT MAJOR INCLUDING OTD TRACK

I. Required BSHS Core.....	50 credits
ENGL 101 Writing and Rhetoric I.....	3
ENGL 102 Writing and Rhetoric II.....	3
COMM 215 Intro to Human Communications.....	3
RELB 101 Biblical Resources for Understanding Healthcare.....	3
RELP 254 Morality and Medicine: Christian Perspective on Bioethical Issues.....	3
RELP 306 Spiritual Dimension of Death and Dying	3
RELP 316 Spirituality in Healing and Healthcare	3
HIST XXX History survey sequence (one course).....	3
HUMN XXX Humanities electives (two courses: literature, history, philosophy, music, art, theater, or foreign language).....	6
MATH 155 College Algebra.....	3
PSYC 112 General Psychology	3
SOCI 115 Principles of Sociology	3
SOCI 375 Cultural Diversity in Healthcare.....	3
Science core **See below for courses.....	8
BIOL 119 Anatomy and Physiology I.....	4
BIOL 129 Anatomy and Physiology II.....	4
*BIOL 151 Microbiology	4
*CHEM 105 Chemistry for Health Sciences.....	4
*PHYS 131 Survey of Physics.....	4

*By permission only and not an option for pre-OTD

In order to complete the major in a timely manner, the student should follow the suggested course of study as outlined below.

II. Required Healthcare Management Major Courses	37 credits
HESC 315 Communication, Negotiations, and Conflict Resolution in Healthcare Organizations	3
HESC 318 Introduction to Health Professional Research.....	3
HESC 330 Healthcare Organizational	3
HESC 340 Legal and Ethical Considerations in Healthcare	3
HESC 381 Introduction to the Health Science Programs.....	3
HESC 420 Healthcare Operations Problem & Lean Thinking.....	3
HESC 421 Healthcare Personnel Management.....	3
HESC 445 Healthcare and Government Policy	3
HESC 448 Leadership Theory in Healthcare	3
HESC 451 Interdisciplinary Team Practice in Community-Based Care	3
HESC 475 Healthcare Management Internship	2
HESC 481 Capstone.....	1
HESC 491 Strategic Management in Health Care	3
KETC 101 Medical Terminology	1
III. Required Cognate Courses	27 credits
ACCT 201 Principles of Accounting.....	3
ECON 101 Fundamentals of Economics.....	3
FINC 301 Corporate Finance	3
HESC 310 Healthcare Economics and Finance	3
HESC 348 Concepts of Management and Leadership in Healthcare	3
MATH 201 Probability and Statistics	3
MKTG 301 Principles of Marketing.....	3
PSYC 210 Social Psychology	3
PSYC 220 Organizational Psychology.....	3
IV. Elective Courses.....	6 credits
HESC 326 Issues and Trends in Healthcare	3
HESC 345 History of Healthcare in the United States	3
HESC 430 Instructional Planning and Delivery	3

HESC 431	Teaching Learners in Healthcare	3
HESC 432	Professional Development in Healthcare	3
HESC 435	Community Health Perspectives	3
HESC 440	Special Project in Healthcare	3
*PSYC 138	Human Growth and Development.....	3
	(must be taken if going into OTD program and counts as an HESC elective)	
*PSYC 230	Abnormal Psychology	3
	(must be taken if going into OTD program)	

TOTAL

120 credits

*OTD required prerequisites

BSHS 3-YEAR HEALTHCARE MANAGEMENT MAJOR: SUGGESTED COURSE OF STUDY**FIRST YEAR****FALL**

*BIOL 119	Anatomy and Physiology I	4
COMM 215	Intro to Human Communications	3
ECON 101	Fundamentals of Economics	3
MATH 105	Fundamentals of Mathematics (if needed)	(3)
RELB 101	Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ	3

TOTAL 13-16

*Science core course required for the OTD track; others may seek permission for other science courses

WINTER

*BIOL 129	Human Anatomy and Physiology II	4
ACCT 201	Survey of Accounting	3
ENGL 101	Writing and Rhetoric I	3
HIST 102 or 152	History sequence II	3
MATH 155	College Algebra	3

TOTAL 16

*Science core course required for the OTD track; others may seek permission for other science courses

SUMMER

ENGL 102	Writing and Rhetoric II	3
HESC 381	Introduction to the Health Sciences Program	3
KETC 101	Medical Terminology	1
RELB 254	Morality and Medicine: Christian Perspective on Bioethical Issues	3
SOCI 115	Principles of Sociology	3

TOTAL 13

SECOND YEAR**FALL**

HESC 340	Legal and Ethical Considerations in Healthcare	3
HESC 348	Concepts of Management and Leadership in Healthcare	3
MATH 201	Probability and Statistics	3
PSYC 112	General Psychology	3
PSYC 220	Organizational Psychology	3

TOTAL		15
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WINTER

HESC 318	Healthcare Statistics and Research	3
HESC 445	Government Policy & Healthcare	3
HUMN XXX	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
PSYC 210	Social Psychology	3
RELT 306	Death and Dying	3

TOTAL		15
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SUMMER

HESC 421	Healthcare Personnel Management	3
HUMN XXX	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
MKTG 301	Principles of Marketing	3
SOCI 375	Cultural Diversity in Healthcare	3

TOTAL		12
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THIRD YEAR**FALL**

FINC 301	Corporate Finance	3
HESC 310	Healthcare Economics and Finance	3
HESC 330	Healthcare Organizational Systems	3
HESC 420	Healthcare Operations Problem & Lean Thinking	3
HESC 448	Leadership Theory in Healthcare	3

TOTAL	15
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WINTER

HESC 315	Communication, Negotiations, and Conflict Resolution in Healthcare Organizations	3
HESC 451	Interdisciplinary Team Practice in Community-Based Care	3
HESC 491	Strategic Management in Healthcare	3
HESC XXX	HESC Elective (or PSYC 138 if pre-OTD)	3
RELP 316	Spirituality in Healing and Healthcare	3

TOTAL	15
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SUMMER

HESC 475	Healthcare Management Internship	2
HESC 481	Capstone	1
HESC XXX	HESC elective	3
*PSYC 230	Abnormal Psychology (pre-OTD only)	3

TOTAL	6-9
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*Required as a prerequisite for OTD if not already completed.

HEALTHCARE STUDIES WITH A CONCENTRATION IN PRE-PHYSICIAN ASSISTANT (PA)

I.	Required BSHS Core.....	50 credits
	ENGL 101 Writing and Rhetoric I.....	3
	ENGL 102 Writing and Rhetoric II.....	3
	COMM 215 Intro to Human Communications.....	3
	RELB 101 Biblical Resources for Understanding Healthcare.....	3
	RELB 254 Morality and Medicine: Christian Perspective on Bioethical Issues.....	3
	REL P 306 Spiritual Dimensions of Death and Dying.....	3
	REL P 316 Spirituality in Healing and Healthcare	3
	HIST XXX History survey sequence (one course).....	3
	HUMN XXX Humanities electives (two courses: literature, history, philosophy, music, art, theater, or foreign language).....	6
	MATH 155 College Algebra.....	3
	PSYC 112 General Psychology	3
	SOCI 115 Principles of Sociology	3
	SOCI 375 Cultural Diversity in Health Care	3
	Science core	
	BIOL 119 Anatomy and Physiology I.....	4
	BIOL 129 Anatomy and Physiology II.....	4

In order to complete the major in a timely manner, the student should follow the suggested course of study as outlined below.

II. Required Healthcare Studies Major Courses	40 credits
ACCT 201 Principles of Accounting	3
ECON 101 Fundamentals of Economics	3
FINC 301 Corporate Finance	3
HESC 310 Healthcare Economics and Finance	3
HESC 318 Introduction to Health Professional Research	3
HESC 340 Legal and Ethical Considerations in Healthcare	3
HESC 348 Concepts of Management and Leadership in Healthcare	3
HESC 381 Introduction to the Health Science Programs	3
HESC 420 Healthcare Operations Problem & Lean Thinking	3
OR	
HESC 448 Leadership Theory in Healthcare	
HESC 421 Healthcare Personnel Management	3
OR	
MKTG 301 Principles of Marketing	
HESC 435 Community Health Perspectives	3
HESC 475 Healthcare Management Internship	2
HESC 481 Capstone	1
HESC 491 Strategic Management in Healthcare	3
KETC 101 Medical Terminology	1

III. Pre- Physician Assistant (PA) Required Courses.....	34 credits
*BIO 105 General Biology I.....	4
*BIO 151 Microbiology	4
*BIO 341 Biochemistry.....	4
*CHE 121 General Chemistry I	4
*CHE 122 General Chemistry II	4
*CHE 221 Organic Chemistry I	4
*CHE 222 Organic Chemistry II	4
*MATH 201 Probability & Statistics.....	3
*PSYC 138 Human Growth and Development.....	3
OR	
*PSYC 230 Abnormal Psychology	

TOTAL

124 credits

*Pre-PA prerequisites for admission to Kettering College; please check the school you are applying to for additional required prerequisites

**BSHS 4-YEAR HEALTHCARE STUDIES WITH A CONCENTRATION IN PRE-PHYSICIAN ASSISTANT (PA):
SUGGESTED COURSE OF STUDY**

FIRST YEAR

FALL

BIOL 119	Anatomy and Physiology I	4
ECON 101	Fundamentals of Economics	3
ENGL 101	Writing and Rhetoric I	3
KETC 101	Medical Terminology	1
MATH 105	Fundamentals of Mathematics (if needed)	(3)
RELB 101	Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ	3

TOTAL		14-17
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WINTER

BIOL 129	Human Anatomy and Physiology II	4
ENGL 102	Writing and Rhetoric II	3
HESC 381	Introduction to the Health Sciences Programs	3
HIST 102 or 152	History sequence II	3
MATH 155	College Algebra	3

TOTAL		16
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SECOND YEAR

FALL

BIO 105	General Biology I	4
CHE 121	General Chemistry I	4
COMM 215	Introduction to Human Communications	3
PSYC 112	General Psychology	3
SOCI 115	Principles of Sociology	3

TOTAL		17
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WINTER

ACCT 201	Survey of Accounting	3
CHE 122	General Chemistry II	4
HESC 348	Concepts of Management and Leadership in Healthcare	3
HUMN XXX	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
RELB 254	Morality and Medicine: Christian Perspective on Bioethical Issues	3

TOTAL	16
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THIRD YEAR**FALL**

CHE 221	Organic Chemistry I	4
FINC 301	Corporate Finance	3
HESC 310	Health Care Economics and Finance	3
HESC 340	Legal and Ethical Considerations in Health Care	3
MATH 201	Probability and Statistics	3

TOTAL	16
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WINTER

BIOL 151	Microbiology	4
CHE 222	Organic Chemistry II	4
HESC 435	Community Health Perspectives	3
RELT 306	Death and Dying	3

TOTAL	14
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SUMMER

HESC 318	Healthcare Statistics and Research	3
HESC 421	Healthcare Personnel Management	3
OR		
MKTG 301	Principles of Marketing	
PSYC 138	Abnormal Psychology (pre-OTD only)	3
OR		
PSYC 220	Organizational Psychology	

TOTAL		9
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FOURTH YEAR**FALL**

BIO 341	Biochemistry I	4
HESC 420	Healthcare Operations Problem & Lean Thinking	3
OR		
HESC 448	Leadership Theory in Healthcare	
HUMN XXX	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
REL 316	Spirituality in Healing and Healthcare	3
SOCI 375	Cultural Diversity in Healthcare	3

TOTAL		16
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WINTER

HESC 475	Healthcare Management Internship	2
HESC 481	Capstone	1
HESC 491	Strategic Management in Healthcare	3

TOTAL		6
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HEALTHCARE STUDIES MAJOR WITH A CONCENTRATION IN PRE-PHYSICAL THERAPY (PT)

I.	Required BSHS Core (same as Pre-PA concentration)	50 credits
II.	Required Major Courses (same as Pre-PA concentration).....	40 credits
III.	Pre- Physical Therapy (PT) Required Courses	30 credits
	*BIO 105 General Biology I.....	4
	*BIO 106 General Biology II.....	4
	*CHE 121 General Chemistry I	4
	*CHE 122 General Chemistry II	4
	*PHYS 141 General Physics I.....	4
	*PHYS 142 General Physics II	4
	*MATH 201 Probability & Statistics.....	3
	*PSYC 138 Human Growth and Development.....	3

TOTAL

120 credits

*Common Pre-PT prerequisites as recommended by accrediting body; please check the school you are applying to for additional required prerequisites

**BSHS 4-YEAR HEALTHCARE STUDIES WITH A CONCENTRATION IN PRE-PHYSICAL THERAPY (PT):
SUGGESTED COURSE OF STUDY**

FIRST YEAR

FALL

BIOL 119	Anatomy and Physiology I	4
ECON 101	Fundamentals of Economics	3
ENGL 101	Writing and Rhetoric I	3
KETC 101	Medical Terminology	1
MATH 105	Fundamentals of Mathematics (if needed)	(3)
RELB 101	Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ	3

TOTAL		14-17
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WINTER

BIOL 129	Human Anatomy and Physiology II	4
ENGL 102	Writing and Rhetoric II	3
HESC 381	Introduction to the Health Sciences Programs	3
HIST 102 or 152	History sequence II	3
MATH 155	College Algebra	3

TOTAL		16
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SECOND YEAR

FALL

BIO 105	General Biology I	4
CHE 121	General Chemistry I	4
COMM 215	Introduction to Human Communications	3
PSYC 112	General Psychology	3
SOCI 115	Principles of Sociology	3

TOTAL		17
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WINTER

ACCT 201	Survey of Accounting	3
BIO 110	General Biology II	4

CHE 122	General Chemistry II	4
PSYC 138	Abnormal Psychology (pre-OTD only)	3
RELB 254	Morality and Medicine: Christian Perspective on Bioethical Issues	3
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	TOTAL	17
THIRD YEAR		
FALL		
FINC 301	Corporate Finance	3
HESC 310	Health Care Economics and Finance	3
HESC 340	Legal and Ethical Considerations in Healthcare	3
MATH 201	Probability and Statistics	3
PHYS 141	General Physics I	4
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	TOTAL	16
WINTER		
HESC 348	Concepts of Management and Leadership in Healthcare	3
HESC 435	Community Health Perspectives	3
HUMN XXX	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
PHYS 152	General Physics II	4
RELT 306	Death and Dying	3
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	TOTAL	14
SUMMER		
HESC 318	Healthcare Statistics and Research	3
HESC 421	Healthcare Personnel Management	3
OR		
MKTG 301	Principles of Marketing	
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	TOTAL	6

FOURTH YEAR**FALL**

HESC 420	Healthcare Operations Problem & Lean Thinking	3
OR		
HESC 448	Leadership Theory in Healthcare	
HUMN XXX	Humanities Group II elective (literature, history, philosophy, music, art, theater, or foreign language)	3
RELP 316	Spirituality in Healing and Healthcare	3
SOCI 375	Cultural Diversity in Healthcare	3

TOTAL		12
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WINTER

HESC 475	Healthcare Management Internship	2
HESC 481	Capstone	1
HESC 491	Strategic Management in Healthcare	3

TOTAL		6
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Graduate Outcomes

Kettering College's institutional learning outcomes represent the knowledge, skills, and attitudes fostered within the Kettering College experience to enable students to be successful in their personal and professional lives, in their future educational efforts, and as engaged members of their communities. Student achievement of learning outcomes is assessed within the academic majors and courses of study, after which the assessment results are used to improve the learning experience.

The College's mission identifies what we esteem: our Adventist faith; its view of health as harmony with God in body, mind, and spirit; and its view of service as a life calling. Our faith transforms *who we are as we serve others*, not only what we do in the process. Individually and collectively, our mission calls us to Christlike service.

Kettering College offers pre-professional and professional healthcare education leading to associate, bachelor's, master's, and doctoral degrees. As a fully accredited institution of higher education, the College provides its students with learning experiences that prepare them not only to be highly qualified professionals, but also to be successful citizens of character, able to adapt in an ever-changing world. To accomplish this, the College has identified four institutional outcomes, known as the Pillars, that are woven throughout the College curricula of all the degrees.

KETTERING COLLEGE INSTITUTIONAL OUTCOMES

Each student who successfully completes their program-specific outcomes and curriculum will be able to demonstrate degree-level-appropriate competencies in the identified domains for each outcome. Students will:

FAITH (F)

- Gain self-awareness of their faith journey within the context of a Christian community and learn the skills to holistically care for self and others.

SERVICE (V)

- Engage in service and service-learning opportunities that have a positive impact on communities and that foster self-awareness.

SCHOLARSHIP (S)

- Conduct ethical scholarship that involves gathering and evaluating evidence in order to draw and disseminate a conclusion.

LEADERSHIP (L)

- Work effectively with and through others by recognizing distinctive contributions each individual brings to forge superior solutions and results.

Graduate Program: Master of Physician Assistant Studies

PROGRAM OF STUDY FOR MPAS: TRANSITION YEAR INTEGRATED SYSTEMS-BASED CURRICULUM

NOTE: To progress from summer to fall semester, official record of degree and/or prerequisite requirements must be documented in the admissions office prior to the end of the summer semester.

FALL V

PHAS 632	Health Policy and PA Professional Practice I	0.5
PHAS 637	Capstone Prep I	1
PHAS 650*	Inpatient Internal Medicine Clinical Rotation	3
PHAS 651*	Family Medicine Clinical Rotation	3
PHAS 652*	Surgery Clinical Rotation	3
RELP 602	Applied Spiritual Care II	1

TOTAL		11.5
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Graduate Program: Occupational Therapy Doctorate

APPLICATION PROCESS

An applicant must complete the application process on the Occupational Therapist Centralized Application Service (OTCAS) at <https://portal.otcas.org/> and have the application completed and verified by the deadline published on www.kc.edu/occupational-therapy to be considered for admission. It can take several weeks for applications to be verified by OTCAS; applicants should plan accordingly. During the application process, all official transcripts should be sent directly to OTCAS. However, if an applicant received college credit from any international college or university, official transcripts need to be mailed to OTCAS and Kettering College directly from the institution(s), and the applicant needs to have the transcript(s) officially translated by a company that provides credential evaluation, such as WES (www.wes.org), ECE (www.ece.org), or Josef Silny (www.jsilny.com).

