

COLLEGE OF PUBLIC HEALTH AND HEALTH SCIENCES

College of Public Health and Health Sciences

131 Moulton Hall
Kent Campus
330-672-6500
publichealth@kent.edu
www.kent.edu/publichealth

Undergraduate Programs

Majors

- Exercise Science - B.S.
- Integrated Health Studies - B.S.
- Long-Term Care Administration - B.S.
- Nutrition - B.S.
- Public Health - B.S.P.H.
- Speech Pathology and Audiology - B.S.
- Sport, Exercise and Performance Psychology - B.S.
- Sports Medicine - B.S.

Minors

- Environmental Health Sciences for Natural Science Majors
- Environmental Health Sciences for Non-Natural Science Majors - Minor
- Health Services Administration
- Health Technologies and Informatics
- Public Health
- Speech Pathology and Audiology
- Sport, Exercise and Performance Psychology
- Sports Medicine: Administration
- Sports Medicine: General Medical and Emergency Care
- Sports Medicine: Orthopedic Patient Care

Certificates

- Community Health Worker Supervision

Graduate Programs

Majors

- Athletic Training - M.S.
- Audiology - Au.D.
- Audiology - M.A.
- Biostatistics - M.P.H.
- Clinical Epidemiology - M.S.
- Communication Sciences and Disorders - Ph.D.
- Epidemiology - M.P.H.
- Exercise Physiology - M.S.
- Exercise Physiology - Ph.D.
- Health Policy and Management - M.P.H.
- Nutrition - M.S.

- Public Health - Ph.D.
- Social and Behavioral Sciences - M.P.H.
- Speech Language Pathology - M.A.

Certificates

- Clinical Research
- Healthcare Compliance
- Nursing Home Administration/Health Services Executive

Accreditation Feedback Policy

The College of Public Health and Health Sciences at Kent State University has been accredited by the Council on Education for Public Health (CEPH) as a school of public health. Being an accredited institution adds great value to degrees conferred and ensures a comprehensive student experience. A continual self-evaluation program is required by CEPH for accreditation. At the core of this program, it is required that the college solicit and respond to feedback from our students. Accordingly, it is an expectation of the college that students earnestly participate in providing accurate and timely feedback to the college in the form of Student Surveys of Instruction (SSI) as well as annual exit and alumni satisfaction surveys. Participation in the feedback process will assist in the college's accreditation process and allow the administration and faculty to quickly identify and address any problems as they arise, thus enhancing the quality of the academic experience in the college.

Students who fail to complete the required surveys may be prevented from future term registration.

College of Public Health Faculty

- Alemagno, Sonia A. (2009), Professor, Ph.D., Case Western Reserve University, 1990
- Beard, Heather (2011), Associate Professor, Ph.D., Case Western Reserve University, 2005
- Benzigar, Sasikumar (2011), Associate Professor, Ed.D., University of Cincinnati, 2014
- Bhargava, Tina D. (2012), Professor, DrPH, University of Pittsburgh, 2012
- Bhatta, Madhav P. (2009), Professor, Ph.D., University of Alabama, Birmingham, 2007
- Brewer, Thomas W. (2002), Professor, Ph.D., University at Albany-SUNY, 2003
- Chatfield, Sheryl L. (2015), Associate Professor, Ph.D., University of Mississippi, 2014
- Cheruvu, Vinay K. (2010), Associate Professor, Ph.D., Case Western Reserve University, 2012
- Eng, Abbey L. (2006), Professor, Ph.D., Bowling Green State University, 2007
- Guan, Tianyuan (2021), Assistant Professor, Ph.D., University of Cincinnati, 2021
- Hallam, Jeffrey S. (2013), Professor, Ph.D., The Ohio State University, 1995
- Hoornbeek, John A. (2006), Professor, Ph.D., University of Pittsburgh, 2004
- Jefferis, Eric S. (2002), Professor, Ph.D., University of Cincinnati, 2004
- Kenne, Deric (2011), Professor, Ph.D., University of Akron, 2010
- King, Jennifer A. (2008), Assistant Professor, Ph.D., Kent State University, 2017

- Kollin, Robert B. (2017), Lecturer, M.S., Case Western Reserve University, 2016
- Lanese, Bethany G. (2015), Associate Professor, Ph.D., Wayne State University, 2004
- Phillips, Lynette (2010), Professor, Ph.D., University of North Carolina-Chapel Hill, 2007
- Smith, Tara C. (2013), Professor, Ph.D., University of Toledo, 2012
- Step, Mary M. (2015), Associate Professor, Ph.D., Kent State University, 1998
- Tomi, Laurel A. (2015), Associate Lecturer, B.A., Kent State University, 1986
- VanGeest, Jonathan B. (2011), Professor, Ph.D., University of Illinois at Chicago, 1998
- Woolverton, Christopher J. (1995), Professor, Ph.D., West Virginia University, 1986
- Zullo, Melissa D. (2009), Professor, Ph.D., Case Western Reserve University, 2009