Kettering College policy and procedures dictate the use of one's cumulative and prerequisite GPA, along with the GPA of the last 60 credits calculated by OTCAS when assigning admissions points and determining eligibility. This applies to those who have completed their bachelor's and/or master's degrees, as well as those who have degrees in progress. OTCAS calculates GPAs based on all academic course work completed. For more information on how OTCAS calculates GPAs, please read the OTCAS Frequently Asked Questions (FAQ) on the OTCAS website (<https://otcas.liaisoncas.com/applicant-ux/#/login>).

The Kettering College OTD Program values exceptional professional skills and endeavors to hold all faculty, staff, and students to the highest levels of professionalism as ambassadors for the profession of occupational therapy and the Kettering Health brand of care. This expectation includes all interactions: face to face, virtual, phone conversations, and communications via e-mail even during the application process.

Once completed, applications are reviewed and verified by the admissions counselor. Applicants meeting the minimum requirements are then requested to provide a timed writing sample. For applicant(s) who apply to multiple admission cycles, a writing prompt is provided for

each application. The writing sample component is then scored by a member of the admissions committee. The OTCAS score is based on the following criteria:

Scores are compiled based on:

- Overall GPA
- Prerequisite GPA
- GPA of last 60 credits completed
- Three letters of recommendation
- Writing sample score
- Exceptional Applicant Policy Points, if applicable
- Bonus points for meeting one or more of the following criteria: (a) three or more classes taken from Kettering College; (b) a degree from a college/university accredited by the Accrediting Association of Seventh-day Adventist Colleges, Schools, and Universities (AAA); (c) Kettering Health employment; or (d) membership in the Seventh-day Adventist (SDA) Church.

The program uses a rolling admissions process to extend program offers. All applicants accepting offers must submit a time-sensitive formal written acceptance and a \$500 nonrefundable deposit. The deposit is applied to the applicant's first semester tuition.

INTERNATIONAL APPLICANTS

Kettering College does not discriminate on the basis of nationality or legal residency/visa status in the United States. However, it is the responsibility of the applicant to inquire with the board that regulates occupational therapy licensure in the country or state in which the applicant intends to practice as to whether citizenship status or other residency requirements may limit or prevent the applicant's ability to obtain licensure as an occupational therapist for practice in certain settings.

TOEFL scores: Applicants from non-English-speaking countries need to submit TOEFL scores. A minimum total score of 90 is required for all internet-based tests; a minimum total score of 577 is required for all written tests. The TOEFL exam must have been taken within the past two years, and the official test scores must be mailed directly from the testing site to the Kettering College admissions office, 3737 Southern Blvd., Kettering, OH 45429.

Note: International applicants must provide proof of ability to pay for at least one academic year at Kettering College. International students studying under an F-1 visa must provide documentation in the form of bank statements, tax documents, investment statements,

employment letters, etc., showing that they are able to financially cover the cost of enrollment at their chosen school.

For further information about requirements for international students, including the submission of transcripts from non-U.S. institutions, visit <https://kc.edu/admissions/international-students/>.

PROGRESSION REQUIREMENTS

Students must maintain continuous enrollment and meet all program requirements.

Grading scale:

All coursework will be graded on the following scale, with individual faculty members determining rounding practices:

- 90 – 100%..... A
- 80– 89.99%..... B
- 70 – 79.99%..... C*
- 60 – 69.99%..... D*
- Less than 60% F*
- To be determined by instructor P**

*Any grade less than a B is considered failing.

**Passing or P does not affect GPA

Students must request and pay to have a criminal background check performed by a college-approved service no more than six months prior to beginning a clinical experience; thereafter, students must complete an annual background check prior to the start of the fall semester. Contact the admissions office for an approved service.

Commencement of the clinical portion of the program is contingent upon successful clearance of the background check.

If a student fails a Level II fieldwork, they are allowed to participate in and complete all concurrent and remaining didactic coursework in the curriculum. Experiential placements will continue to progress in sequence as designed, including the required makeup fieldwork, prior to the capstone experience.

CONDITIONS FOR DISMISSAL

A student will be dismissed from the OTD program for any one of the following:

- Earning less than a B in more than one course at any time during the didactic curriculum.
- Earning less than a B after retaking the same course.
- Failing one level I fieldwork course or failing more than one level II fieldwork course.
- Involvement in a severe ethical or legal situation during the 14-week doctoral experience.
 - If the student does not demonstrate sufficient progress during the 14-week doctoral experience, the student may receive a failing grade.
 - If the student fails the doctoral experience, they may be dismissed from the Kettering College OTD program.
 - Please refer to the KC OTD Doctoral Experience Manual for a detailed explanation of this policy and procedure.
- Breaching professional ethics.
- Exhibiting behavior that might pose a threat to other people or property.
- Professional skills probation for more than one semester.

A student may be dismissed from the OTD program for any violation of a program policy.

Students who have been academically dismissed are ineligible to apply to the KC OTD program for a period of three academic years. Students who choose to reapply do so under the current bulletin and program handbook at the time of reapplication and acceptance. They will be required to take all courses listed in the OTD curriculum sequence at the time of reapplication and acceptance, regardless of classes previously taken.

COURSE SEQUENCE

All foundational courses are taught in the first two semesters.

SEMESTER 1 (FALL)

OTD 500	Human Occupations	3
OTD 503	Occupational Therapy Theory, Science, and Justice	3
OTD 510	Evidence-based Practice	3
OTD 515	Neuroscience for the Occupational Therapist	2
OTD 516	Neuroscience for the Occupational Therapist Lab	1
OTD 550	Pediatric Occupational Therapy Practice I	3
OTD 552	Pediatric Occupational Therapy Practice Lab I	1
RELP 516	Christian Service & Human Flourishing	2

TOTAL		18
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SEMESTER 2 (WINTER)

OTD 525	Kinesiology	2
OTD 526	Kinesiology Lab	1
OTD 545	Pediatric Occupational Therapy Management	2
OTD 551	Pediatric Occupational Therapy Practice II	3
OTD 553	Pediatric Occupational Therapy Practice II Lab	1
OTD 560	Level I Fieldwork: Pediatric	1
OTD 600	Graduate Research and Literature	
	Review Development	2
OTD 601	Graduate Research and Literature	
	Review Development Lab	1
RELP 514	Bioethics from Clinical & Christian Perspectives	2

TOTAL		16
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Course Descriptions

ACCT 201 Principles of Accounting

3 credits

An introduction to the basic concepts and standards underlying financial accounting systems. Several important concepts will be studied in detail, including revenue recognition; inventory; long-lived assets; present value; and long-term liabilities. The course emphasizes the construction of the basic financial accounting statements — the income statement, balance sheet, and cash flow statement — as well as their interpretation.

Prerequisite: ECON 101

ACCT 301 Nonprofit Healthcare and Governmental Accounting

3 credits

Assess Generally Accepted Accounting Practices (GAAP) utilizing fund accounting principles and focusing on nonprofit and not-for-profit healthcare organizations, with inclusion of related charity, religious, federal, state, and local government practices. Emphasis on financial reporting, record keeping, compliance, and analysis for decision-making purposes.

Prerequisite: ACCT 201

ADIM 300 CT Theory

3 credits

An introduction to sectional imaging accomplished with computed tomography technology. Topics covered include but are not limited to the history of CT development, data acquisition, data processing, imaging production, image artifacts and quality, radiation dose, and quality assurance measures. Review for the ARRT Registry in CT is included. Course requirements include a typed paper or presentation.

Prerequisite: BIOL 263 with minimum grade of C

ADIM 305 MRI Theory**6 credits**

Topics include but are not limited to the history of magnetic resonance, the physical properties of MRI, image weighting and contrast, pulse sequences, flow phenomena, instrumentation and equipment, contrast agents, patient and staff safety issues, and image artifacts and quality. Additional information concerning 1.5T vs. 3T imaging as well as safety will be discussed. The student will incorporate physics knowledge on the simulator as well as in the lab workbooks. Review for the ARRT Registry in MRI is included. Course requirements include a typed paper or presentation.

Prerequisite: BIOL 263 with minimum grade of C

ADIM 311 Vascular Interventional Technology**3 credits**

An introduction to vascular and interventional procedures. Discussion topics include general vascular procedures including cerebral, visceral, and peripheral studies using conventional and digital imaging techniques. Discussions and demonstrations also cover vascular equipment and techniques. Review for the ARRT Registry in VIT is included. Course requirements include a typed paper or article reports.

ADIM 315 Practicum II (MRI)**3 credits**

Supervised competency-based education in magnetic resonance imaging at an affiliated clinical education site. The student will work with the instructor on the simulator prior to attending a clinical rotation. The student observes, assists, and eventually performs all routine MRI examinations. It is recommended that the student enter the course with a functional knowledge of Windows operations for the clinical setting.

ADIM 321 Practicum III (Vascular Interventional Technology)**3 credits**

Supervised competency-based education in vascular interventional technology at an affiliated clinical education site. The student observes, assists, and eventually performs varied routine vascular examinations.

ADIM 328 Clinical Aspects of CT**3 credits**

Study of the clinical aspects of CT scanning that emphasizes the practical applications of CT technology: identifying gross sectional anatomy and pathology. Image artifacts and improvements and examination protocols are discussed using case studies, lectures, and demonstrations. Course requirements include a typed paper or presentation.

Prerequisite: BIOL 263 with minimum grade of C

ADIM 360 Advanced Cardiac Life Support**1 credit**

Provides the opportunity to acquire knowledge and skills in advanced cardiac life support theory and techniques. Upon successful completion of the course, the student will receive American Heart Association certification as an Advanced Cardiac Life Support (ACLS) Provider. Graded on a pass/not pass basis. Taught in a blended format, the course consists of one all-day online interaction and three all-day on-campus learning and testing sessions.

Prerequisite: Current certification in Basic Life Support (CPR)

ADIM 396 Variable Independent Clinical**1-4 credits**

An additional clinical opportunity for advanced imaging students to obtain the ARRT exams in order to sit for the Registry. Variable credits are associated with this course based on the amount of clinical days per week. Two days a week = one credit; three days = two credits; four days = three credits; five days = four credits. The above credits are in addition to but not in replace of credits for the bachelor's program. Standard clinical requirements (Performance evaluations, midpoint and end of semester clinical meetings) would be required including a Summer semester Trajecsyst account. The clinical rotation is to occur within the same consecutive modality.

Prerequisites: ADIM 315, 321, 404, and 432, all with minimum grade of C

ADIM 404 Practicum I (CT)**3 credits**

Supervised, competency-based education in computed tomography at an affiliated clinical education site. The student observes, assists with, and eventually performs all routine CT examinations. It is recommended that the student enter the course with a functional knowledge of Windows operations for the clinical setting.

ADIM 413 Cardiovascular Interventional Technology**5 credits**

This course is designed to give students the necessary didactic knowledge to become successful cardiovascular interventional radiologic technologists. Topics of discussion and assessment in this online course include cardiovascular and peripheral vascular anatomy and physiology; hemodynamic data and calculations; ECG rhythm recognition; fluoroscopic and angiographic imaging; cardiovascular pathology and interventions; and patient care.

Prerequisites or corequisites: HESC 360 with minimum grade of C

ADIM 425 Clinical Aspects of MRI**5 credits**

Study of clinical MRI emphasizing the practical application of the technology, identifying gross sectional anatomy and pathology. Image artifacts and improvements and examination protocols are discussed using lectures, and demonstrations. The simulator will be used to demonstrate knowledge of safety and scanning. The student will be given cases found in the Basic and Advanced Simulation Lab Manual that require critical thinking skills. In addition to protocol outcomes, 1.5 and 3T safety will be discussed, along with advanced studies including but not limited to functional MRI, breast, and cardiac. Course requirements include a typed paper or presentation.

Prerequisite: BIOL 263 with minimum grade of C

ADIM 432 Practicum IV (Cardiovascular Interventional Technology)**3 credits**

Supervised competency-based education in general cardiovascular interventional technology at an affiliated clinical education site. The student observes, assists, and eventually performs varied duties in the cardiac diagnostic laboratory. It is recommended that the student enter the course with a functional knowledge of Windows operations for the clinical setting.

BIO 100 Freshman Seminar in Human Biology**1 credit**

Seminars designed to provide strategies for academic success in human biology courses and guest speakers to broaden perspectives on career options using the human biology major.

Prerequisite: For human biology major students only or by permission of department chair

BIO 105 Foundations of Biology I**4 credits**

The structure and function of the cell and its importance as the basic unit of life; the nature and function of organelles; an introduction to Mendelian and molecular genetics, cellular energetics, and the molecules essential to life. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: Meet admissions requirements to the human biology major or permission of department chair

BIO 110 Foundations of Biology II**4 credits**

Basic structural and functional characteristics that are fundamental to the kingdoms of living organisms; biodiversity, ecological principles, and evolution. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: Meet admissions requirements to the human biology major or permission of department chair

BIO 130 Career Explorations **1 credit**

Exposure to careers for which the major in human biology is preparation.

Prerequisite: For human biology major students only or by permission of department chair

BIO 200 Sophomore Seminar in Human Biology **2 credits**

Seminars designed to prepare students for success in the human biology major and beyond. Topics include professionalism within the sciences and healthcare environment; development of deeper critical thinking skills; and strategies for success in admissions to various professional schools. Students will be required to shadow in various healthcare settings. One hour of lecture weekly and 40 hours of shadowing.

Prerequisite: For human biology majors only or by permission of department chair

BIO 220 Topics in Human Biology

An introductory study in a traditional area of the biological sciences or related clinical field. Lectures, laboratory times, and prerequisites will vary according to the topic offered.

Prerequisite: For human biology majors only or by permission of department chair

BIO 300 Junior Seminar in Human Biology **1 credit**

Seminars are designed to enhance the understanding of a specific topic within the science field and provide students the opportunity to demonstrate their critical thinking skills. During each class, a journal article will be presented by a student and discussed in a journal club format. One hour of lecture weekly.

Prerequisite: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 304 Human Anatomy **4 credits**

Structure and structural relationships of the human body including topographical, histological, and developmental features. Body structure studied by organ systems with an emphasis on form-function relationships from the perspectives of histology and gross anatomy using models and cadavers. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: Two semesters of college-level science with minimum grade of C; for human biology majors only or by permission of department chair

BIO 305 Human Physiology **4 credits**

Function and functional relationships of the human organ systems with an emphasis on homeostatic mechanisms. Three hours of lecture and three hours of laboratory weekly.

Prerequisites: BIO 304 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 310 Histology**4 credits**

Microscopic structure of tissues and organ systems of vertebrates with functional correlations. Two lectures and two laboratories per week.

Prerequisites: BIO 105 and 110 and BIO 304 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 315 Molecular Biology**4 credits**

Composition, structure, and function of the cell and its organelles; emphasis on intracellular and intercellular communication and control principles, including an introduction to the replication, control, and transmission of genetic information. Molecular techniques are emphasized in the laboratory. Three hours of lecture and three hours of laboratory weekly.

Prerequisites: BIO 335 and CHE 222 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 335 Genetics 4 credits

Basic principles of genetic organization, chromosome mapping, prokaryotic and eukaryotic genetic control, and molecular genetic techniques. Three lectures and one laboratory per week.

Prerequisites: BIO 105 and 110 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 341 Biochemistry I**4 credits**

Principles of chemistry as they apply to living systems. Topics covered include: structure, function, and metabolism of amino acids, carbohydrates, and lipids; enzymatic reactions and kinetics; and essential metabolic pathways. Laboratory activities highlight basic techniques used to study the properties of proteins. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

Corequisite: CHE 222

BIO 342 Biochemistry II**4 credits**

Principles of chemistry as they apply to living systems. Topics covered include structure, function, and metabolism of amino acids and nucleic acids; regulation of gene expression; and cellular signaling pathways and their regulation. Students will design and carry out an individualized research laboratory project. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: BIO 341 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 405 Capstone Thesis **3 credits**

Students registered for this course will complete a project focused on one of the four pillars of the mission of Kettering College: Leadership, Service, Scholarship, and Faith. Students will work with a mentor on this project and will submit a thesis pertaining to their work. Meetings with the individual mentor will be held as needed; students will be expected to log the hours spent on the project.

Prerequisite: BIO 300 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 406 Senior Seminar in Human Biology **1 credit**

Students present the results of their capstone thesis during this seminar. Seminars also prepare students for the next step in their education/career. One hour of lecture weekly.

Prerequisite: BIO 405 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 420 Topics in Human Biology **1-4 credits**

An in-depth study in a traditional area of the biological sciences or related clinical field. Lectures, laboratory times, and prerequisites will vary according to the topic offered. .

Prerequisite: BIO 315 with a minimum grade of C; for human biology majors only or by permission of department chair

BIO 421 Principles of Neurobiology **3 credits**

A study of the neural basis of behavior, including topics such as cellular and molecular approaches to nerve cell function, neural networks, neuroendocrine mechanisms, and sensory and motor systems of the brain, with some emphasis on the human nervous system. The course is designed to help students develop skills in finding, reading, and discussing articles related to basic neurobiology from peer-reviewed journals.

Prerequisites: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 422 Mechanisms of Human Diseases **3 credits**

Biological mechanisms of various disorders and diseases of biomedical interest. Topics include the mechanisms of genetic disorders, viral diseases, and cancer within a biochemical context.

Prerequisite: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 425 Endocrinology**3 credits**

Basic concepts and principles of hormone synthesis, metabolism, actions, and mechanisms. An introduction to hormone associated disorders will also be covered. This course relates the principles of endocrinology to contemporary issues such as diet, weight loss, obesity, depression, aging, sexuality, diabetes, and drugs. Lectures, discussions of published manuscripts, and oral presentations will demonstrate the direct relationship of biology to everyday life. This course also enhances the student's ability to communicate (oral and written) effectively, analyze scholarly published manuscripts, and think critically.

Prerequisite: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 435 Molecular Genetics**3 credits**

Detailed understanding of the structure and expression of prokaryotic and eukaryotic genomes. Topics covered include mechanisms of gene expression and control; molecular understanding of epigenetics; and role of tumor suppressor and oncogenes in cancer development. Various techniques used in molecular genetics will also be presented. Three hours of lecture weekly.

Prerequisites: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 440 Immunology**3 credits**

Principles of immunology. Topics covered include molecular mechanisms of adaptive and innate immunity; receptor interactions regulating immunology; and principles of immunization, immunodeficiency, and autoimmunity. Three hours of lecture weekly.

Prerequisites: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIO 445 Developmental Biology**3 credits**

Principles of early development of organisms. Topics covered include identification of genes involved in embryology; molecular mechanisms of processes within early organism development including fertilization; limb development; and germ cell development. Various model organisms will be used including the fruit fly, frog, chick, and human. Three hours of lecture weekly.

Prerequisites: BIO 315 with minimum grade of C; for human biology majors only or by permission of department chair

BIOL 119 Human Anatomy and Physiology I**4 credits**

A practical, systematic study of the human body including both gross and microscopic anatomy and basic physiology. Topics covered include anatomical terminology, cell structure and function, body tissues, integumentary system, skeletal system, muscular system, nervous system, special senses, and endocrine system. Laboratory experiences are designed to supplement lecture topics and include dissection, cadaver study, microscopy, and physiology. Three hours of lecture and two hours of laboratory weekly.

Note: This course does not meet requirements for the human biology major.

BIOL 129 Human Anatomy and Physiology II**4 credits**

A practical, systematic study of the human body including both gross and microscopic anatomy and basic physiology. Topics covered include the cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems; metabolism, fluid, and electrolyte balance; and acid-base balance. Laboratory experiences are designed to supplement lecture topics and include dissection, cadaver study, microscopy, and physiology. Three hours of lecture and two hours of laboratory weekly.

Prerequisite: BIOL 119 with minimum grade of C.

Note: This course does not meet requirements for the human biology major.

BIOL 151 Microbiology**4 credits**

An introduction to general topics in microbiology. Topics include fundamentals of microbiology, survey of medically significant microorganisms, principles of immunology, infectious diseases and their causes, biotechnology, and some applied microbiology. Laboratory exercises focus on a broad range of microbiological techniques and procedures. Three hours lecture and four hours laboratory weekly.

BIOL 263 Sectional Anatomy**3 credits**

The study of human gross anatomy from the perspective of transverse, sagittal, and coronal views. Course uses a regional approach, which includes the head and neck as well as the thorax, abdomen, pelvis, extremities, and selected articulations. Particular emphasis is given to organ and vessel relationships important in understanding anatomy and applicable to radiologic science and imaging modalities. Three hours' lecture weekly.

Prerequisites: BIOL 119 and BIOL 129 or BIO 304 with minimum grade of C

BIOL 350 Pathophysiology**3 credits**

A study of homeostatic changes that occur with disease and the implications of those changes in the progression and treatment of disease. Generalized mechanisms of disease as well as diseases of individual organ systems will be examined, with a view to understanding homeostatic compensations that occur as a result of altered function.

Prerequisites: BIOL 119 and BIOL 129, or BIO 305 with minimum grade of C

BIOL 420 Topics in Biological Science**1-4 credits**

Study of one the traditional areas of the biological sciences such as immunology, developmental biology, medical genetics, or any of a variety of field-oriented courses. Lectures, laboratory times, and prerequisites will vary according to the topic offered.

Prerequisite: A year of college-level biology and chemistry

CHE 121 General Chemistry I**4 credits**

Part one of the one-year general chemistry sequence. Examination of the fundamental principles and laws of general inorganic chemistry: states of matter, atomic and molecular orbital theory, molecular structure, chemical bonding, stoichiometry, properties of solutions, chemical reactions, and qualitative analysis. Students gain skills in developing hypotheses, observing chemical phenomena, collecting data, and evaluating results critically. Three hours of lecture and three hours of laboratory weekly.

Prerequisite/corequisite: MATH 165; for human biology majors only or by permission of department chair

CHE 122 General Chemistry II**4 credits**

A continuation of the one-year general chemistry sequence with focus on: kinetic molecular theory, acid-base theory, chemical kinetics and thermodynamics, chemical equilibria, electrochemistry, nuclear chemistry, and quantitative analysis. Students continue to develop relevant laboratory techniques. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: CHE 121 with minimum grade of C; for human biology majors only or by permission of department chair

CHE 221 Organic Chemistry I**4 credits**

Investigation of the principles and application of functional groups, stereochemistry, basic reaction mechanics, organic spectroscopy (IR, ^1H and ^{13}C NMR), and fundamental organic reactions (addition, SN1, SN2, E1, E2). First in a two-semester sequence. Three hours of lecture and three hours of laboratory weekly.

Prerequisites: CHE 121 and 122 with minimum grade of C; for human biology majors only or by permission of department chair

CHE 222 Organic Chemistry II**4 credits**

Investigation of the applications of spectroscopy (UV-Vis, Mass Spec) to identification of organic molecules. Introduction to aromatic substitution reactions, addition and substitution to carbonyl groups, substitution at the carboxyl group, enolates, organic radicals, and pericyclic reactions. Second in a two-semester sequence. Three hours of lecture and three hours of laboratory weekly.

Prerequisite: CHE 221 with minimum grade of C; for human biology majors only or by permission of department chair

CHEM 105 Chemistry for Health Sciences**4 credits**

Introduction to inorganic, organic, and biological chemistry with emphasis given to chemical principles applied to cellular biochemistry and human physiology. Designed for students preparing for health sciences careers, not majoring in chemistry, by establishing the chemical foundations for physiology, nutrition, microbiology, and pharmacology. Three hours of lecture and three hours of laboratory weekly.

Note: Students are highly encouraged to take MATH 105 (or equivalent) before or with, this course in order to be best prepared for success in the math component.

CHEM 295 Independent Study in Chemistry**1-3 credits**

A course intended primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the independent study request form, available from the records office, before an independent study is granted. Permission is given on an individual basis.

COMM 215 Introduction to Human Communication**3 credits**

An introduction to the fundamental components of the human communication process, focusing on intrapersonal communication, interpersonal relationships, and public performance. The course emphasizes the skills necessary for success in personal and professional life and includes the study of verbal and nonverbal communication, group dynamics, cultural diversity, and basic public speaking.

COMM 315 Communication for Health Care Teams**3 credits**

An examination of the traditional structures and functions from both interpersonal and small-group perspectives. The course begins with an overview of the fundamentals of effective interpersonal communication and moves on to examine small-group interaction and participation from a communication systems perspective. Includes discussion of group processes and leadership in group interaction.

ECON 101 Fundamentals of Economics**3 credits**

An introduction to the basic concepts of economics, both macro and micro. Economics is the study of how individuals and societies use the resources available to them. Economic issues have an important impact on individuals, firms, industries, countries, and the world.

ENGL 101 Writing and Rhetoric I**3 credits**

An introduction to the fundamentals of academic reading, writing, and critical thinking. Writing assignments focus on personal narrative or response; exposition; evaluation; and persuasion. Emphasis is placed on the development of appropriate rhetorical strategies. Students are introduced to a rhetorical context for creating multimodal texts. In addition, students learn to use source material effectively and ethically. ENGL 101 prepares students for ENGL 102, Writing and Rhetoric II.

ENGL 102 Writing and Rhetoric II**3 credits**

A continuation of the skills mastered in ENGL 101; course is designed to help students develop advanced levels of reading, writing, and critical thinking by examining a variety of texts and responding to selected issues and ideas. Students advance their abilities to use source material effectively and ethically. Writing assignments include responses, rhetorical analysis, a proposal, an annotated bibliography, a fully documented research paper; students also complete a multimodal project.

Prerequisite: ENGL 101 with a minimum grade of C and word processing skills

ENGL 118 Writing and Research in the Health Care Professions**3 credits**

A course designed to build on those skills mastered in Writing and Rhetoric I with an emphasis on the discourse of the healthcare professions, including document design and genres in the health professions. Course content includes information literacy and research methodology. Students will produce a variety of writing assignments, including a discourse analysis and a research paper consisting primarily of a literature review, and then present their findings to the class in a multimedia presentation. While specialized, this course emphasizes the research and writing skills that are central to any freshman composition research class.

Prerequisites: ENGL 101 with a minimum grade of C and enrollment in a professional program of study; ENGL 118 is to be taken concurrently with a specific program course as outlined in the program course of study.

ENGL 215 Literature of the British Experience**3 credits**

Readings in British literature selected to offer the student an introduction to the literary heritage of Britain.

Prerequisite: Two semesters of college English or instructor's permission.

ENGL 216 Literature of the American Experience**3 credits**

Readings in American literature that will enable the student to explore America's literary heritage. Students will be encouraged to compare and contrast literary themes with their personal experience of growing up in the United States.

Prerequisite: Two semesters of college English or instructor's permission.

ENGL 218 Writing and Research in the Sciences**3 credits**

A course providing a rhetorical context in which to master the discourse of science. The emphasis is upon familiarizing students with the conventions of the major scientific genres and developing their proficiency in reading and writing in these genres, all while examining their rhetorical dimensions. Assignments include a discourse analysis, a literature review, and a poster presentation of their research findings. This course meets the requirements for the second of a two-course composition sequence.

Prerequisite: ENGL 101 with a minimum grade of C

ENGL 220 Topics in English**3 credits**

A course examining literary works and/or popular media from a number of different perspectives: historical, critical, developmental, and rhetorical, among others. The course focuses on various social and cultural issues as well as literary scholarship. Possible topics may include children's literature, young adult literature, popular culture, male/female relationships, theater appreciation, cultural diversity, and language of faith.

ENGL 296 Independent Study in Composition**1-3 credits**

Primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the independent study request form, available from the records office, before an independent study is granted. Permission is given on an individual basis.

ENGL 297 Independent Study in Literature**1-3 credits**

Primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the independent study request form, available from the records office, before an independent study is granted. Permission is given on an individual basis.

ENGL 320 Topics in Literature**3 credits**

An exploration of various social and cultural issues as manifested in the world of literature and media. The course will focus both on issues themselves as well as literary scholarship. Possible topics may include male/female relationships, medicine in literature, or race relationships in America.

Prerequisite: Two semesters of college English or instructor's permission.

ENGL 325 Medicine in Literature and Other Media**3 credits**

An exploration of medicine and healthcare within a paradigm based on the tradition of the humanities. The course deals with how illness and disease are constructed in literature and other forms of media and how the study of medicine within these venues reveals societal attitudes toward healthcare and the profession.

FINC 301 Corporate Finance**3 credits**

An introduction to the theory, the methods, and the concerns of corporate finance. Finance is the study of how firms plan, raise funds, make investments, control costs, analyze financial data and deal with financial markets. Capital budgeting, evaluation tools for business development, and capital market analysis are also featured in the course.

Prerequisites: ECON 101, ACCT 201, MATH 201

HESC 310 Healthcare Economics and Finance**3 credits**

Perspectives of the health care economy including influencing forces, reimbursement models, market development, and healthcare finance applied to various work settings. Students have the opportunity to integrate these economic factors with quality improvement processes and validate them through interactions with healthcare managers.

HESC 315 Communication, Negotiations, and Conflict Resolution in Healthcare Organizations**3 credits**

Explores barriers and effective communications within healthcare systems and the role that the healthcare manager has in strategies for effective communication within healthcare organizations. Focus is on conflict resolution and negotiation within healthcare organizations using knowledge of organizational political and personal power. Students will practice conflict resolution and negotiation skills using effective communication processes through case study methods.

HESC 318 Introduction to Healthcare Research**3 credits**

Introduction to basic research concepts necessary to evaluate published research for evidence-based nursing and health professions practice. Focus on research process, reading and interpreting research articles, and evaluating the appropriateness of using the findings to guide professional practice.

Prerequisite corequisite: HESC 381 or RESB 420; recommended: Statistics

HESC 326 Trends and Issues in Healthcare**3 credits**

Examination of national healthcare trends and issues and their impact on the delivery of healthcare. Emphasis is placed on the role of the healthcare professional in their area of practice.

HESC 330 Healthcare Organizational Systems**3 credits**

Examines managerial systems in contemporary healthcare organizations along the continuum from primary care to acute and long-term care. The course will discuss the impact of market forces and the regulatory environment on cost containment and quality improvement, purchasing, inventory control, contracting, billing, information and scheduling systems, corporate compliance, fraud, and abuse. Measures of organizational effectiveness will be analyzed using current research, theory, and best practices, facilitating understanding and application of managerial practice in healthcare organizations.

HESC 340 Legal and Ethical Considerations in Healthcare **3 credits**

A study of the relationship of the healthcare professional to the regulatory and ethical issues affecting healthcare. Topics include the evolution of legal and ethical issues, trends in legislation affecting healthcare, risk management, and the process of collaborative decision making.

HESC 345 History of Healthcare in the United States **3 credits**

A study of changes in healthcare provision from the founding of the United States through the beginning of the 21st century. Emphasis is on the advancement of healthcare during the 19th and 20th centuries. Subjects include the public reform movement's impact on healthcare during the early 1900s; gender and race in healthcare; the development of nursing and other specialty health occupations; and the changes in healthcare resulting from advances in science and technology.

HESC 348 Concepts of Management and Leadership in Healthcare **3 credits**

Exploration of management and leadership principles as practiced in the healthcare setting. The course addresses the role of the health professional in management and leadership positions focusing on departmental and organizational issues most likely to be encountered by leaders. Application of these principles is developed through a brief practicum experience.

HESC 350 Risk Management in Healthcare Organizations **3 credits**

Overview of risk management and quality management in healthcare. Students will gain a broad perspective of risk management and quality management as applicable to all healthcare organizations. Research in these areas will be reviewed and evaluated. The role of healthcare manager in relation to risk and quality management will be discussed.

HESC 370 Special Topics in Health Professions **3 credits**

An in-depth exploration of a topic of interest to the healthcare professional. Different topics may be offered, such as health policy, alternative therapies in health and illness, and professional issues. The course may be repeated for credit; specific topics may not be repeated.

HESC 381 Introduction to the Health Sciences Program **3 credits**

An introduction to the Bachelor of Science completion program with focus on online learning and the process of creating an e-portfolio. Students are given the tools to develop and produce a professional learning e-portfolio based on the end-of-degree student learning outcomes and institutional outcomes (known as the Pillars), which will be completed in HESC 481. Other topics include skills necessary for online learning; time management skills; online library and database usage; and refining writing skills with APA formatting and guidelines. Must be taken in the first semester once a student is admitted to the BSHS program.

HESC 420 Healthcare Operations and Lean Thinking **3 credits**

This course covers concepts related to lean thinking as applied to a healthcare setting including eliminating waste and maximizing value and efficiency. Key concepts including 5S, PDCA, employment of visual management tools to captivate attention, development of standard work. Kaizen and Kanban concepts are also explored. Six Sigma analytical continuous improvement tools including goal setting and removal of roadblocks are also highlighted as control mechanisms. The course will lead to an examination for Lean Six Sigma certification as a yellow belt.

HESC 421 Healthcare Personnel Management **3 credits**

Applies personnel law and government regulations to policies and practices in a variety of healthcare systems. A case study approach focuses on processes and solutions to problems impacting employer and employee dynamics. Emphasis is on communication techniques and managerial practices as a basis for providing effective healthcare personnel management.

Prerequisite/corequisite: HESC 348 or permission of instructor

HESC 430 Instructional Planning and Delivery **3 credits**

Emphasizes the basic principles of instructional design and implementation. Students are introduced to the skills required for effective teaching in classroom, laboratory, clinical, and community settings.

HESC 431 Teaching Learners in Healthcare **3 credits**

Explores different types of healthcare learners in a variety of healthcare settings. Concepts include assessing and evaluating heterogeneous learner groups emphasizing age, gender, generation, and cultural considerations. Students discuss teaching different types of learners, whether individually, in a family, or in a group. They also examine differences in patient teaching and healthcare professional education.

HESC 432 Professional Development in Healthcare **3 credits**

Assessment, planning, implementation, and evaluation of educational programs for healthcare professions. Students discuss and develop educational needs assessment, continuing education programs, and evaluations related to the educational needs of their chosen healthcare professions. Discussion includes policies, procedures, accreditation, and laws related to lifelong learning in health professions.

HESC 435 Community Health Perspectives**3 credits**

A study of healthcare needs and healthcare delivery within the context of community. The changing demography of the United States is explored, highlighting the need to understand cultural diversity. Epidemiological thinking provides a foundation for assessing community factors affecting healthcare. Emphasis is on promotion of wellness and modification of patient behavior as a basis for improving healthcare delivery within communities, reflected by active engagement in a service-learning project designed to address a specific need within the learner's own demographic region.

Prerequisite/corequisite: Enrollment in human biology major and/or honors program

HESC 440 Special Project in Health Professions**1-3 credits**

Students pursue directed learning experiences in various aspects of health professions, including management, education, research, and other areas of interest. In consultation with a faculty advisor, the student develops a project from a list suggested by community healthcare organizations and institutions. Students have the opportunity to apply program competencies in a realistic setting. Course is available each semester and is scheduled on an individual basis. May be repeated once for credit.