Athletic Training (ATTR)

ATTR 15003 CAREERS IN HEALTH AND MEDICAL SCIENCES 2 Credit Hours

(Cross-listed with EXSC 15003 and IHS 15003) An overview of the profession of healthcare and medical professional associated including employment opportunities, academic preparation and clinical preparation. This course will address the qualities and skills required for a comprehensive list of professional opportunities in the healthcare and medical fields with an emphasis on professionalism, cultural competencies, ethics and self care. Students will be required to work with faculty and health care and medical professionals to outline a personalized program to assist in their professional development.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

ATTR 15012 DOCUMENTATION IN HEALTH CARE 2 Credit Hours

Addresses clinical writing skills associated with documentation in health care. Addresses the legal, ethical, and practical needs for proper documentation in health care. Focus is on reading, writing and interpreting various forms of medical documentation including but not limited to SOAP notes, progress notes, treatment notes, clinical record keeping, and facility records. Electronic medical record techniques and other clinical record methods will be addressed.

Prerequisite: Sports medicine major or sports medicine: administration minor or sports medicine: general medical and emergency care or sports medicine: orthopedic patient care minor.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

ATTR 20001 SOCIOCULTURAL ASPECTS OF HEALTH CARE 3 Credit Hours

Advanced examination of the sociocultural aspects of healthcare careers. Specific emphasis will be placed of the recognition of diverse patient populations and effectively addressing their unique needs. Cultural competence will be the focus of of the course and will address various aspects of sociocultural diversity; including but not limited to racial, ethnic, religious, socioeconomic, regional beliefs, and alternative approaches to healthcare.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 25036 RESPONDING TO EMERGENCIES 3 Credit Hours

Principles of emergency care including prevention, management and administrative aspects associated with injury and trauma. Practical competency in American Red Cross; emergency care and first aid and CPR/AED.

Prerequisite: None.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lab, 2 other

Grade Mode: Standard Letter

ATTR 25037 PHYSICAL ASSESSMENT TECHNIQUES AND KINESIOLOGY FOR THE LOWER EXTREMITY AND SPINE 3 Credit Hours

Anatomical, clinical assessment and kinesiology related to injuries and illnesses common in athletic training and sports medicine. Emphasis on orthopedic assessment and kinesiology concepts of the Lower extremity and spine.

Prerequisite: ATTR 25036; and ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 25038 PHYSICAL ASSESSMENT TECHNIQUES AND KINESIOLOGY FOR THE UPPER EXTREMITY, HEAD AND NECK 3 Credit Hours

Anatomical, clinical assessment and kinesiology related to injuries and illnesses common in athletic training and sports medicine. Emphasis on orthopedic assessment and kinesiology concepts of the Upper Extremity, Health and neck.

Prerequisite: ATTR 25036 and ATTR 25037; and ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 25057 HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB) 4 Credit Hours

(Cross-listed with EXSC 25057) Comprehensive examination of anatomy and physiology related to the organization of the body and basic cell and tissue types. Specific structure and function of the muscular, skeletal, integumentary and nervous systems are addressed.

Prerequisite: None.

Schedule Type: Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

ATTR 25058 HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)**4 Credit Hours**

(Cross-listed with EXSC 25058) Comprehensive examination of anatomy and physiology related to the human body under rest and exercise conditions. Specific structure and function of the metabolic, endocrine, lymphatic, digestive, urinary and reproductive systems are addressed. Advanced coverage of neurological, cardiovascular and respiratory systems are also addressed.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010.

Schedule Type: Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

ATTR 35037 ADVANCED PHYSICAL ASSESSMENT TECHNIQUES 3 Credit Hours

Anatomical, medical and clinical assessment techniques for injuries and illnesses common to the physically active. Emphasis on neurological and non-orthopedic assessment strategies for proper referral and care.

Prerequisite: ATTR 25037; and ATTR 25058 or BSCI 11020 or BSCI 21020 or EXSC 25058.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 35040 STRENGTH AND CONDITIONING 2 Credit Hours

Demonstrate didactic understanding and clinical application of energy systems, anatomy and proper techniques for strength and conditioning exercises for practical applications with healthy and recovering athletes including but not limited to indications, contraindications and modifications for injured and at risk populations.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010; and Exercise Science major; or Physical Education, Health and Sport Exploration major; or Sports Medicine major or minor; or Sport Medicine: Administration minor; or Sport Medicine: General Medical and Emergency Care minor; or Sport Medicine: Orthopedic Patient Care minor.