Prerequisites/corequisites: Completion of six (6) credits of health professions courses and permission of the instructor.

HESC 445 Healthcare and Government Policy**3 credits**

Explores the role of government in the current U.S. healthcare system. Students will examine the history of the government's role in healthcare reform and the challenges faced with healthcare reform in the United States. Topics covered will include the issues of employment-based health insurance; role of Medicare/Medicaid; the medical malpractice conundrum; the challenges surrounding access, cost, and quality; and the implementation of the Affordable Care Act. In addition, healthcare systems in other parts of the world will be examined and compared to the U.S. system of healthcare.

HESC 448 Leadership Theory in Healthcare**3 credits**

Expansion of leadership theory as applied to the healthcare professional's role in healthcare settings. Students will explore their leadership strengths and development opportunities through self-assessment tests. Research in leadership will be explored related to present and future skills needed for leaders in healthcare.

Prerequisites/corequisites: HESC 348 or permission of instructor.

HESC 451 Interdisciplinary Team Practice in Community-Based Care **3 credits**

An introduction and exposure to conceptual modes of interdisciplinary practice in community settings. Concepts include managing change, resolving conflict, team dynamics, and issues of diversity within healthcare professional practice. Students explore the backgrounds of other healthcare professions, the relationships of the professions to each other, the roles each serves, and how the clinical work force is organized. This course is be taught using the principles of service learning and grant writing in relationship to interdisciplinary practice.

Prerequisites/corequisites: HESC 348 or permission of instructor

HESC 475 Healthcare Management Internship **2 credits**

Synthesizes healthcare management concepts and theories to a practicum in a healthcare management setting. Students will participate in an internship in a healthcare setting and demonstrate healthcare management through a senior project.

HESC 481 Capstone/Senior Project **1 credit**

A senior project in which students demonstrate their healthcare professional growth through integration of knowledge and skill. Continuing from HESC 381, the student produces a professional portfolio that demonstrates achievement of the end-of-degree student learning outcomes and presents the final product to peers and/or other healthcare professionals. Must be taken in the last semester of the program.

Prerequisite/corequisite: HESC 381

HESC 491 Strategic Management in Healthcare **3 credits**

A capstone course integrating various functional areas of business and applying this knowledge to a study of business and institutional problems with a focus on the healthcare sector.

Prerequisite: FINC 301 & MKTG 301 or permission of the Health Sciences chair

HIST 101 History of Civilization I **3 credits**

The development of civilization from antiquity to the end of the Middle Ages with emphasis on the study of political, economic, social, and cultural forces which have shaped the course of civilization throughout the world. A documented, typewritten paper is required for this course.

HIST 102 History of Civilization II **3 credits**

The history of Western civilization from the mid-17th century (Treaty of Westphalia) to the present, featuring the political, economic, social, cultural, intellectual, and religious forces that shaped this development. A documented, typewritten paper is required for this course.

HIST 151 United States History I**3 credits**

United States history from the age of exploration to Reconstruction with emphasis on the political, religious, cultural, and economic forces that shaped early America. Topics include the role of the Puritans on American heritage, the revolutionary era, Jacksonian America, the roots of the American Civil War and Reconstruction of the Union. A documented, typewritten paper is required for this course.

HIST 152 United States History II**3 credits**

United States history from the Civil War to the present with emphasis on the political, cultural, and economic forces that have shaped the direction of modern America. Topics include the industrial revolution, the Progressive Era, and American involvement in the world wars and the Cold War. A documented, typewritten paper is required for this course.

HIST 221 History and Film**3 credits**

Hollywood has always had a fascination with history from early films like *Cleopatra* in 1917 to modern films like *Lincoln* in 2012. Several major movies in recent years deal with our past. How does Hollywood interpret the past? Can films be a source of credible information, or are they simply entertainment? What should the historians' reaction be to these films? These and other questions will be explored through this class.

HIST 315 Topics in History**3 credits**

A focused exploration into diverse topics in history. May include the political, religious, social, economic, intellectual, and cultural forces in a variety of eras in American, European, and world history. A documented, typewritten paper is required for this course.

HIST 326 Recent American History**3 credits**

A study of people and events that shaped U.S. policies and influence life in the United States today. The major emphasis is World War II to the present, understanding the emergence of the United States as a world power. The Korean and Vietnam wars and forces such as communism, the Cold War, and rise of Third World powers are explored. Includes the impact of technical and scientific development and the dynamics of social change that characterized the 20th century.

Prerequisite: Full freshman English sequence

HIST 345 History of Health Care in the United States**3 credits**

A study of changes in healthcare coverage from the founding of the United States through the beginning of the 21st century. Emphasis is on the advancement of healthcare during the 19th and 20th centuries. Subjects include the public reform movement's impact on healthcare during the early 1900s; gender and race in healthcare; the development of nursing and other specialty health occupations; and the changes in healthcare from advances in science and technology.

Prerequisite: Full freshman English sequence

HUMN 220 Topics in Humanities**3 credits**

This is a course engaging works, relationships, practices, and structures from a humanities point of view. This lens may come from different perspectives, such as historical, philosophical, social, artistic, cultural, and political, among others. All chosen topics will include examination of the way disciplines within the humanities impact or shape human dynamics.

HUMN 301 Narrative Medicine**3 credits**

Examines the social, cultural, and spiritual function of narrative in medicine using expressive arts and narrative elements to train healthcare professionals to constructively identify, analyze, and apply narrative details for therapeutic value to self and others.

HUMN 410 Philosophy of Science**3 credits**

The study of the nature of modern science: its social context, its epistemology, and its interface with other human endeavors and forms of inquiry, including the religious and spiritual.

Prerequisite: One full-year sequential college science course.

KETC 100 Strategies of Success – Freshman Seminar**0 credits**

Seminars and workshops designed to provide students with the skills needed to succeed at Kettering College. Topics include study strategies; test-taking strategies; development of critical thinking skills; and time management. One hour of lecture weekly.

KETC 101 Medical Terminology**1 credit**

A study of basic medical terminology used by healthcare professions. Focuses on the language of healthcare and the use of prefixes, suffixes, word roots, and their combining forms. It also emphasizes word construction, spelling, usage, comprehension, and pronunciation. The course uses a self-study online format.

KETC 120/320 Topics in Health Care**1– 3 credits**

An exploration of a topic in healthcare relevant to the various healthcare professions. Different topics may be offered at the lower- or upper-division level. The course may be repeated for credit; specific topics may not be repeated.

LART 320 Topics in Fine Art**3 credits**

An exploration of topics designed to foster awareness of and appreciation for a variety of forms of artistic media.

LART 321 Music Appreciation**3 credits**

A course of discovery through an introduction to the basic elements of music to enable students to respond, ask questions, and develop an appreciation for diverse musical styles from 500 A.D. to the present.

LART 327 Introduction to Western Arts**3 credits**

An overview of the stylistic character and cultural climate of the important epochs of Western civilization, including the relationship of painting, sculpture, and architecture. Emphasis is on examining the fine arts in relationship to one another and in the context of social and political happenings of the time, leading to an awareness of fine arts as a mirror of the human condition.

MATH 105 Fundamentals of Mathematics**3 credits**

A wide variety of mathematical concepts. Topics include algebraic expressions and polynomials, factoring polynomials, laws of exponents, introduction to logarithms, measurement conversions within the metric and English systems, solving linear equations and inequalities in one variable, solving quadratic equations, graphing equations, right triangle trigonometry, estimating, and interpreting graphs.

Note: Students scoring less than 40% on the math placement test are encouraged to take a basic algebra and/or math refresher course before enrolling in this course.

MATH 155 College Algebra**3 credits**

Foundational algebra. Topics include order of operations, laws of exponents, radicals and rational exponents, solving linear equations and inequalities up to three variables, solving quadratic equations, solving systems of linear equations in two and three variables, factoring polynomials, operations on rational expressions, graphing and analyzing linear, quadratic, exponential, logarithmic, polynomial, and rational functions, graphing transformations of functions, and modeling and applications of linear, quadratic, exponential, and logarithmic functions.

Prerequisite: One of the following must be met:

MATH 105 with a grade of C or above

Kettering College math placement test score of 70% or greater

Transfer credit equivalent to MATH 105

ACT/SAT math sub score at or above the 50th percentile within the last five years

MATH 165 College Algebra and Trigonometry**3 credits**

Foundational algebra and trigonometry. Topics include order of operation, laws of exponents, radicals and rational exponents, solving linear equations and inequalities up to three variables, solving quadratic equations, factoring polynomials, operations on rational expressions, graphing linear and quadratic equations, relations and functions, solving systems of linear equations in two and three variables, trigonometry, exponential and logarithmic functions.

Prerequisite: One of the following must be met:

MATH 105 with a grade of C or above

Kettering College math placement test score of 70% or greater

Transfer credit equivalent to MATH 105

ACT/SAT math sub score at or above the 50th percentile within the last five years

MATH 201 Probability and Statistics**3 credits**

An introductory course to probability and statistics with an emphasis on healthcare applications. Topics include sampling methods, descriptive statistics, statistical graphs and charts, probability, probability distributions (binomial and normal), sampling distributions, central limit theorem, linear correlation and regression, confidence interval estimates, and hypothesis testing with z, t, Chi-square and F tests.

MATH 220 Calculus I**3 credits**

Introduction to the techniques of differentiation and integration of functions of one variable. Includes the chain rule, fundamental theorem, and extremum applications.

Prerequisite: MATH 165 or its equivalent with a grade of C or above

MESO 400, 401 Advanced Project in Medical Sonography I, II**3 credits each**

Allows students to pursue advanced learning experiences in various aspects of sonography, including clinical opportunities, applications, education, management, mission work, research, and other areas of interest. Students will develop a project in consultation with a sonography faculty advisor. The course is graded on a pass/not pass basis.

Prerequisite: Acceptance to the BSHS program

MKTG 301 Principles of Marketing**3 credits**

An introduction to the concepts, analyses, and activities that make up marketing management, including practice in assessing and solving marketing problems. Marketing is the study of the dynamic processes used by individuals and organizations to anticipate and satisfy customers' needs and wants. Completion of a marketing plan based upon a healthcare product or service is a key component of the course.

Prerequisite: ECON 101, ACCT 201

Note: The following NMED courses are taken at and administered by the University of Findlay. Courses and programs are subject to change according to the decisions of the administration at the University of Findlay.

NMED 406 Molecular Imaging Mathematics**3 credits**

This course covers the mathematics applicable to the field of clinical nuclear medicine. Topics include activity units, the decay formula, radionuclide dose and dosage calculations, radionuclide equilibrium, radiation counting statistics, and MDA.

NMED 416 Molecular Imaging Physics**2 credits**

Starting with applicable concepts of classical physics, this course covers atomic structure, mass-energy relationships, electromagnetic radiation, decay modes, half-life, and the interaction of radiation with matter. Inverse square law, shielding, and exposure calculations are also covered. Radionuclide production methods are presented.

NMED 425 Molecular Imaging Radiobiology **1 credit**

Basics of radiobiology, including the molecular and cellular effects of radiation, the acute and chronic effects of radiation, and how radiation affects the various tissues and organ systems of the body, will be covered. Stochastic and nonstochastic effects are covered.

NMED 435 Molecular Imaging Radiation Protection **2 credits**

Topics include licensing requirements; guidelines and regulations for radiation protection; governing agencies; radiation signs; record keeping; personnel and area monitoring; radionuclide receipt, storage and disposal; and management of clinical radiation spills and accidents.

NMED 445 Molecular Non-Imaging Procedures **3 credits**

In vivo non-imaging clinical procedures are covered in this course, including venipuncture, standard precautions, blood volume procedures, patient care, ECG, and non-imaging physiologic studies. Department organization, medical/legal issues of patient care, and medical/legal terminology are also covered.

NMED 455 Molecular Imaging Procedures **5 credits**

This course introduces topics that encompass the interrelated aspects of performing patient organ visualization procedures. Included are a review of the anatomy, physiology, and pathology of the various organs; radiopharmaceuticals; pharmaceuticals; applicable instrumentation; and a discussion of the methodologies and techniques used in performing the imaging procedure. Representative images are shown. The course will include a self-study assignment on pediatric nuclear medicine.

NMED 462 Radionuclide Therapies **1 credit**

Therapeutic clinical procedures are covered in this course, including the properties and selection of therapeutic radiopharmaceuticals; forms of therapy and radiation safety techniques involved with systemic therapy procedures.

NMED 465 Radiochemistry and Radiopharmaceuticals **3 credits**

Topics include radiochemistry, radionuclide generators, transient and secular equilibrium, radiopharmaceutical properties, pharmacological actions, localization methods, basic principles of immunology, and radiopharmaceutical preparation and quality control.

NMED 472 Molecular Imaging Instrumentation**3 credits**

This course is an introduction to the basic principles of molecular imaging radiation detection instrumentation and gamma spectroscopy. The design, operation, and quality control of gas-filled and scintillation instruments are covered. Detailed discussion of the components of a planar gamma camera system and dedicated computer, both hardware and software, is included.

NMED 475 Molecular Imaging SPECT**1 credit**

Detailed discussion of the components of a SPECT gamma camera system and dedicated computer, both hardware and software, image reconstruction, filtering, and other computer applications are covered. Data reduction and image analysis are described.

NMED 477 Molecular Imaging PET**1 credit**

Physics, radiopharmaceutical production and applications, imaging systems, and procedures and radiation safety for PET are discussed. Image reconstruction, data reduction, image analysis, and other computer applications for PET imaging are also covered.

NMED 485 Clinical Nuclear Medicine I**12 credits**

In the Clinical Nuclear Medicine series, students receive clinical training at one of the affiliate hospitals and possibly an affiliate radiopharmacy. The student receives instruction and participates in the performance of all types of clinical nuclear medicine procedures; patient care; administrative duties; radiopharmaceutical preparation and quality control; instrumentation usage and quality control; and radiation safety. Students also complete assigned clinical projects involving the clinical correlation between academic and practical experience.

NMED 486 Clinical Nuclear Medicine II**12 credits**

While enrolled in the Clinical Nuclear Medicine series, students receive clinical training at one of the affiliate hospitals and possibly an affiliate radiopharmacy. The student receives instruction and participates in the performance of all types of clinical nuclear medicine procedures; patient care; administrative duties; radiopharmaceutical preparation and quality control; instrumentation usage and quality control; and radiation safety. Students are also required to complete assigned clinical projects involving the clinical correlation between academic and practical experience. This course is a continuation of NMED 485.

NMED 487 Capstone**1 credit**

This course is a capstone for the NMI program. A one-year comprehensive final exam will be administered. This course will assist students in transitioning from academics into the profession of nuclear medicine technology.

NRSA 305 Nursing Externship: Acute Care Nursing Roles I **3 credits**

Provides opportunities for nursing students to enhance knowledge, skills, and attitudes necessary to provide whole-person care in the acute care setting. Exploration of acute care nursing roles is accomplished through classroom presentations offered by Kettering College. Employment-based clinical experiences are conducted by Kettering Health Network at one of its acute care centers. The development of critical thinking skills is enhanced through interactive activities and discussion of clinically relevant topics and current nursing issues. (1 theory credit; 2 clinical credits)

Prerequisites: Must be in the senior level of a nursing curriculum

NRSA 306 Nursing Externship: Acute Care Nursing Roles II **3 credits**

Provides opportunities for nursing students to enhance knowledge, skills, and attitudes while providing whole-person care in the acute care setting. Employment-based clinical experiences are conducted by Kettering Health Network and supervised by Kettering College faculty. Students who have completed NRSA 305, Nursing Extern Elective: Acute Care Nursing Roles I, can obtain additional theory and clinical hours by taking this course. (1 theory credit; 2 clinical credits)

Prerequisites: Must be in the senior level of a nursing curriculum

NRSA 307 Nursing Externship Acute Care Nursing Roles **2 credits**

This course provides opportunities for nursing students to enhance knowledge, skills, and attitudes while providing whole-person care in the acute care setting. Employment-based clinical experiences are conducted by Kettering Health Network and supervised by Kettering College faculty. (1 theory credit; 1 clinical credit)

Prerequisite: Must be in the senior level of a nursing curriculum

NRSA 311 BSN Success Strategies **2 credits**

Explores strategies for successful online learning. Orients students to the philosophy and learning approach of the KC RN-to-BSN completion program. Engages with a variety of tools available in the course learning management system to enhance learning and communication throughout the program track. (2 theory credits)

NRSA 326 Trends and Issues in Healthcare **3 credits**

Examination of local, national, and global healthcare trends and issues and their impact on the delivery of healthcare. Emphasis is placed on the role of the healthcare professional in their area of practice. (3 theory credits)

Prerequisite or corequisite: NRSA 311

NRSA 340 Evidence-Based Nursing Practice**4 credits**

Introduces fundamental concepts of the research process for use in evidence-based healthcare practice. Emphasis is placed upon the application of the research process to quality improvement. (4 theory credits)

Prerequisite or corequisite: NRSA 311

NRSA 350 Health Assessment & Health Promotions**3 credits**

Explores the role of the nurse in implementing a whole-person plan of care to promote health of individuals across the lifespan. Health promotion strategies are informed by theories and current evidence and take into consideration the individual's culture, faith, environment, and resources. (3 theory credits)

Prerequisite or corequisite: NRSA 311

NRSA 420 Population Health**4 credits**

Provides a foundation for understanding the health needs of families and populations within the community and global settings. Explores the role of the nurse in community assessments, epidemiology, emergency preparedness, population health, and service opportunities. Emphasis is placed on improving access to quality healthcare and decreasing health disparities. (3.75 theory credits; 0.25 clinical credit)

Prerequisite or corequisite: NRSA 311

NRSA 440 Leadership in Healthcare**4 credits**

Explores the role of the nurse as leader and manager within the context of Christian caring to build positive work environments. Emphasis is placed on using effective communication, developing cultures of safety, and implementing quality improvement initiatives using evidence-based principles. (3.75 theory credits; 0.25 clinical credit)

Prerequisite or corequisite: NRSA 311

NRSA 450 Leadership Seminar & Capstone**2 credits**

A capstone course in which students demonstrate their professional growth through integration of knowledge and skills showing achievement of the program's student learning outcomes. Must be completed in the final semester of the RN-to-BSN completion program track. (2 theory credits)

Prerequisite or corequisite: NRSA 311

NRSB 100 Nursing Readmission Remediation**0 credits**

Provides remediation after a leave of absence or readmission to the nursing program to review and demonstrate nursing skills and critical thinking techniques to prepare for success in the nursing program and NCLEX testing. The course is available each semester and is scheduled on an individual basis. Must be a prelicensure BSN major and have permission of the nursing department.