Schedule Type: Combined Lecture and Lab

Contact Hours: 1 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 35045 EMERGENCY MEDICAL TECHNICIAN-BASIC 5 Credit Hours

Preparing for Emergency Medical Technician certification including patient assessment, airway and cardiac management, trauma management, medical patient management and clinical experience. Prepares students to challenge the National Registry Examination for the State of Ohio for EMT-Basic. Clinical hours are required for this course through Hudson EMS.

Prerequisite: Special approval.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 6 lab

Grade Mode: Standard Letter

ATTR 35050 NEUROLOGICAL PROCESS FOR THE HEALTHCARE PROFESSIONAL 3 Credit Hours

Advanced cognitive content in the areas of normal and pathological function of the nervous system and its components. Specific emphasis on the neurophysiological basis for motor learning, special senses, and memory serves to address the central and peripheral nervous system structure and function. Growth and Development and pathological responses to hypoxia, microbiologic agents, genetic derangements, nutritional deficiencies, chemicals, drugs and aging are addressed.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 21020.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 35054 BIOMECHANICS 3 Credit Hours

(Cross-listed with EXSC 35054) Anatomical and mechanical bases of human movement. Emphasis is placed on tools and techniques for motion analysis, mechanical concepts, forces and performance analysis. Lecture and laboratory.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 35062 EVIDENCE-BASED RESEARCH IN HEALTH CARE 3 Credit Hours

An examination of evidence-based practice and evidence-based research in health care. The focus of the course will include understanding literature, research questions, methods of research, and how evidence-based research and evidence-based practice play a vital role in the delivery or modern day healthcare. Emphasis will be placed upon the process of evidence-based research, utilizing the outcomes of evidence-based research and the utilization of outcomes assessment in healthcare.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 43018 ETHICAL LEADERSHIP FOR HEALTH CARE (WIC) 3 Credit Hours

(Slashed with ATTR 53018) Examination of specific situations in healthcare from an ethical sensitivity, reasoning and decision making perspective. A problem-oriented case study approach based on contemporary moral issues and moral theory related to clinical and academic health professions. An examination and assessment of leadership styles and methods as they pertain to healthcare and healthcare administration.

Prerequisite: Senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Writing Intensive Course

ATTR 45019 PROFESSIONAL RESPONSIBILITY AND MANAGEMENT IN HEALTH CARE 3 Credit Hours

An investigation of the issues affecting the entry level healthcare providers. Professional development issues and career advancement are included. Investigation into current philosophies and legal aspects of healthcare management. Organization and administrative concepts and models will focus on the advancement of patient based healthcare.

Prerequisite: Senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 45040 PATHOLOGY AND PHARMACOLOGY FOR HEALTH CARE PROVIDERS 3 Credit Hours

(Slashed with ATTR 55040) Investigation of specific pathological conditions presented by professionals, including physicians and pharmacists. Will discuss common pathologies, associated pharmacological treatment and physiologic effects for various afflictions.

Prerequisite: ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 21020.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 45041 ADVANCED THERAPEUTIC INTERVENTIONS 3 Credit Hours

Addresses the physiological considerations of specific injuries and conditions commonly encountered in the athletic training profession. Focus is on contemporary rehabilitative programming for all of the major body regions. Specific units on Aquatic therapy and rehabilitation, Neurological considerations for rehabilitation, Return to Running Considerations, and Return to Throwing protocols are included.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 21020; and ATTR 35054.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 45492 INTER-PROFESSIONAL INTERNSHIP IN SPORTS MEDICINE (ELR) 3 Credit Hours

(Repeatable for credit) Inter-professional internship experience in a sports medicine discipline. An internship experience in a sports medicine facility focusing on inter-professional dynamics and aspects of the discipline. A comprehensive clinical experience will be supported by engagement in the inter-professional environment through projects and professional development experiences. Integration of professionalism, professional development, and transition to practice in a sports medicine discipline drives this internship.

Prerequisite: Sports medicine major; and senior standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 9 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

ATTR 53018 ETHICAL LEADERSHIP FOR HEALTH CARE 3 Credit Hours

(Slashed with ATTR 43018) Examination of specific situations in healthcare from an ethical sensitivity, reasoning and decision making perspective. A problem-oriented case study approach based on contemporary moral issues and moral theory related to clinical and academic health professions. An examination and assessment of leadership styles and methods as they pertain to health care and health care administration.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 55040 PATHOLOGY AND PHARMACOLOGY FOR HEALTH CARE PROVIDERS 3 Credit Hours

Investigation of specific pathological conditions presented by professionals, including physicians and pharmacists. Will discuss common pathologies, associated pharmacological treatments and physiologic effects for various afflictions.

Prerequisite: ATTR 25058 or EXSC 25058.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 60000 CADAVER ANATOMY AND APPLIED ASSESSMENT 6 Credit Hours

Cadaver dissection with emphasis on the systems of the body to understand structure and function of the anatomical structures. Applied assessment components integrate functional assessment and diagnostic signs and symptoms of common athletic training conditions and injuries. Evidence-based assessment will be infused throughout the course.

Prerequisite: Athletic Training major within the Master of Science degree; and graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 3 lecture, 6 lab

Grade Mode: Standard Letter

ATTR 61000 ACUTE INJURY DIAGNOSIS, TREATMENT AND MANAGEMENT 3 Credit Hours

Mechanisms of acute injuries will provide the foundation for the integration of evidence-based knowledge in the diagnosis, treatment and management of athletic training injuries. Contemporary clinical guidelines and management strategies will provide a framework for critical thinking and practical application.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 62010 CONTEMPORARY ISSUES AND EXAM PREP IN ATHLETIC TRAINING 3 Credit Hours

The purpose of this course is to prepare student to successfully transition to practice through rigorous investigation of contemporary issue in athletic training. Understanding the dynamic issues facing the profession will better prepare students for the challenges facing the profession and how to function effectively in the healthcare environment as an athletic trainer. Passing the Board of Certification (BOC) examination is the threshold for entry level practice into the profession. This course will provide exam taking strategies, ACES programming, and post workshop self directed strategies to position the students to successfully challenge the BOC examination upon graduation.

Prerequisite: Athletic Training major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 62012 EDUCATION AND SUPERVISION PROCESSES IN ATHLETIC TRAINING 3 Credit Hours

A comprehensive examination of educational learning theories, curriculum design, evaluation and supervision strategies in athletic training education programs from didactic and clinical perspectives. Additional applications for continuing education programs will be included.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 62014 ADVANCED CLINICAL PROCEDURES IN ATHLETIC TRAINING AND SPORTS MEDICINE 3 Credit Hours

Advanced clinical practice theory and skills as they relate to the profession of athletic training and sports medicine. Emphasis on contemporary clinical practice issues for a variety of athletic training and sports medicine professional settings.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 62015 ORTHOPEDIC ASSESSMENT FOR THE ATHLETIC TRAINER 3 Credit Hours

This course will provide a holistic approach to evidence based practice (EBP) information regarding the role of the athletic trainer in performing orthopedic examinations. This course builds upon the anatomic and injury pathology information in previous courses and broadens students knowledge and skill set regarding diagnostic skills and tools necessary to develop a more effective and efficient differential diagnosis of common and uncommon orthopedic injuries that fall within the scope of practice for an Athletic Trainer.

Prerequisite: Athletic Training major; and graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 62016 CLINICAL INQUIRY IN ATHLETIC TRAINING 3 Credit Hours

Principles of athletic training research methodologies with a focus on clinical athletic training research. Completion of a clinical research project will be required in this course.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 63094 COLLEGE TEACHING IN HEALTH SCIENCES 3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Guided teaching experiences in the Health Sciences. Specific emphasis on establishing and implementing a teaching philosophy in an instructional setting in the Health Sciences. Development of Professional Teaching Behaviors will be addressed. A comprehensive teaching experience rooted in contemporary teaching literature will guide this course.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture, Seminar

Contact Hours: 1 lecture, 2 other

Grade Mode: Standard Letter

ATTR 63096 INDIVIDUAL INVESTIGATION IN ATHLETIC TRAINING 1-3 Credit Hours

(Repeatable for credit) Independent study in the area of athletic training not covered during regularly schedule programmatic coursework is completed under the supervision of a Kent State Athletic Training faculty member.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter

ATTR 63098 RESEARCH 1-3 Credit Hours

(Repeatable for credit) Research carried out by the student under the supervision of a faculty member. Prerequisite: Graduate standing; and special approval

Schedule Type: Research

Contact Hours: 3-9 other

Grade Mode: Standard Letter

ATTR 63195 SPECIAL TOPICS IN ATHLETIC TRAINING 1-3 Credit Hours

(Repeatable for credit) Selected and varied topics of relevance in athletic training.

Prerequisite: Athletic Training major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

ATTR 63199 THESIS I 2-6 Credit Hours

(Repeatable for credit) Thesis students must register for a total of 6 hours, 2 to 6 hours in a semester distributed over several semesters if desired. (Variable 90-270 hours)

Prerequisite: Graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 6-18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

ATTR 63299 THESIS II 2 Credit Hours

(Repeatable for credit) Thesis students must continue registration each semester until all degree requirements are met.