NRSB 301 Wellness and Health Promotion**3 credits**

Examines concepts from nursing, nutrition, and other sciences, with an emphasis on health promotion for individuals, families, and communities. It explores strategies of prevention of disease and health restoration, focusing on the eight natural laws of health across the lifespan. (3 theory credits; 0 laboratory credits; 0 clinical credits)

Prerequisite: This course must be taken by the third semester of nursing

NRSB 305 Pharmacology in Nursing**3 credits**

Develops an understanding of basic principles of pharmacology, including drug absorption, distribution, metabolism, excretion, actions, effects, and therapeutic outcomes of medication classifications. Emphasis is placed on the baccalaureate nurse's role, utilizing critical reasoning in the application of therapeutic pharmacological principles in professional nursing practice. (3 theory credits; 0 laboratory credits; 0 clinical credits)

NRSB 310 LPN-to-BSN Transition**3 credits**

Provides concepts for transitioning from the role of LPN to a baccalaureate nurse. Emphasis is placed on Christian caring, health and wellness, and professional role development. Included is the role of the baccalaureate nurse in gathering, understanding, and beginning application of patient data to create a basic plan of whole-person care. (2.75 theory credits; 0.25 laboratory credit; 0 clinical credits)

NRSB 315 Foundations of Nursing**6 credits**

Introduces the fundamental concepts of nursing, Christian caring and professional role development for the baccalaureate nurse. Students develop beginning knowledge and clinical competencies in the areas of health assessment, communication, and clinical judgment of health alterations. Emphasis is placed on gathering, understanding, and beginning application of patient data to create a basic plan to provide whole-person care. (4 theory credits; 0.5 laboratory credit; 1.5 clinical credits)

NRSB 325 Medical Surgical Nursing 1**6 credits**

Integrates nursing concepts to provide Christian caring for individuals experiencing health alterations. Emphasis is placed on analysis of patient data and use of clinical judgment to formulate, implement, and evaluate outcomes for a whole-person plan of care. (4 theory credits; 0.61 laboratory credit; 1.39 clinical credits)

Prerequisites: BIOL 350, NRSB 305, NRSB 310 or NRSB 315

NRSB 331 Psychiatric/Mental Health Nursing Concepts**4 credits**

Focuses on the nurse's role in caring for individuals, families, and communities experiencing neuropsychological and environmental stressors. Students manage a plan of care based on the use of presence, compassion, and therapeutic communication to support and promote wellness and whole-person care for those with mental health challenges. (2.6 theory credits; 0.2 laboratory credit; 1.2 clinical credits)

Prerequisites: NRSB 335, NRSB 355

NRSB 335 Medical Surgical Nursing 2**8 credits**

Integrates nursing concepts to provide Christian caring for multiple patients experiencing health alterations. Emphasis is placed on application of analysis and evaluation of patient data and use of nursing judgment to formulate, implement, and evaluate outcomes for a whole-person plan of care. (5 theory credits; 0.5 laboratory credit; 2.5 clinical credits)

Prerequisites: NRSB 301, NRSB 325

NRSB 341 Family Nursing Concepts**6 credits**

Focuses on women's health, the developing child from newborn through adolescence, and families throughout the continuum of care. Emphasis is placed on Christian and whole-person nursing care in the promotion, maintenance, and restoration of health. Students will coordinate a plan of care using nursing judgment to synthesize outcomes for a whole-person plan of care. (4 theory credits; 0.22 laboratory credit; 1.78 clinical credits)

Prerequisites: NRSB 335

NRSB 355 Population Health Concepts**4 credits**

Provides a foundation for understanding the health needs of individuals, families, and populations within the community and global settings. Emphasis is placed on the role of the nurse in community assessments, epidemiology, emergency preparedness, and population health. Students use critical reasoning and Christian caring to formulate, implement, and evaluate health outcomes in plans of care for diverse populations. (3.25 theory credits; 0.25 lab credit; 0.5 clinical credit)

Prerequisites: NRSB 301, NRSB 325

NRSB 371 Nursing Research**3 credits**

Provides an introduction to the research process. It establishes a foundation for understanding the role of research in the establishment of evidence-based nursing practice and quality improvement processes. (3 theory credits; 0 laboratory credits; 0 clinical credits)

Prerequisites: MATH 201, NRSB 335, NRSB 355

NRSB 405 Medical Surgical Nursing 3**9 credits**

Integrates nursing concepts to provide Christian caring within the context of an interdisciplinary environment for multiple patients experiencing complex health alterations. Emphasis is placed on application, analysis, and synthesis of patient data and use of nursing judgment to formulate, implement, and evaluate outcomes for a whole-person plan of care. (6.75 theory credits; 0.25 laboratory credit; 2 clinical credits)

Prerequisites: NRSB 331, NRSB 341

NRSB 411 Essentials of Nursing Leadership, Management, and Informatics**3 credits**

Explores the essential principles of leadership and management within the context of Christian caring and evidence-based practice. Students apply knowledge of nursing leadership roles and responsibilities for impacting the culture and success of healthcare organizations and systems. (3 theory credits; 0 laboratory credits; 0 clinical credits)

Prerequisites: NRSB 335

NRSB 425 Capstone Nursing Experience**5 credits**

Transitions the student to the role of a competent, Christian caring entry-level baccalaureate nurse who functions in the interdisciplinary environment. Emphasis is placed on clinical application of concepts that prepare the student for the volume and complexity of patient care and nursing judgment expected of a nursing graduate across the continuum of healthcare. (1.28 theory credits; 0.18 laboratory credit; 3.54 clinical credits)

Prerequisites: NRSB 405, NRSB 411

NRSB 435 NCLEX-RN Success Strategies**3 credits**

Synthesizes nursing concepts and theories necessary for entry-level practice as a baccalaureate nurse. Emphasis is placed on individual preparation of students prior to graduation for the National Council on Licensure Examination for RNs. (3 theory credits; 0 laboratory credits; 0 clinical credits)

Prerequisites: This course must be taken in the last semester of the nursing program after successful completion of the previous semesters.

Note on OTD courses: Only students who are accepted into the occupational therapy doctoral program and in compliance with all OTD policies will be allowed to enroll in OTD courses.

OTD 500 Human Occupations**3 credits**

Course covers key foundational concepts of the occupational therapy profession. It provides an extensive introduction to occupations and the *Occupational Therapy Practice Framework*, as well as the scope of practice. This course includes instruction and opportunities for task analysis.

OTD 503 Occupational Theory, Science, and Justice**3 credits**

An introduction to the history of occupational therapy and the theories that have contributed to the development of the profession. It addresses occupational therapy-specific models, frames of reference, and occupational science and justice.

OTD 506 Introduction to the Doctoral Experience and Capstone Project**0.5 credit**

Students explore topics related to their interest areas in occupational therapy and initiate the development of their capstone projects.

OTD 510 Evidence-based Practice**3 credits**

Introduces research designs and skills to evaluate the quality of evidence. Students are provided instruction on and opportunities to practice developing written clinical questions, searching for evidence, and selecting the highest-quality evidence to support practice.

OTD 512 Research Statistics for Graduate Studies**2 credits**

Building upon concepts of evidence-based practice, students gain a basic understanding of the application of quantitative and qualitative data analysis and procedures of evidence-based practice.

OTD 515 Neuroscience for the Occupational Therapist **2 credits**

A study of the central and peripheral nervous systems of the human body. Major topics include neuroanatomy, neurophysiology, nervous system development, sensory systems, and motor systems.

OTD 516 Neuroscience for the Occupational Therapist Lab **1 credit**

Students participate in laboratory experiences to enhance identification of structures associated with and understand functions of a healthy nervous system and its connection to the *Occupational Therapy Practice Framework*.

OTD 525 Kinesiology **2 credits**

An exploration of human movement from biomechanical, neuromuscular, and anatomical perspectives. Course contains principles of posture, movement analysis, muscle strength, and joint range of motion testing. Students learn anatomical parts of the musculoskeletal system, muscle palpation, manual muscle testing, range of motion, and motion analysis. Models facilitate assessment of musculoskeletal anatomy and its relationship to occupational performance.

OTD 526 Kinesiology Lab **1 credit**

Lab experiences allow the opportunity to apply knowledge and learning provided in lecture.

OTD 535 Cultural Context & Therapeutic Relationships in OT **2 credits**

Students learn the importance of effective relationships with diverse persons, groups, and populations. Course explores specific therapeutic relationship skills to support optimal client outcomes with regard to cultural context.

OTD 545 Pediatric Occupational Therapy Management **2 credits**

Course covers the topics impacting the pediatric occupational therapy process beyond assessment and intervention. It reviews major trends and issues that impact the standards of occupational therapy practice and the delivery of occupational therapy services. These include reimbursement and documentation, legislation, diversity, ethical practice, rural health, and service delivery systems.

OTD 550 Pediatric Occupational Therapy Practice I **3 credits**

Introduces students to the occupational therapy process in pediatric practice. Students learn about child development, assessment, and intervention. Students learn to utilize occupational therapy-specific models, frames of reference, and current evidence to guide pediatric practice intervention.

- OTD 552 Pediatric Occupational Therapy Practice I Lab** **1 credit**
 Students apply knowledge and enhance learning provided in lecture.
- OTD 551 Pediatric Occupational Therapy Practice II** **3 credits**
 A continuation of Pediatric Occupational Therapy Practice I. Students learn about the occupational therapy process in pediatric practice. In addition to further exploration of treatment interventions, special attention is given to setting-specific information to enhance preparation for pediatric practice.
- OTD 553 Pediatric Occupational Therapy Practice II Lab** **1 credit**
 Students apply knowledge and enhance learning provided in lecture.
- OTD 560 Level I Fieldwork: Pediatric** **1 credit**
 Students integrate curriculum components by applying concepts to practice addressing the occupational therapy needs of the pediatric population while demonstrating professional skills during a one-week fieldwork experience.
- OTD 600 Graduate Research and Literature Review Development** **2 credits**
 Students learn the steps of conducting research using quantitative, qualitative, and mixed methods.
- OTD 601 Graduate Research and Literature Review Development Lab** **1 credit**
 Student research groups work with faculty preceptors to design a research project for the following semester. Students develop and submit a research proposal for IRB approval.
- OTD 602 Research Group and IRB Proposal Lab** **1 credit**
 Working with their preceptors, student research groups develop and submit their IRB proposal.
- OTD 606 Mentored Development of the Doctoral Capstone Project Proposal** **0.5 credit**
 Students continue the development of their capstone project by completing a preliminary review of the literature to develop a basic understanding of contemporary scholarship relevant to their topic. They also conduct a needs assessment to validate the feasibility and relevance of their topic.
- OTD 615 Data Analysis in Graduate Research** **1 credit**
 Students implement quantitative or qualitative procedures in their approved research proposal. Students analyze the data and develop meaningful clinical conclusions from the analysis.

OTD 616 Data Analysis in Graduate Research Lab **1 credit**

In collaboration with their preceptors, student research groups collect and complete initial data analysis for their IRB-approved study.

OTD 633 Occupational Therapy Practice with Psychosocial Conditions **3 credits**

Course prepares students with the knowledge and skills necessary for the occupational therapy process with clients experiencing psychosocial conditions. Utilizing the *Occupational Therapy Practice Framework* and its models and frames of reference, students develop skills in evaluation and intervention. Students synthesize knowledge of normal development, abnormal psychology, and human health conditions. They also analyze psychosocial factors on person, groups, and populations.

OTD 634 Occupational Therapy Practice with Psychosocial Conditions Lab **1 credit**

Explores the use of individual and group interventions and examines current evidence for mental healthcare within community and healthcare settings. Students develop group leadership abilities through engaging in the group occupational therapy process.

OTD 645 Adult Occupational Therapy Management **2 credits**

Course covers the topics impacting the occupational therapy process beyond assessment and intervention. It reviews major trends and issues that impact the standards of occupational therapy practice and the delivery of occupational therapy services. These include current reimbursement and documentation, managed care, legislation, diversity, ethical practice, rural health, health promotion and wellness, emerging areas of practice, and service delivery systems.

OTD 652 Assistive Technology **2 credits**

Course includes the design and use of assistive technologies, adaptations, and environmental modifications to enhance performance, safety, and independence. Learning experiences include the client and family in the assessment, design, selection, and use of technologies, adaptations, and modifications. Content includes fabrication of technologies and adaptations. Communities and practice settings are analyzed for accessibility, needed modifications, and legal compliance.

OTD 655 Occupational Therapy Practice with Orthopedic Conditions **3 credits**

Students develop knowledge and skills related to facilitating return to function. Students learn about the functional sequelae of orthopedic injury as well as evaluation, intervention, and clinical problem solving.

OTD 656 Occupational Therapy Practice with Orthopedic Conditions Lab **1 credit**

In the laboratory portion of the course, students learn and practice intervention skills.

OTD 657 Occupational Therapy Practice with PAMS and Orthoses **2 credits**

Course provides students with the theoretical rationale and technical skills to appropriately use common physical agent modalities and upper extremity orthoses. Course covers the physical and chemical changes that occur with the application of thermal and electrical agents. Students develop a broad orthosis-fabrication skill set.

OTD 658 Occupational Therapy Practice with PAMS & Orthoses Lab **1 credit**

Students learn and practice appropriate methods for the application of modalities and develop a broad orthosis-fabrication skill set.

OTD 665 Level I Fieldwork: Psychosocial **1 credit**

Students integrate curriculum components focusing on the importance of the role of addressing psychosocial needs within the occupational therapy process with adult populations. This clinical experience occurs over an entire 15-week semester and is equivalent to a one-week fieldwork experience.

OTD 670 Level I Fieldwork: Adult **1 credit**

Students integrate curriculum components by applying concepts to practice addressing the occupational therapy needs of the adult population while demonstrating professional skills during a one-week fieldwork experience.

OTD 691 Pediatric Case Application and Exam **1 credit**

Students synthesize curriculum content through an evidence-based practice case application. They apply knowledge through problem-based learning, which may include video and written cases. Students synthesize clinical reasoning; application of frames of reference and models of practice; and technical knowledge. The course culminates in a comprehensive examination.

OTD 705 Dissemination in Graduate Research Lab **1 credit**

Students prepare their group research project for dissemination in various formats including a written manuscript and poster presentation. The manuscript will be prepared for submission to a peer-reviewed journal, while the poster will be submitted for a local, regional, or national presentation.

OTD 730 Professional Preparation for Clinical Practice **1 credit**

Course assists students in successful transition from a classroom role to clinical settings. Course consists of developing professional behaviors, self-evaluation, professional goal achievement, effective professional relationship navigation, and other topics as needed. They also review policies and procedures for level II fieldwork.

OTD 735 Clinical Reasoning Lab **1 credit**

A synthesis of the occupational therapy process. It provides students the opportunity to develop and hone clinical reasoning skills as they prepare to enter practice in a variety of settings.

OTD 741 Scholarship, Leadership, and the Doctoral Experience **1 credit**

Students continue to explore potential doctoral experience sites to implement their capstone projects. Students then determine how their intended doctoral experience and capstone project relates to theory and current practice. In this course, students learn about leadership, participate in an initial IRB meeting, and create a draft of learning objectives pertaining to their project.

OTD 742 Mentored Development of the Doctoral Capstone Project Design **1 credit**

This lab will support the students continued scholarly work toward developing their capstone project in conjunction with OTD 741. In collaboration with their faculty mentor, students will complete a literature review to gain a deeper understanding of their chosen project. Additionally, students will begin to develop an evaluation plan to measure the effectiveness of their capstone project.

OTD 752 OT Practice with Adult Neurological Conditions **3 credits**

Course prepares students with the knowledge and skills necessary for the occupational therapy process with clients diagnosed with a variety of neurological conditions. With *Occupational Therapy Practice Framework* as a guide, students synthesize knowledge in neurobehavioral science, human health conditions, theory, and the use of assessment tools in the occupational therapy process.

OTD 753 OT Practice with Adult Neurological Conditions Lab **1 credit**

Lab experiences allow students to apply knowledge and enhance learning provided in lecture.

OTD 755 Medical Conditions **3 credits**

Provides students with information about a variety of medical conditions and their impact on occupations. Incorporates facilitated discussions to increase clinical reasoning for addressing clients with the presented medical conditions.

OTD 760 Level II Fieldwork A**6 credits**

A 12-week clinical fieldwork experience of the occupational therapy process including demonstrating the ability to perform evaluations; develop intervention plans; integrate clinical reasoning and therapeutic use of self; educate and communicate with clients, caregivers, family members, and health care professionals; and demonstrate appropriate professional and ethical behaviors with differing populations and service delivery models.