Prerequisite: ATTR 63199; and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

ATTR 65001 CLINICAL PRACTICE I: PREVENTION AND WELLNESS 3 Credit Hours

Clinical practicum in an athletic training setting under the direct supervision of a certified, licensed health care provider. Emphasis on the development of clinical competencies related to prevention of injuries and medical conditions and overall wellness will be the primary focus. Engagement in an inter-professional environment with specific competencies for research and ethical case analysis are required.

Students must complete a minimum of 180 hours in clinicals.

Prerequisite: Athletic Training major within the Master of Science degree; and graduate standing.

Schedule Type: Clinical Laboratory

Contact Hours: 12 other

Grade Mode: Standard Letter

ATTR 65002 CLINICAL PRACTICE II: ADVANCED HEAD, NECK AND ORTHOPEDIC 3 Credit Hours

Clinical practicum in an athletic training setting under the direct supervision of a certified, licensed health care provider. Emphasis on the development of clinical competencies related to Head, Neck, and Orthopedic conditions and overall wellness will be the primary focus. Engagement in an inter-professional environment with specific competencies for research and ethical case analysis are required.

Student must complete a minimum of 180 hours in clinicals.

Prerequisite: ATTR 61001; and Athletic Training major within the Master of Science degree; and graduate standing.

Schedule Type: Clinical Laboratory

Contact Hours: 12 other

Grade Mode: Standard Letter

ATTR 65003 CLINICAL PRACTICE III: GENERAL MEDICAL 3 Credit Hours

Clinical practicum in an athletic training setting under the direct supervision of a certified, licensed health care provider. Emphasis on the development of clinical competencies related to general medical conditions will be the primary focus. Engagement in an inter-professional environment including rotations with physicians and-or nurse practitioners with specific competencies for research, ethical case analysis are required. Student must complete a minimum of 180 hour in clinicals.

Prerequisite: ATTR 65002; and Athletic Training major within the Master of Science degree; and graduate standing.

Schedule Type: Clinical Laboratory

Contact Hours: 12 other

Grade Mode: Standard Letter

ATTR 65005 CLINICAL PRACTICE IV: ADVANCED COMPETENCIES 3 Credit Hours

Clinical practicum in an athletic training setting under the direct supervision of a certified, licensed health care provider. Emphasis on the development of clinical competencies related to advanced competencies and skills in athletic training will be the primary focus. Engagement in an inter-professional environment with specific competencies for research and ethical case analysis are required. Student must complete a minimum of 180 hours in clinicals.

Prerequisite: ATTR 65001, ATTR 65002 and ATTR 65003; and Athletic Training major within the Master of Science degree; and graduate standing.

Schedule Type: Clinical Laboratory

Contact Hours: 12 other

Grade Mode: Standard Letter

ATTR 65036 GENERAL MEDICAL CONDITIONS IN ATHLETIC TRAINING 3 Credit Hours

The purpose of this course is to provide a holistic approach to evidence based practice (EBP) information regarding the role of the athletic trainer in the initial assessment and referral of common general medical conditions that fall within the scope of practice for athletic training. The course provides an overview of pathology, etiology, signs and symptoms, diagnosis and treatments that follow established national and international professional standards of care. This course will include, but is not limited to dermatologic, respiratory, cardiovascular, endocrine, urogenital, neurological, musculoskeletal and digestive general medical conditions.

Prerequisite: Athletic Training major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 65037 PHYSICAL AGENTS IN ATHLETIC TRAINING AND SPORTS MEDICINE 3 Credit Hours

The study and practical application of physical modalities including physical principles, physiologic effects, indications-contradictions, and standard application procedures. Safety and legal issues of modality usage are also addressed.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 65038 ADMINISTRATION CONCEPTS FOR THE HEALTHCARE PROFESSIONAL 3 Credit Hours

Investigation into current philosophies and legal aspects of athletic training and sports medicine programs. Organization and administration of all aspects of athletic training and sports medicine programs with specific emphasis on policy and regulation of programs anchored in contemporary healthcare practices.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 65039 PHYSICAL REHABILITATION IN ATHLETIC TRAINING AND SPORTS MEDICINE 3 Credit Hours

The study and clinical application of evidence based rehabilitation techniques including strategies for proper exercise selection based on anatomical and physiological considerations, program administration, and guidelines for program progression. This course will address the comprehensive concepts related to the rehabilitation of including but not limited to modality selection, pharmacological considerations, record keeping, program design and implementation, and safety aspects. The psychology of rehabilitation including goal setting and motivation will also be addressed. Current literature and techniques in the field will support the content of this course.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