OTD 761 Level II Fieldwork B**6 credits**

A 12-week clinical fieldwork experience in the occupational therapy process including demonstrating the ability to perform evaluations; develop intervention plans; demonstrate integration of clinical reasoning and therapeutic use of self; educate and communicate with clients, caregivers, family members, and health care professionals; and demonstrate appropriate professional and ethical behaviors with differing populations and service delivery models.

OTD 791 Adult Case Application and Exam**1 credit**

Students synthesize content and technical skills through an evidence-based case study. They refine their clinical reasoning and technical skills and their ability to use the frames of references and modes of practice during problem-based learning. Course culminates in a comprehensive examination.

OTD 806 Preparation for the Doctoral Experience and Finalization of the Capstone Project Plan**1 credit**

Students are guided through the process of synthesizing knowledge gained throughout the curriculum to finalize their doctoral capstone objectives and the evaluation plan for successful implementation of their doctoral experience and capstone project based on feedback from their faculty advisor in the prerequisite course OTD 742, the site mentor, and the doctoral capstone coordinator. Students will design a timeline for implementing their capstone project and complete an IRB application in preparation for project initiation.

OTD 810 Doctoral Experience**8 credits**

Occurs after all coursework and Level II fieldwork. Project focuses on clinical practice skills, research, administration, leadership, program and policy development, advocacy, or education. Students present their project outcomes at a program-wide poster presentation.

OTD 835 Occupational Therapy Service Management I (online) 2 credits

Covers topics impacting the occupational therapy process beyond assessment and intervention, which students experience on level II fieldwork. Topics may include client and profession advocacy, current reimbursement and documentation, managed care, legislation, diversity, ethical practice, rural health, health promotion and wellness, emerging areas of practice, and service delivery systems.

OTD 891 Comprehensive Exam 1 credit

Provides an overview of the national board exam. Students complete a practice comprehensive exam to develop strategies to prepare for the national board certification exam.

PHAS 500 Introduction to the PA Profession 1 credit

Traces the history, development, and current status of the physician assistant profession. Students explore the role of the physician assistant as part of the healthcare team. Students research and investigate state and national legislation that governs the profession.

PHAS 502 Patient Interviewing and Documentation 2 credits

Introduces basic interviewing and history-taking skills. Students learn the basics of medical documentation techniques, including introduction to electronic medical record systems and medical terminology.

PHAS 536 Evidence-Based Medicine I 0.5 credit

This is the first in a two-part series of courses intended for students to acquire and develop both the knowledge and skills for evidence-based medicine (EBM). This part of the series applies the principles of EBM to patient-centered evaluation and treatment of the systems studied this semester. The course covers all steps of EBM: posing the patient's problem as an answerable set of questions, searching clinical evidence, critically appraising the validity and importance of clinical research evidence, and determining the applicability of evidence into practice. Students will also learn to debrief to improve future EBM efforts through group work, discussions, classroom presentations, and direct faculty observation and feedback. Students will be able to apply their EBM skills, assessment of social determinants of health, and patient-centered decision making to a patient case through faculty-led group discussion.

PHAS 537 Evidence Based-Medicine II**0.5 credit**

This is the second in a two-part series of courses intended for students to acquire and develop both the knowledge and the skills for evidence-based medicine (EBM). This part of the series applies the principles of EBM to patient-centered evaluation and treatment of the systems studied this semester. The course covers all steps of EBM: posing the patient's problem as an answerable set of questions, searching clinical evidence, critically appraising the validity and importance of clinical research evidence, and determining the applicability of evidence into practice. Students will also learn to debrief to improve future EBM efforts through group work, discussions, classroom presentations, and direct faculty observation and feedback. Students will be able to apply their EBM skills, assessment of social determinants of health, and patient-centered decision making to a patient case through faculty-led group discussion and a written assignment.

PHAS 512 CMM Dermatology**1 credit**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the dermatologic system. Instruction emphasizes epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 516 CMM ENT**3 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the HEENT (head, eyes, ear, nose, and throat) systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 517 CMM Cardiovascular Medicine**9 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the cardiovascular systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 518 CMM Pulmonology**5 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the pulmonary systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 522 CMM Endocrinology**3 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the endocrine system. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 526 CMM Gastroenterology**6 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the gastrointestinal systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 529 CMM Nephrology**3 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the genitourinary and renal systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 532 Introduction to Pathophysiology and Pharmacology**3 credits**

This course offers an introduction to the altered physiologic functioning of various human body systems in disease states and an introduction to important basic pharmacology concepts necessary for an understanding of clinical pharmacology. Includes concepts ranging from pharmacokinetics and pharmacodynamics to receptor physiology. It is intended to allow students to understand the pathophysiologic basis for the selection of pharmacotherapeutic agents in disease states. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 533 CMM Musculoskeletal Medicine**5 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the musculoskeletal system. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 534 CMM Neurology**6 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the neurologic systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 551 Behavioral Medicine**2 credits**

This course offers an integrated approach to learning diseases of behavioral medicine. Instruction emphasizes the epidemiology, clinical presentation, clinical evaluation, counseling, and pharmacotherapeutic management skills to effectively intervene for a variety of psychiatric, emotional, and social concerns common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 553 Clinical Genetics**2 credits**

This course provides the PA student with an understanding of the molecular basis of genetic disorders, diagnostic testing, treatment of associated conditions, gene therapy, and emerging technologies. Throughout this course, the principles of medical ethics and patient counseling are addressed. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 561 Pediatrics**2 credits**

This course offers an integrated approach to learning diseases of the pediatric population. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse pediatric patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 566 CMM Surgical and Emergency Care**3 credits**

This course offers an integrated approach to surgical and emergency care. Instruction emphasizes the recognition of surgical and emergent conditions, epidemiology, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

Procedural skills include IVs, suturing, sterile technique, scrubbing, and gowning and gloving techniques.

Emergency skills include airway management, vascular access, chest tube placement, FAST ultrasound examination, and advanced cardiac life support.

PHAS 567 Integration of Clinical Medicine Seminar**1 credit**

In this course students develop, integrate, and refine their clinical acumen and skills. They will apply critical thinking to the diagnosis and treatment of both acute and chronic conditions occurring across the lifespan and amongst a diverse patient population. An emphasis is placed on learning and adopting a patient-centered approach to care that includes building therapeutic relationships with patients; effective communication with patients, families, and colleagues; and the development and practice of clinical reasoning skills. This course uses clinical case presentations to provide students with the opportunity to learn and practice their clinical skills with direct faculty observation and feedback.

PHAS 570 CMM Hematology, Oncology**2 credit**

This Clinical Medicine Module (CMM) offers an integrated approach to learning diseases of the hematology & oncology systems. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 571 CMM Infectious Disease**2 credits**

This Clinical Medicine Module (CMM) offers an integrated approach to learning infectious diseases. Instruction emphasizes epidemiology, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 574 Women's Health**3 credits**

This course offers an integrated approach to learning diseases of women's health. Instruction emphasizes the epidemiology, anatomy, pathophysiology, clinical presentation, diagnostic evaluation, and pharmacotherapeutic management common among a diverse patient population and a variety of practice settings across the lifespan. The curricular content is guided by the most current blueprint list of medical topics and task areas published by the National Commission on Certification of Physician Assistants for the Physician Assistant National Certifying Exam.

PHAS 615 Objective Structured Clinical Examination**1 credit**

This course prepares and refines student history taking, physical exam, formulation of differential diagnosis, diagnostic evaluation, treatment plans, interpersonal communication, and professionalism skills prior to the summative assessment.

PHAS 632 Health Policy and PA Professional Practice I**0.5 credit**

This is the first of a two-part series that explores various professional topics that affect practicing physician assistants, including laws and regulations that govern practice and current practice trends. This course also includes health policy and public health topics in healthcare, issues of coordination and quality of care, patient-centered medical homes, cost effectiveness, and access to healthcare across diverse populations.

PHAS 633 Health Policy and PA Professional Practice II**0.5 credit**

This is the second of a two-part series that explores various professional topics that affect practicing physician assistants, including laws and regulations that govern practice and current practice trends. This course also includes health policy and public health topics in healthcare, issues of coordination and quality of care, patient-centered medical homes, cost-effectiveness, and access to healthcare across diverse populations.

PHAS 637 Capstone Prep I**1 credit**

This is the first in a three-part series designed to foster scholarly activity in a mentored environment leading to a capstone project. The project serves as one of the culminating experiences in the graduate PA program. Building upon specific student interest, didactic curriculum, and clinical experiences, the capstone project permits the student to gain greater insight into healthcare issues such as medical conditions, therapies, diagnostics, clinical practice guidelines, healthcare delivery systems, and patient education challenges. The deliverable for the capstone project is an eight-to-10-page paper and accompanying poster presentation that substantiates or refutes a clinical hypothesis through the integration of an existing body of knowledge.

During this part of the series, students will frame a research question, learn to interpret basic statistical methods and limits of medical research, types of sampling methods, use of common databases to access medical literature, and begin to critically appraise existing literature. Students will present research findings and provide feedback to peers.

PHAS 638 Capstone Prep II**1 credit**

This is the second part in a three-part series of courses designed to foster scholarly activity in a mentored environment. This course permits students to further refine their critical appraisal table, develop study methods, and critically analyze existing research. During this process, students develop expertise in their area of study, allowing them to complete the capstone project. Students prepare a rough draft of a written report and plans for oral presentation in consultation with their research mentor.

PHAS 641 Capstone Project**1 credit**

This is the third and final part in the capstone series of courses. Under the direction of their research mentor, students will finalize and present their written and oral research project. The deliverable for the capstone project is an 8–10-page paper and accompanying poster presentation that substantiates or refutes a clinical hypothesis through the integration of an existing body of knowledge.

PHAS 650 Inpatient Internal Medicine Clinical Rotation**3 credits**

Required rotations emphasizing pathophysiology, evaluation, diagnosis, and management of systemic and chronic diseases and conditions found in the clinical practice of internal medicine in inpatient settings. Inclusion of proper data collection through history and physical examination, formulation of accurate problem lists, accurate investigation, and treatment plans. Emphasis is on geriatric patients and complex patients with chronic and comorbid conditions.

PHAS 651 Family Medicine Clinical Rotation**3 credits**

A required five-week rotation that emphasizes the pathophysiology, evaluation, diagnosis, and management of systemic diseases and conditions unique to the clinical practice of outpatient family medicine. It also includes proper data collection through history and physical examination, followed by formulation of accurate problem lists, accurate investigation, and treatment plans. There is a special focus on treatment of chronic disease and maintenance of health for patients from cradle to grave.

PHAS 652 Surgery Clinical Rotation**3 credits**

A required five-week rotation providing an orientation to patients of various ages with surgically managed disease. The emphases of the learning experiences are the preoperative evaluation and preparation of patients for surgery; assistance during the intra-operative period to develop an understanding of team member roles and operative procedures; postoperative care, and the care of surgical wounds and post-operative complications.

PHAS 653 Behavioral Medicine Clinical Rotation**3 credits**

A required five-week rotation designed to provide an understanding of the behavioral components of health, disease, and disability. Exposure to patients with a variety of emotional illnesses and disabilities is used to develop informed history-taking and mental status examination skills, ability to recognize and categorize psychiatric disturbances, and techniques of early intervention and psychiatric referral.

PHAS 654 Pediatrics Clinical Rotation**1.5 credits**

A required 2 ½-week rotation emphasizing care of the child from birth through adolescence. Focus of the learning experience is on the recognition and management of common childhood illnesses; assessment of variations of normal growth and development; and the counseling of parents regarding immunizations, preventative healthcare visits, growth and development, nutrition, and common psychosocial problems. Teaching rounds and lectures introduce concepts of developmental disabilities and chronic care.

PHAS 655 Women's Health Clinical Rotation **1.5 credits**

A required 2 ½-week rotation that provides exposure to the spectrum of conditions and issues associated with women's healthcare. Learning experiences emphasize family planning and birth control; recognition and treatment of sexually transmitted disease; cancer detections; prenatal care, deliveries, and post-natal care; and the evaluation of common gynecological problems. An exposure to the surgical management of gynecological problems is also provided. Students will see patients throughout the various stages of life and reproduction experiencing acute, chronic, and emergent conditions, as well as those requiring health maintenance and preventative care.

PHAS 656 Emergency Medicine Clinical Rotation **3 credits**

Required five-week rotation providing an in-depth exposure to the illnesses and injuries sustained by children and adults that necessitate emergency care. The educational experiences emphasize the focusing of interview and examination skills, and performance of techniques and procedures essential to the proper management of life-threatening illness and injury. Ventilatory assistance, cardiopulmonary resuscitation, fluid and electrolyte replacement, and acid-base balance are also stressed.

PHAS 657 Elective I Clinical Rotation **1.5 credits**

A 2 ½-week rotation in any medical or surgical specialty or subspecialty chosen by the student. The rotation may be done in the United States or internationally.

PHAS 658 Elective II Clinical Rotation **1.5 credits**

A 2 ½-week rotation in any medical or surgical specialty or subspecialty chosen by the student. The rotation may be done in the United States or internationally.

PHAS 659 Elective III Clinical Rotation **3 credits**

A five-week rotation in any medical or surgical specialty or subspecialty chosen by the student. The rotation may be done in the United States or internationally.

PHYS 131 Survey of Physics **4 credits**

Lectures and demonstrations covering mechanics, fluids, heat, sound, light, electricity, and atomic physics. Emphasis is on understanding natural phenomena with medical applications. Laboratory.

Prerequisite/corequisite: MATH 105

PHYS 141 General Physics I **4 credits**

Fundamental physics of mechanics and thermodynamics: kinematics, dynamics, gravity, work, energy, momentum, circular and rotational motion, fluids, kinetic theory, heat, and the laws of thermodynamics. Three hours of lecture and three hours of laboratory/recitation weekly.

Prerequisite/corequisite: MATH 165

PHYS 152 General Physics II **4 credits**

Fundamental physics of electromagnetism, optics, and modern physics: electric fields and currents, magnetic fields and induction, electromagnetic spectrum, light and optics, relativity, quantum theory, radioactivity, and elementary particles. Three hours of lecture and three hours of laboratory/recitation weekly.

Prerequisite/corequisite: MATH 165

PSYC 112 General Psychology **3 credits**

An introduction to the field of psychology. Addresses principles and concepts basic to the following aspects of the science of behavior and mental processes: biological basis of behavior; sensation and perception; learning and thinking; emotions; motivation; personality; stress and adjustment; psychological disorders and their treatment; life span development; and social psychology.

PSYC 138 Human Growth and Development **3 credits**

An introduction to the processes of human development through the study of selected sequential changes occurring during the entire life span from conception through late adulthood, including death and dying. This course meets the standards for a required course in life span development.

Prerequisite: PSYC 112

PSYC 195 Independent Study in Psychology **1-3 credits**

Primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the independent study request form, available from the records office, before an independent study is granted. Permission is given on an individual basis.

PSYC 210 Social Psychology**3 credits**

A study of the impact of the social environment on individuals. Focus on principles and concepts of research in social psychology; social perception; social beliefs and attitudes; social learning and cognition; social influence; aggression; intimacy; obedience; social power; working in groups; prosocial behavior; aggression; group behavior; and environmental social psychology.

PSYC 220 Organizational Psychology**3 credits**

An introduction to the theories and practices of psychology and sociology in the working environment, including social psychology, human resource management, organizational science, and human factors engineering. Specific topics include research methods; motivation and satisfaction; personal and group decision making; organizational development; leadership; workplace influences; employee selection and training; work-related stress; performance appraisal systems; and organizational improvement.

PSYC 230 Abnormal Psychology**3 credits**

This course provides an introduction to the field of abnormal psychology to include historical, social, and cultural contexts of abnormality. Studies will focus on major disorders, etiologies, symptoms, diagnosis, preferred treatment strategies, and classification in accordance with the Diagnostic and Statistical Manual of Mental Disorders (DSM). Course also covers past and current research of mental disorders.

Prerequisite: PSYC 112 with a minimum grade of C

PSYC 295 Independent Study in Human Growth and Development**1-3 credits**

Primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the independent study request form, available from the records office, before an independent study is granted. Permission is given on an individual basis.

PSYC 330 Principles of Teaching and Learning**3 credits**

An exploration of learning theory and the process of teaching in a variety of settings. Includes an overview of learning theories, learner assessment, and practice in formulating, implementing, and evaluating teaching plans. Opportunity is given for students to explore ways to incorporate continued learning as an essential element of their professional growth.

Prerequisite: A lower-level PSYC course

RELB 101 Seventh-day Adventist Fundamental Beliefs and the Healing Ministry of Christ **3 credits**

This course presents the definitive convictions of the Adventist Christian perspective on healthcare that inspired the creation of Kettering Medical Center and Kettering College. Students explore scriptural and theological writings especially suited to engendering understanding of Adventist healthcare as an extension of the Gospel and the healing ministry of Christ. Particular attention is given to concepts of God, salvation, healing and health, the nature of human being and community, and the dynamics of suffering. As Kettering College's institutional history and outcomes are captured with the motto "Following Christ, Serving Others," all students are expected to take this course before any other religion course.

RELB 112 Introduction to Christianity **3 credits**

An introduction to Christianity: its backgrounds, origins, essentials, history, and forms. Designed for the student who knows little or nothing about Christianity, it can be illuminating for students who consider themselves familiar with Christianity since it views Christianity from a new and fresh perspective.

RELB 113 Introduction to the Bible **3 credits**

An exploration of Christian scripture: what it is, where it came from, how it was created, what it is for, what it has meant over the centuries, and what it means today.

RELB 128 Biblical Growth **3 credits**

An exploration of the dynamics and concepts of biblical spiritual growth and formation, with an emphasis on Christian disciplines such as prayer, meditation, and service. A major component of this learning experience is small-group work, group discussions, and presentations.

RELB 185

This course is for transfer credit and is used for religion electives that are transferable but are not content-equivalent to a Kettering College course.

RELB 200 Reflections on the Psalms **3 credits**

An exploration of the spiritual power and value of the Psalms. Students explore what the Psalms communicate about God, prayer, praise, worship, and the trials and triumphs of the life of faith.

RELB 201 The Parables of Jesus**3 credits**

An exploration of many of the parables of Jesus. The emphasis is on what the parables meant to their original hearers and what the parables mean to us as hearers. Interpretation of the parables is consistent with the larger message of Jesus regarding the Gospel, God, and the kingdom, but seeks the personal meaning in the parables for those of us who encounter them today.

RELB 202 Life and Teachings of Jesus**3 credits**

A survey of the life and ministry of Jesus Christ to gain an understanding of the challenges and possibilities of discipleship and the witness of the Christian church regarding Jesus.

RELX 220 Selected Topics in Religion**3 credits**

Topics may include specific biblical topics, theological issues, and other religious studies.

RELB 221 Victors, Victims, and Virgins: Great Women of the Bible**3 credits**

An in-depth review and critical examination of the biblical narratives of a number of extraordinary women from the bible (Old Testament). We will explore such questions as: Who were they? What role did they play history? What lives did they touch? What legacy have they left? How important were they to God? What was the result of God in their lives?

RELB 295 Independent Study in Religion**1-2 credits**

Primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the appropriate documentation, in accordance to academic policy for independent study, before an independent study is granted. Permission is given on an individual basis.

RELB 336 Paul and His Epistles**3 credits**

An exploration of the life and letters of the man known as “Paul, the Apostle.” While Jesus “created” Christianity by his life, teachings, death, and resurrection, Paul also “created” Christianity by his tireless efforts over some 30 years to proclaim it, distribute it, defend it, explain it, live it, teach it, and die for it. By examining what Paul left behind in his letters, students seek to understand what he understood Christianity to be — and why he was willing to give his life for it.

RELP 210 Character and Ethics**3 credits**

An examination of character and ethics from Western philosophical and theological traditions. The interplay of persons and principles forms the focus of inquiry. What makes a person good? What makes an action right? How are the preceding questions and their answers related to one another?

RELP 254 Morality and Medicine: Christian Perspective on Bioethical Issues**3 credits**

A general review of ethical challenges that arise in healthcare. The analysis of the issues and the range of contemporary responses to those issues are set in the context of the Christian tradition. Course materials emphasize moral discernment, rigorous argument, and conceptual resources for sustaining morality in medicine.

RELP 303 Body, Mind, and Soul**3 credits**

An examination of the various understandings of what it means to be a body that has a mind and/or a soul, and of some real-world consequences of holding various views. Students develop practical applications that link the intellectual positions they adopt with their professional and personal lives.

RELP 306 Spiritual Dimensions of Death and Dying**3 credits**

A study of the process of dying from psychological, emotional, intellectual, and spiritual perspectives informed by biblical teachings about death and dying. The intent is to equip future healthcare workers with information, perspective, and skills necessary to be helpful to others who are approaching their own death and to minister to those who love them and are suffering in their own ways. Course uses case studies, role playing, readings, lectures, class discussion, and field interactions with patients or family members.

RELP 316 Spirituality in Healing and Health Care**3 credits**

Students investigate, experience and develop their own understanding of the body-mind-spirit relationship and explore various approaches to healing, the role of caregivers in the healing process, and the role of spirituality in healing and healthcare. Emphasizes the student's own development of ideas for integrating spirituality in the delivery of healthcare.

RELP 330 Christian Social Ethics**3 credits**

This course explores Christian responsibility to society. It uses the bible's social vision to consider how to address the needs and well-being of communities. Emphasis is on the availability and quality of healthcare.

RELP 507 Clinical Ethics I**1 credit**

The first part of this course orients students to the historical concepts and essential current literature in clinical ethics. We will explore ethical theory, methods of moral reasoning, codes of ethics, and a Christian orientation to altruistic service in healthcare.

RELP 508 Clinical Ethics II**1 credit**

Case study methods shape the second stage of this course sequence as we analyze practical matters of faith and the diversity in the lives of our patients. Applying specific codes of ethics with standard, clinical moral decision-making methods take up the majority of our time in this course.

RELP 512 Desire, Happiness, and God**3 credits**

The Declaration of Independence asserts that the pursuit of happiness is an inalienable right. Augustine observed that our hearts are made for God and are restless until they find their rest in God. This course reflects on paths to human flourishing. Using literary, theological, and philosophical writings, students will analyze the dynamics of desire, happiness, human dependency, and need for meaning as these relate to God.

RELP 514 Bioethics from Clinical and Christian Perspectives**2 credits**

This course explores Aristotle's Nicomachean Ethics along with biblical and theological resources as a means for understanding analysis of the clinical ethical issues facing health care professionals and the range of contemporary responses to those issues. Christian convictions in general and Adventist Christian convictions in particular serve to illuminate the commitments that any account of ethics must make.

RELP 516 Christian Service and Human Flourishing**2 credits**

How does the search for happiness and wholeness relate to a calling to serve others who are in need of care and support on multiple levels? What spiritual challenges and opportunities do health care workers face as they encounter human vulnerability and suffering daily, and what can help them to persevere joyfully? This course will introduce practices of self-reflection and self-care while inviting biblical, theological, and philosophical reflection on God's desire for us to engage in transformative encounters with God and others for the sake of our patients' and our own flourishing.

RELP 601 Applied Spiritual Care I**1 credit**

This interdisciplinary course provides students with opportunities for reflecting with peers on concepts from biblical and other narrative models of spiritual caregiving while exploring the process of developing spiritual care plans. This will prepare students for incorporating interprofessional reflection and communication into spiritual care design and practice. Attention will be given to the consideration of the development of the biophysical model of health care and ways relationship-centered models have developed to better address the psycho-social-spiritual needs of patients and their families, along with those of care team members.

Prerequisites: RELP 514 and RELP 516

RELP 602 Applied Spiritual Care II**1 credit**

Students will reflect on actual and simulated health care “case-stories” in order to hone wise approaches to service while promoting healing interactions between all participants in caregiving practices. This will involve practicing story-listening and self-reflection skills, thereby developing capacities for collaboration with all those who provide spiritual support to patients while enhancing the wholeness of all involved in this process.

Prerequisite: RELP 601

RELT 300 Christian Beliefs**3 credits**

An examination of the central teachings of the Christian church that give expression to the faith of the followers of Jesus Christ. Students explore what it means to be a Christian and what being a Christian means for everyday life. Particular attention is devoted to what students can hope for and the opportunity for freedom through faith.

RELT 305 World Religions for Health Care Professionals**3 credits**

A survey of the major religions of the world; introduces the basic teachings, rituals, and historical developments of each religion. Emphasizes concepts of healing, the role of faith in illness from the perspectives of patients and practitioners. Students learn how to apply their knowledge of world religions to clinical settings.

RELX 320 Topics in Religion**3 credits**

An exploration of various topics such as grace and freedom; love and justice; God and human suffering; desire, happiness and God; and faith and art.

RESA 310 Cardiopulmonary Assessment**3 credits**

In-depth knowledge of physical examination and diagnostic techniques for comprehensive evaluation of the cardiopulmonary system. Focuses on methods of assessing the patient's current status and response to therapy.

Prerequisite: RRT credential

RESA 311 Advanced Practice in Neonatal/Pediatric Respiratory Care**3 credits**

Pathologies associated with congenital malformations of the newborn. Students develop an understanding of surgical interventions and the implications for the respiratory care management of patients before, during, and after surgery. Topics include patient assessments and managing invasive and noninvasive mechanical ventilation; high-frequency oscillatory ventilation; medical gas administration; and extra-corporeal membrane oxygenation.

Prerequisite: RRT credential

RESA 320 Cardiopulmonary Monitoring**3 credits**

In-depth methods of monitoring the cardiopulmonary status of the patient. Focus is on methods of assessing the patient's current status and response to therapy. The course focuses on noninvasive and invasive methods of assessing patients' current hemodynamic and pulmonary status as well as response to therapy in the acute care and critical care settings.

Prerequisite: RRT credential

RESA 321 Pediatric Respiratory Care Case Management**3 credits**

Study of the pathophysiology, clinical findings, and management of pediatric patients with various clinical disorders. Using the case-based approach to learning, students develop respiratory care plans for the management of pediatric patients in medical and pulmonary rehabilitation units suffering from pulmonary and non-pulmonary disorders.

Prerequisite: RRT credential

RESA 330 Advanced Topics in Respiratory Care**3 credits**

An in-depth explanation of a topic of interest to the advanced-level practitioner. A different topic is covered each semester including but not limited to mechanical ventilation, delivery of respiratory care at alternate sites, pulmonary function testing, and professional topics. The course may be repeated for credit: specific topics may not be repeated.

Prerequisite: RRT credential

RESA 495 Independent Study**1-3 credits**

An individualized program of independent study, clinical activity, research, or reading, jointly designed by a third- or fourth-year respiratory care student and an instructor with the approval of the program chairperson.

Prerequisite: RRT credential

RESB 100 Survey of Respiratory Care**1 credit**

A study of the history and scope of the respiratory care profession as well as legal, professional, ethical, and culturally competent practice. General orientation to the healthcare environment including HIPPA, and safety education will be included. Students are expected to complete a four 4-hour job shadow with a Registered Respiratory Therapist in a health care setting.

RESB 110 Integrated Respiratory Care Sciences**2 credits**

A survey of physics, chemistry, and microbiology as applied to respiratory care clinical practice. Concepts regarding gas laws, surface tension, acid-base balance, classification of microorganisms, staining methods, specimen collection, culturing, human-microbe interactions, human defense mechanisms, control of microbial growth, sterilization and disinfection, antimicrobials, and microbial pathogens are discussed.

RESB 205 Cardiopulmonary Anatomy and Physiology**3 credits**

A study of the gross and microscopic anatomy and physiology of the respiratory, circulatory, and renal systems. Covers the normal mechanisms and control of ventilation, diffusion of pulmonary gases, oxygen and carbon dioxide transport, ventilation-perfusion relationships, fetal development of the cardiopulmonary systems, electrophysiology, hemodynamic measurements, renal failure, and sleep physiology.

RESB 307 Respiratory Care Protocols I**3 credits**

Direct application of theory, operation, and delivery of respiratory care treatment protocols and infection control policies and procedures. Laboratory experience includes a hands-on approach to management and troubleshooting of respiratory care equipment. Patient care simulations are used to practice the respiratory care protocols of oxygen therapy, aerosol and humidity therapy, medical gases, and hyperbaric oxygen therapy.

RESB 308 Clinical 1 Respiratory Protocols**1-3 credits**

Students will receive 10 hours of clinical experience per week performing patient assessments, aerosol and humidity therapy, and medical gas administration in the acute and sub-acute healthcare settings. Students will also observe hyperbaric oxygen therapy in the clinical setting. Students are expected to complete the American Heart Association BLS provider training prior to beginning clinical rotations.

RESB 310 Cardiopulmonary Assessment**3 credit**

In-depth knowledge of physical examination and diagnostic techniques for comprehensive evaluation of the cardiopulmonary system and infection control policies and procedures. This course focuses on methods of assessing the patient's current status and response to therapy. The application of patient history, diagnostic laboratory results, and physical examination findings in selecting appropriate respiratory care protocols is discussed and practiced.

RESB 312 Cardiopulmonary Pathology**3 credits**

A study of the etiology, pathophysiology, clinical findings, and management of patients with various cardiac and pulmonary disorders. Students apply basic respiratory care protocols to cardiac and pulmonary disease management using clinical case studies. Students will recommend consultation from a physician specialist and use evidence-based practice for the classification of disease severity.

RESB 317 Respiratory Care Protocol II**3 credits**

Direct application of theory, operation, and delivery of respiratory care treatment protocols. Laboratory experience includes a hands-on approach to management and troubleshooting of respiratory care equipment. Patient care simulations are used to practice the respiratory care protocols of bronchial hygiene (including tracheal suctioning and airway clearance), aerosol medication delivery, tracheostomy care, and volume expansion therapy.

RESB 318 Clinical 2 Respiratory Protocols**2 credits**

16 hours of clinical experience per week performing patient assessments, tracheostomy care, aerosolized medication, volume expansion, and bronchial therapies. Observation of noninvasive ventilation for oxygenation management may be provided in the clinical setting. Case-based assessment in the clinical setting will be required. Students develop and present a patient case study.

RESB 320 Cardiopulmonary Monitoring**3 credits**

In-depth methods of monitoring the cardiopulmonary status of the patient. Focus is on methods of assessing the patient's status and response to therapy especially in the critical care and emergency room settings. The course focuses on noninvasive and invasive methods of assessing the patients' current hemodynamic and pulmonary status as well as response to therapy in the acute care and critical care settings.

RESB 324 Introduction to Critical Care**3 credits**

Introduction to various critical care concepts used to diagnose and manage the critically ill patient. Direct application of theory, basic operation, and delivery of respiratory care procedures and equipment for the intensive care patient. Specific topics will include: endotracheal intubation, advanced airways, resuscitation equipment, phases of ventilation, and basic modes of ventilation. Laboratory experience includes a hands-on approach designed to provide the student with authentic learning opportunities that allow the student to relate the concepts presented in this course to the clinical management of critically ill patients. Students are expected to complete the American Heart Association ACLS provider training.

RESB 326 Clinical 3 Diagnostics and Critical Care**2 credits**

16 hours of clinical experience per week performing pulmonary function testing in the acute care setting as well as ventilator initiation and patient-ventilator assessments in the critical care and sub-acute care settings.

RESB 330 Cardiopulmonary Pharmacology**3 credits**

Principles of general pharmacology, drug action, and dosage calculation. Includes indications, side effects, hazards, and mechanism of action regarding drugs used to treat the respiratory and cardiovascular systems. Case based application of bronchodilator, mucus controlling, surfactant, corticosteroid, non-steroidal antiasthma, aerosolized anti-infective, antimicrobial, neuromuscular, sedative, narcotic, diuretic, and cardiovascular agents are discussed. Students will recommend pharmacologic intervention with narcotic antagonists and benzodiazepine antagonists.

RESB 335 Pulmonary Diagnostics**3 credits**

A study of basic pulmonary function testing and equipment including arterial puncture and ABG analysis, spirometry, diffusion capacity, thoracic gas volume, exercise stress testing, and polysomnography. Students will evaluate results and perform quality control of pulmonary function equipment relating to diffusion capacity and lung volumes.

RESB 344 Introduction to Neonatal Pediatric Respiratory Care **3 credits**

Study of neonatal and pediatric cardiopulmonary assessment as well as the pathophysiology, clinical findings, and management of pediatric patients with various clinical disorders. Topics include cystic fibrosis, asthma, bronchitis, bronchiolitis, croup, epiglottitis, and trauma. Students review portions of the American Heart Association PALS program.

RESB 407 Critical Care Case Management **3 credits**

An in-depth study and direct application directed for the assessment and management of the critically ill patient. Laboratory experience provides a hands-on approach to ventilator set-up, management, and troubleshooting. Specific topics will include advanced modes of ventilation and use of ventilator graphics to assess ventilator dyssynchrony, patient response to therapy, ventilator weaning, and extubation.

RESB 408 Clinical 4 Respiratory Critical Care **2 credits**

16 hours of clinical experience per week performing ventilator initiation, patient-ventilator assessments, care of the ventilator patient, ventilator weaning, ventilator troubleshooting in the critical care and sub-acute care settings, and endotracheal intubation in the operating room. Clinical rotations will also include pediatric acute care experience.

RESB 410 Outpatient Respiratory Care Services **2 credits**

Study of the application of respiratory care protocols and use of equipment related to assisting the respiratory care patient in the outpatient settings. Special emphasis is placed on home care equipment, rehabilitation services, smoking cessation techniques, breathing techniques, patient education, case management, and disaster planning.

RESB 417 Advanced Practice in Neonatal Pediatric Respiratory Care **3 credits**

Study of pathologies associated with congenital malformation of the newborn. Students develop an understanding of surgical interventions and the implications for the respiratory care management of critically ill patients. Laboratory experience includes neonatal assessment, managing invasive and noninvasive mechanical ventilation, high-frequency oscillatory ventilation, medical gas administration, and bubble CPAP. Students are expected to complete the American Heart Association NRP and PALS provider training.

RESB 418 Clinical 5 Advanced Critical Care**2 credits**

Students will receive 16 hours of clinical experience per week. Critical care rotations may include ventilator initiation; patient-ventilator assessments; ventilator patient care; weaning; and troubleshooting in the critical care and sub-acute care settings. Specialty rotations may include neonatal intensive care, labor and delivery, pulmonary rehabilitation, and home health care. Students will serve as clinical teaching assistants (under the direction of the onsite clinical instructor) to junior respiratory care students in the general medical surgical areas. Students will complete and present a patient case study.

RESB 420 Respiratory Care Capstone**2 credits**

A study of professional topics as they relate to respiratory care. Emphasis on therapist-patient relations, ethical issues, cultural competence, and professionalism. Students will prepare a resume and practice interviewing. Directed study assists in preparation for the NBRC credentialing examinations.

RESB 426 Respiratory Care Summative Practicum**6 credits**

Concentrated clinical experience (360 hours) in all areas of respiratory care. Emphasis is on the development of independence in the practice of adult, pediatric, and neonatal respiratory care.

RTCA 114 Practicum I**1 credit**

An introductory internship of supervised practicum hours where the student acquires the knowledge and skills relevant to the use of radiologic methods and techniques. Focus is on the upper and lower extremities and the respiratory and abdominal systems and is correlated with RTCA 117 through demonstrations, practice sessions, and laboratory simulations.