ATTR 65040 PATHOPHARMACOLOGY FOR HEALTHCARE PROVIDERS 3 Credit Hours

Advanced investigation of specific pathological conditions presented by professionals, including physicians and pharmacists. Will discuss common pathologies, associated pharmacological treatment and physiologic effects for various afflictions anchored in evidence-based practice in health care.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 65050 NEUROLOGICAL CONCEPTS FOR THE HEALTHCARE PROFESSIONAL 3 Credit Hours

Advanced cognitive content in normal and pathological function of the nervous system and its components. Specific emphasis on the neurophysiological basis for motor learning, special senses, and memory serves to address the central and peripheral nervous system structure and function. Growth and Development and pathological responses to hypoxia, microbiologic agents, genetic derangements, nutritional deficiencies, chemicals, drugs and aging are addressed. Evidence-based practice concepts will guide the integration from anatomy and physiology to effective interventions for selected neurological conditions.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 69999 CLINICAL CAPSTONE IN ATHLETIC TRAINING 6 Credit Hours

Clinical Capstone is an intensive, immersion experience in the clinical setting under the direct supervision of a certified, licensed health care professional. Students will invest a minimum of 360 in the clinical setting working with inter-professional health care providers. Clinical capstone expectations include performance evaluations by supervisors and patient management to promote active clinical engagement and critical thinking. A portfolio will include professional skill assessments, performance assessment, case studies, mock interview, and formal evidence-based presentation to health care providers on an athletic training domain.

Prerequisite: ATTR 65001, ATTR 65002, ATTR 65003 and ATTR 65005; and Athletic Training major within the Master of Science degree; and graduate standing.

Schedule Type: Clinical Laboratory

Contact Hours: 24 other

Grade Mode: Standard Letter

ATTR 75001 EVIDENCE-BASED INTERVENTIONS IN ATHLETIC TRAINING 3 Credit Hours

Course examines the use and implementation of evidence-based interventions (EBI) in athletic training education. Specific emphasis on designing and implementing EBI into didactic and clinical experiences in athletic training. Also addressed are implementation of EBI into the development, implementation and dissemination of research. Through an extensive examination of the critical literature, students gain an understanding of how to broadly integrate EBI constructs in their professional practice.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 75002 ACADEMIC AND ADMINISTRATIVE LEADERSHIP IN ATHLETIC TRAINING 3 Credit Hours

This course will address the key academic leadership constructs needed to navigate the higher education culture as a faculty and/or clinical faculty member. Human resources, politics, administrative processes and organizational factors related to successful higher education and clinical leadership will be the focus. Leadership and advocacy strategies for professional organizations will also be developed.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 75003 CONTINUOUS QUALITY IMPROVEMENT AND ASSESSMENT IN ATHLETIC TRAINING 3 Credit Hours

The focus of the course includes the fundamental constructs associated with quality improvement through an academic program in athletic training. The development of inter-professional practice, engaging curriculum, creation of educational and administrative policy, and leading change within Athletic Training organizations. The course will assist students in developing action plans for their organization pertaining to organizational improvement.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

ATTR 75004 TEACHING AND CLINICAL EDUCATION LEADERSHIP IN ATHLETIC TRAINING 3 Credit Hours

This course focuses on the comprehensive and integrated elements in athletic training education. An in-depth analysis of curriculum design and implementation, didactic and clinical education, program assessments, and accreditation policies and standards will be addressed. A framework rooted in the context of inter-professional education promote organizational and programmatic improvements related dynamic trends in HC education.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Biostatistics (BST)

BST 50196 INDIVIDUAL INVESTIGATION IN BIOSTATISTICS 1-3 Credit Hours

(Repeatable for maximum 6 credits) Individual graduate investigation or research in areas related to biostatistics.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

BST 60010 USING R IN PUBLIC HEALTH 1 Credit Hour

(Slashed with BST 70010) Students learn the role of the computing software R for data analyses. The course covers the basics of R including how to organize and clean data and how to display data visually. Students understand how to perform descriptive and inferential statistics using R.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

BST 60011 USING SAS IN PUBLIC HEALTH 1 Credit Hour

(Slashed with BST 70011) Students learn the role of the computing software SAS for data analyses. The course covers the basics of SAS, including importing data, organizing and cleaning the data and using different procedures. Students understand how to perform descriptive and inferential statistics using SAS.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

BST 60012 USING EXCEL IN PUBLIC HEALTH 1 Credit Hour

(Slashed with BST 70012) An introduction to using Excel in the field of public health. Students learn the skills to analyze and present data, including using formulas, pivot tables, graphs and the data analysis toolpak.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