Corequisites: RTCA 117

RTCA 115 Radiology in the Modern Medical World**1 credit**

An introduction to radiography specifically and the healthcare profession generally. Topics include a brief history of medicine and radiology; hospital organizational systems; healthcare delivery setting; reimbursement policies within the healthcare industry; practicing in the medical field; ethical, professional, and medicolegal issues; and opportunities for career advancement.

Corequisites: RTCA 114, RTCA 117

RTCA 117 Radiologic Technology I**3 credits**

An introduction to the field of radiography, including: basic radiographic terms and principles; radiation safety and protection; radiation exposure and techniques; gross and radiographic anatomy of the chest, abdomen, upper and lower extremities and the bony thorax; radiographic positioning skills; compassionate patient care skills; radiographic terminology; and radiographic image identification and evaluation of the anatomic areas listed above. A laboratory component is included in this course.

Corequisites: RTCA 114, RTCA 115

RTCA 120 Patient Care**2 credits**

Basic patient care for the healthcare worker. One hour of lecture and two hours of skills laboratory each week. Sessions include discussions, demonstrations, and competency examinations covering: communication skills, vital signs, patient assessment, patient histories, body mechanics, infection control, oxygen administration, principles of drug administration, and sterile technique. A typed paper is required.

RTCA 121 Medical Terminology**1 credit**

Basic medical terminology used in healthcare professions, including correct spelling, abbreviations, word roots, and definitions. Includes lecture, assigned workbook exercises, and written tests.

RTCA 123 Practicum II**2 credits**

A continuing internship of supervised clinical practicum hours for acquiring the knowledge and skills relevant to the usage of radiologic methods and techniques. Focuses on the genitourinary system, spinal column, alimentary tract, and cranium, and is correlated with RTCA 127 through demonstrations, practice sessions, and laboratory simulations. A functional knowledge of Windows operations for the clinical setting is recommended.

Prerequisite: RTCA 114

Corequisites: RTCA 127

RTCA 127 Radiologic Technology II**3 credits**

A continuation of Radiologic Technology I. Includes discussions, demonstrations, radiographic image critique, and practice sessions over the radiologic examinations of the urinary system, alimentary tract, spinal column, and cranium. A laboratory component is included in this course.

Prerequisites: RTCA 117, 120

Corequisite: RTCA 123

RTCA 131 Practicum III**2 credits**

A continuing internship of supervised clinical practicum hours for acquiring the knowledge and skills relevant to the usage of radiologic methods and techniques. Focus is on portable/trauma, pediatric, surgical, and non-routine radiography and is correlated with RTCA 133 through demonstrations, practice sessions, and laboratory simulations. This course is competency-based. A functional knowledge of Windows operations for the clinical setting is recommended.

Prerequisite: RTCA 123

Corequisite: RTCA 133

RTCA 133 Radiologic Technology III**2 credits**

Radiologic examination of the non-routine skeletal procedures, pediatric radiography, the biliary system, and mobile/trauma applications of radiologic technology. Discussions and demonstrations of radiographic image critique are presented. A typed paper is required.

Prerequisites: RTCA 127

Corequisite: RTCA 131

RTCA 135 Fundamentals of Radiation and Generation I**2 credits**

An introductory study of X-ray generation, including fundamental X-ray generation; radiation protection; control of high voltage and electrical hazards; and methods of rectification. The student receives an introduction to the X-ray machine as well as an in-depth knowledge of electricity, magnetism, electromagnetism, electromagnetic radiation, digital imaging concepts, and the structure of the atom.

Prerequisites: MATH 105, PHYS 131

RTCA 137 Formulating Radiographic Technique**2 credits**

A study of the fundamental methods of producing high-quality radiographs with a minimum of patient exposure and cost. Reviews the effects of radiation on X-ray film and digital imaging receptors and how intensifying screens, grids, filters, and artifacts can affect the contrast, density, and image quality of the radiograph. Also includes a comparison of digital and film processes, and quality control issues relating to radiographic exposure. Knowledge of word processing and spreadsheets is required.

Prerequisite: RTCA 127

RTCA 210 Advanced Patient Care**2 credits**

Advanced skills and knowledge in patient care. Includes but is not limited to basic pharmacology for radiographers, emergency procedures, venipuncture, patient assessment and monitoring, drug administration, sterile procedures and setups, and basic laboratory values. Functional knowledge of word processing and presentation software such as Power Point are recommended.

Prerequisites: RTCA 120, 121

RTCA 215 Practicum IV**3 credits**

A continuing internship of supervised clinical practicum hours for acquiring the knowledge and skills relevant to the use of radiologic techniques. Focus is on mastering routine radiographic procedures covered in previous courses: trauma, surgery, and portable radiography; and semi-special radiologic procedures. Course is correlated with RTCA 221. A functional knowledge of Windows operations for the clinical setting is recommended.

Prerequisite: RTCA 131

Corequisite: RTCA 221

RTCA 217 Pathology for Radiographers**2 credits**

A study of structural and functional manifestations of diseases that includes pathologic processes of all major anatomic systems and developmental, acute, chronic, traumatic, and neoplastic diseases. Discussion centers on diseases related to imaging sciences. Lectures, discussions, and case presentations enhance the students' critical thinking skills.

Prerequisite: RTCA 133

RTCA 218 Fundamentals of Radiation and Generation II**3 credits**

A continuation of Fundamentals of Radiation and Generation I with special emphasis on modern X-ray tubes; processing; X-ray production and interaction with matter; digital imaging applications; radiographic film and recording devices; grids; three-phase generators; basic X-ray circuits; fluoroscopy; and image intensifiers. Also includes quality assurance and quality control issues relating to radiographic exposure.

Prerequisite: RTCA 135

RTCA 221 Radiologic Technology IV**1 credit**

A continuation of Radiologic Technology I, II, and III provides a cognitive knowledge of special and semi-special imaging procedures and enables the student to understand and experience them in the clinical setting. Subjects include, but are not limited to: angiography, interventional procedures, myelography, arthrography, tomography, computed tomography, digital radiography, magnetic resonance imaging, mammography, and examinations of the reproductive system.

Prerequisites: RTCA 133, 137

Corequisite: RTCA 215

RTCA 222 Principles of Radiobiology**1 credit**

A study of the biological effects of ionizing radiation. Emphasis is on the basic concept of radiation dose and the interactions of radiant energy with living matter. Mutagenesis, carcinogenesis, embryonic and fetal effects, and other topics relevant to medical applications of ionizing radiation are stressed, as well as developing strategies for applying proper radiation protection principles. A typed paper is required.

Prerequisites RTCA 218, 217

RTCA 239 Practicum V**3 credits**

The fifth semester of supervised clinical practicum hours. Focus is on the application of knowledge and skills relevant to the usage of radiologic methods and techniques. The student demonstrates final competency in a wide variety of radiographic procedures. Functional knowledge of Windows operations for the clinical setting is recommended.

Prerequisite: RTCA 215

RTCA 292 Radiology Simulated Registry**2 credits**

Prepares the second-year student radiographer for the ARRT Registry Examination through review and simulated registry examinations.

Prerequisite: All RTCA courses from semesters 1 to 4

Corequisites: RTCA 217

RTCA 295 Independent Study in Radiologic Technology**1-3 credits**

An individualized independent study with the advice and approval of the radiologic sciences and imaging department faculty. The student may pursue the study of a specific area of radiologic technology such as research, laboratory experimentation, or both. Topics must be mutually agreed upon by the student and the instructor before registration.

SLHP 330 Global Health**2 credits**

Introduction to the global healthcare system, especially as it pertains to developing countries. Health and illness issues are discussed in relation to the world community. Application of the topics discussed is pursued in a service-learning international experience. Students are expected to travel outside the United States. Course includes service-learning hours completed after the conclusion of all didactic materials. Students not enrolled as service learning honors scholars may take course with permission of instructor(s) and their academic advisors.

SLHP 331 Health Care Needs of Underserved Populations**2 credits**

Introduction to the health care needs of underserved populations in the United States. Health and illness problems of diverse groups in the United States are discussed, including but not limited to: the homeless, migrant workers, urban poor, and those living in rural settings. Application of the topics discussed results in a service-learning experience in a local community.

SLHP 332 Leadership in Service**2 credits**

Introduction to the development and application of leadership skills with an emphasis on service in the local community. Students interact with College administration and Kettering Health Network leaders. Application of the topics includes contributing to and leading service projects. Students set goals and collectively perform beyond the limits of individual accomplishment.

SLHP 333 Scholarship and Service**2 credits**

Introduction to the development of primary research in a health care environment with a commitment to the role of research in advancing health care. Students can participate in and shape a scholarly project with Kettering Health Network leadership through the Innovation Center.

SOCI 115 Principles of Sociology**3 credits**

A general introduction to the basic forms of human association and interaction, dealing with social processes, institutions, cultures, and personality.

SOCI 226 Marriage and the Family**3 credits**

A study of the family as a social institution with emphasis on dating, love, courtship and marriage, sex, child-rearing, marital problems, and divorce.

SOCI 295 Independent Study in Sociology **1-3 credits**

Independent study is available primarily for transfer students whose previous coursework does not meet content or credit equivalency. Other extenuating circumstances may also require the use of an independent study. A student must submit the independent study request form, available from the records office, before an independent study is granted. Permission is given on an individual basis.

SOCI 304 Modern Social Problems **3 credits**

A concentration on major social problems in America. Content varies from semester to semester. Includes historical development, current status, and analysis using major social theories.

SOCI 320 Topics in Social Science **3 credits**

An exploration of various issues associated with sociology and psychology.

SOCI 325 Topics in Cultural Studies **1-4 credits**

Study of one of the traditional areas of cultural studies. Lectures, laboratory times, and prerequisites will vary according to the topic offered.

SOCI 375 Cultural Diversity in Health Care **3 credits**

Study of the principles of cultural diversity specifically applied to the healthcare setting. Explores social and cultural dimensions of health and healthcare and assessment and intervention techniques appropriate to specific cultural groups.

Prerequisites: ENGL 101 or equivalent and acceptance into a College major

SONO 205 Introduction to Sonography **2 credit**

An introduction to the profession of diagnostic medical sonography and the role of the sonographer. Emphasis on sonographic terminology, basic protocols, communication, and professionalism in the clinical setting; history of ultrasound, accreditation, professional organizations, and registry significance will be presented. Trajecsyst, an online clinical tracking tool, will be introduced.

SONO 300, 305, 310 Clinical Sonography I, II, III **4 credits each**

Consecutive clinical sonography courses are an internship of supervised clinical practicum hours in which the student acquires the knowledge and skills relevant to abdominal, vascular, and gynecological sonography specialties. Students must achieve specific levels of clinical competence before advancing to the next clinical course.

SONO 301 Sonographic Physics and Instrumentation I **2 credits**

The first course in a two-course series of sonographic physics and instrumentation covering basic principles. Topics include sound wave anatomy and properties, attenuation, echoes, piezoelectricity, transducers, focus, resolution, and imaging instruments.

SONO 302 Sonographic Physics and Instrumentation II **2 credits**

The second course in a two-course series of sonographic physics and instrumentation covering basic principles. Topics include hemodynamics, Doppler equation, Doppler angle, color Doppler principles, color maps, continuous-wave and pulsed-wave Doppler, spectral analysis, spectral display, ultrasound artifacts, and bioeffects.

Prerequisite: SONO 301

SONO 305 Clinical Sonography II **4 credits**

See description for SONO 300, 305, 310 Clinical Sonography I, II, III

SONO 306 Abdominal Sonography I **4 credits**

The first course in a two-course series covering sonographic imaging of the abdomen and small parts. General principles of sonography scanning procedures, lab values related to patient disease processes, ultrasound characteristics of the various organs, and pathology of the abdominal vasculature, liver, biliary system, pancreas, and spleen will be discussed.

SONO 307 Abdominal Sonography II **3 credits**

The second course in a two-course series covering sonographic imaging of the abdomen and small parts. Scanning procedures, lab values, ultrasound characteristics, and pathology of the gastrointestinal tract, kidneys, urinary tract, adrenal glands, prostate, thyroid, breast, and scrotum will be discussed.

Prerequisite: SONO 306

SONO 310 Clinical Sonography III **4 credits**

See description for SONO 300, 305, 310 Clinical Sonography I, II, III

SONO 311 Vascular Sonography I **4 credits**

The first course in a two-course series covering the study and uses of sonography in the diagnosis of vascular disease. Basic protocols for performing vascular sonography including carotid, lower-extremity, and upper-extremity arterial testing will be discussed. Indications, patient history, physical examinations, imaging techniques, and arterial pathology will be covered in depth.

SONO 312 Vascular Sonography II**3 credits**

The second course in a two-course series covering the study and uses of sonography in the diagnosis of vascular diseases. Duplex, pulsed, and continuous-wave Doppler velocimetry and plethysmography testing of peripheral, intra/extracranial systems will be studied. Test validation, disease epidemiology, and therapeutic intervention in vascular disease will also be presented.

Prerequisite: SONO 311

SONO 316 Cardiac Testing**1 credit**

An introductory course that covers various forms of cardiac testing excluding echocardiography. Basic ECG interpretation and the principles of ECG, Holter monitoring, an introduction to cardiac catheterization, and cardiac stress testing will be covered.

SONO 321 Gynecological Sonography**2 credits**

Applications and scanning methods including transabdominal and transvaginal imaging of the female pelvis. Gynecologic pathology including tumors, pelvic inflammatory diseases, and congenital pelvic pathology will be presented. The menstrual cycle and its relationship to the sonographic appearance of reproductive organs and surrounding anatomy will be studied in depth.

SONO 395 Independent Study in Sonography**1-3 credits**

An individualized course in which the student may investigate a special topic related to diagnostic medical sonography. The student will design a project and present it to the instructor for final approval.

Prerequisite: Approval from department chair

SONO 400, 405 Clinical Sonography IV, V**4 credits each**

Consecutive clinical sonography courses are an internship of supervised clinical practicum hours in which the student acquires the knowledge and skills relevant to obstetrical sonography and echocardiography specialties. Students must achieve specific levels of clinical competence before advancing to the next clinical course and final clinical externship.

Prerequisite: SONO 310

SONO 401 Echocardiography I**4 credits**

The first course in a two-course series covering the study and use of sonographic imaging as it relates specifically to the heart. Two-dimensional imaging as well as M-mode and Doppler testing in the detection of diastolic dysfunction and valvular and ischemic heart disease will be studied. Specialty echocardiographic examinations such as transesophageal, stress, and contrast studies will be introduced.

SONO 402 Echocardiography II **3 credits**

The second course in a two-course series covering the study and use of sonographic imaging as it relates specifically to the heart. Pathophysiology of cardiac and pericardial disease processes, prosthetic heart valves, and cardiac tumors will be covered. An introduction to pediatric echocardiography and congenital heart defects will also be included in this course.

Prerequisite: SONO 401

SONO 405 Clinical Sonography V **4 credits**

See description for SONO 400, 405 Clinical Sonography IV, V

SONO 406 Registry Review **2 credits**

A review class to prepare for the sonography registry examinations offered by the American Registry of Diagnostic Medical Sonography (ARDMS). This course consists of comprehensive review and simulated examinations in abdomen and small parts, vascular, obstetrics and gynecology, and adult echocardiography.

Prerequisite: SONO 405

SONO 408 Seminar/Capstone **1 credit**

A senior capstone course that emphasizes professional ethics, legal issues in sonography, informatics, resume writing, and employment opportunities.

SONO 410 Clinical Externship **4 credits**

A final clinical practice experience offered during the final semester of the sonography curriculum. Students may use this practicum as an opportunity to integrate their experience from the previous two years and select a sonography specialty or specialties in which to do their rotations. Practicum experiences may take place at any site in which the students are under the supervision of a physician or registered sonographer, vascular technologist, or echocardiographer. New outside clinical affiliations may be sought. The student is responsible (under the guidance of the clinical coordinator) for the arrangement of these experiences.

Prerequisite: SONO 405

SONO 411 Special Project in Sonography **2 credits**

Allows students to pursue advanced learning experiences in various aspects of diagnostic medical sonography. Students will develop a project in consultation with a sonography faculty advisor. This course is offered as a senior project course but may be substituted with a sonography specialty course.

SONO 425 Obstetrical Sonography I**3 credits**

Applications and scanning methods of obstetrical sonography will be the focus of this course. Sonographic examination in early pregnancy, estimation of gestational age, first-trimester screening, and fetal anatomy will be presented. Pathology associated with pregnancy will be discussed. Maternal disease and its role in pregnancy will be studied.

Prerequisite: SONO 321

SONO 426 Obstetrical Sonography II**3 credits**

A continuation of Obstetrical Sonography I. The placenta, late pregnancy, abnormal growth and development, and special procedures will be presented. The application of sonography in the diagnosis and treatment of infertility will also be studied.

Prerequisite: SONO 425

SPAN 101 Spanish Culture and Communication I**3 credits**

Designed to develop basic communication skills in speaking, listening, reading, and writing the Spanish language. Strong emphasis will be given to cultural aspects of the language and Spanish-speaking communities. This course is for beginners with no previous exposure to the Spanish language.

SPAN 102 Spanish Culture and Communication II**3 credits**

Designed to continue developing basic communication skills in speaking, listening, reading, and writing the Spanish language. Strong emphasis will be giving to understanding and producing conversations and dialogues in the target language. Culture continues to be an important component of the course. Previous knowledge of Spanish is required.

Prerequisite: SPAN 101

SPAN 301 Spanish for Health Professions**3 credits**

A hands-on study of the Spanish language and culture related to health professions. Students gain familiarity with basic written and oral vocabulary for the assessment of Spanish-speaking patients in a variety of settings. A major component of the course is a service-oriented project in the community. Previous basic experience with the Spanish language is required.

Prerequisites: placement exam; one semester of college-level Spanish.