BST 60192 APPLIED PRACTICE EXPERIENCE IN BIOSTATISTICS 2-4 Credit Hours

(Repeatable for credit) Observation of and participation in public health activities of a public health agency, hospital or other approved organization. The student completes the field experience with joint supervision from the university and approved organization or agency.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 10-20 other

Grade Mode: Satisfactory/Unsatisfactory-IP

BST 60195 SPECIAL TOPICS IN BIOSTATISTICS 1-3 Credit Hours

(Repeatable for credit) Special topics to sample new offerings about topics in biostatistics.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

BST 60292 APPLIED PRACTICE EXPERIENCE IN BIOSTATISTICS II 1 Credit Hour

(Repeatable for credit) Continuing enrollment for students participating in public health activities of a public health agency, hospital or other approved organization. Students complete the field experience with joint supervision from the university and an approved organization or agency.

Prerequisite: BST 60192; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

BST 62019 BIOSTATISTICS IN PUBLIC HEALTH 3 Credit Hours

Course provides graduate students with an understanding of basic statistical methods as well as the skills to perform and interpret basic statistical procedures and interpret the results. Emphasis is on principles of statistical reasoning, presentation of graphical and numerical descriptive statistics, statistical inference (estimation and hypothesis testing) and careful interpretation of results. By the end of the course, students achieve competency in applying appropriate basic statistical methods to real-time data and presenting the results appropriate for public health professionals and educated lay audiences.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 62020 DATA MANAGEMENT AND LOGIC USING SAS® SOFTWARE 3 Credit Hours

(Slashed with BST 82020) Course introduces graduate students to SAS® software, including reading external data into SAS software, use of SAS data step, basic SAS functions, logical data steps for data management and different SAS procedures for creating summary reports and graphical displays and conducting basic statistical analysis using SAS software. SAS lab sessions are designed to mimic real-time challenges working with different kinds of data and learning how to meet such challenges. By the end of the course, students achieve competency with proper and efficient use of SAS software.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 63012 SURVIVAL ANALYSIS IN PUBLIC HEALTH 3 Credit Hours

(Slashed with BST 83012) Introduction in survival analysis for graduate students in public health. Covers survival functions, hazard rates, types of censoring and truncation. Methods of focus include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models and parametric survival models. Inference for recurrent event and competing risks models are also covered.

Prerequisite: BST 62019 and BST 63014; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 63013 EXPERIMENTAL DESIGNS IN PUBLIC HEALTH RESEARCH
3 Credit Hours

(Slashed with BST 83013) Introduces students to experimental research methods in public health settings. First introduces a number of quasi-experimental and experimental study designs, then identifies a number of statistical methods that can be used to draw correct causal inferences from the study.

Prerequisite: BST 62019 and BST 63014; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 63014 APPLIED REGRESSION ANALYSIS OF PUBLIC HEALTH DATA
3 Credit Hours

(Slashed with BST 83014) Focuses on developing student proficiency in building and evaluating various regression models for public health studies. Topics covered include exploratory and descriptive methods, simple and multiple linear regression models, predictor selection, binary and multinomial logistic regression models, survival analysis, repeated measures and generalized linear models.

Prerequisite: BST 62019; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 70010 USING R IN PUBLIC HEALTH
1 Credit Hour

(Slashed with BST 60010) Students learn the role of the computing software R for data analyses. The course covers the basics of R including how to organize and clean data and how to display data visually. Students understand how to perform descriptive and inferential statistics using R.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

BST 70011 USING SAS IN PUBLIC HEALTH
1 Credit Hour

(Slashed with BST 60011) Students learn the role of the computing software SAS for data analyses. The course covers the basics of SAS, including importing data, organizing and cleaning the data and using different procedures. Students understand how to perform descriptive and inferential statistics using SAS.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

BST 70012 USING EXCEL IN PUBLIC HEALTH
1 Credit Hour

(Slashed with BST 60012) An introduction to using Excel in the field of public health. Students learn the skills to analyze and present data, including using formulas, pivot tables, graphs and the data analysis toolpak.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

BST 82020 DATA MANAGEMENT AND LOGIC USING SAS® SOFTWARE
3 Credit Hours

(Slashed with BST 62020) Course introduces graduate students to SAS® software, reading external data into SAS software, use of SAS data step, basic SAS functions, logical data steps for data management, and different SAS procedures for creating summary reports, graphical displays, and conducting basic statistical analysis using the SAS software. SAS Lab sessions are designed to mimic real time challenges working with different kinds of data and learn how to meet such challenges. By the end of the course, students will achieve competency in proper and efficient use of SAS software.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 83012 SURVIVAL ANALYSIS IN PUBLIC HEALTH
3 Credit Hours

(Slashed with BST 63012) Covers survival functions, hazard rates, types of censoring and truncation. Methods of focus include life tables, Kaplan-Meier plots, log-rank tests, Cox regression models and parametric survival models. Inference for recurrent event and competing risks models are also covered.

Prerequisite: BST 62019; and BST 63014 or BST 83014; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 83013 EXPERIMENTAL DESIGNS IN PUBLIC HEALTH RESEARCH
3 Credit Hours

(Slashed with BST 63013) Introduces students to experimental research methods in public health settings. First introduces a number of quasi-experimental and experimental study designs, then identifies a number of statistical methods that can be used to draw correct causal inferences from the study. Students are expected to develop two research proposals, first using quasi-experimental then an experimental design, and develop a statistical analysis plan for each study.

Prerequisite: BST 62019; and BST 63014 or BST 83014; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

BST 83014 APPLIED REGRESSION ANALYSIS OF PUBLIC HEALTH DATA
3 Credit Hours

(Slashed with BST 63014) Focuses on developing student proficiency in building and evaluating various regression models for public health studies. Topics covered include exploratory and descriptive methods, simple and multiple linear regression models, predictor selection, binary and multinomial logistic regression models, survival analysis, repeated measures and generalized linear models.

Prerequisite: BST 62019; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Environmental Health Sciences (EHS)

EHS 50060 PUBLIC HEALTH LABORATORY METHODS 3 Credit Hours

(Slashed with PH 40060) Course introduces the student to the fundamental theory and hands on use to track specimen collection and laboratory analysis. Environmental specimens are examined for their public health importance using classical and modern techniques. Students learn classical laboratory methods and their modern use in the laboratory environment. Examples include culture and microscopic identification of microorganisms, identification of disease vectors, detection of newborn disease and detection of terrorism agents.

Prerequisite: BSCI 30140 or CHEM 10062 or CHEM 10971 or PH 30006; and graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 1 lab

Grade Mode: Standard Letter

EHS 50102 SOLID AND HAZARDOUS WASTE MANAGEMENT 3 Credit Hours

(Slashed with PH 40102) Solid and hazardous waste programs and practices are explored. Pollution prevention, safety, sanitation practices, sustainability concepts, management and regulations pertinent to solid and hazardous waste such as RCRA are discussed and studied. Consumption, garbage handling, landfill design and disposal, sustainability concepts, reuse, recycling, composting and other waste strategies are presented. Hazardous waste and material issues throughout the environment, such as HW disposal, TSD facilities, underground storage tanks, Superfund, brownfields and related issues are introduced.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 50103 FOOD PROTECTION 3 Credit Hours

(Slashed with PH 40103) Topics surrounding foodborne disease prevention and food sanitation relative to quality control, food service and processing systems are introduced. Foodborne disease agents, microbiology, epidemiology and outbreak investigation techniques are explored. The regulatory process and agencies at the wholesale, retail and food service levels are introduced. Ohio food regulations are covered, including the Ohio Uniform Food Code. Basic preparation to conduct food serve inspections and foodborne disease investigations as part of agency regulatory programs and the opportunity to earn the National Restaurant Association ServSafe Manager certification are provided.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 50104 AIR QUALITY AND POLLUTION CONTROL 3 Credit Hours

(Slashed with PH 40104) Basic survey of air pollution and its control. The respiratory system and body's response to air pollutants of different types are reviewed and related illnesses such as asthma are studied. The Clean Air Act, NESHAPS and related regulations are surveyed. Ambient air quality standards, the effect of climate and other air pollution concepts are reviewed. Measurement and control methods for both particulate and gaseous contaminants are surveyed.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 50105 WATER AND WASTEWATER MANAGEMENT 3 Credit Hours

(Slashed with PH 40105) Explores issues surrounding water pollution and human health and the environmental treatment systems developed to provide safe water and sewage disposal. Private and public water and sewage systems are studied. Federal and state regulations, including the Safe Drinking Water Act and Clean Water Act, are reviewed.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 50109 LABORATORY SAFETY AND HYGIENE 3 Credit Hours

(Cross-listed with PH 40109) Basic introduction to laboratory safety, chemical hygiene, and biosafety. Includes the research compliance programs of institutions (IBC, IACUC, IRB, RSC) and the OSHA Chemical Hygiene Standard requirements and program responsibilities. General lab safety concepts are reviewed, along with chemical handling and storage, fumehoods and ventilation, hazardous waste disposal, radiation safety, and lab design. Basic principles of biosafety are covered, BSL 1-4 levels, biosafety cabinets, select agents, bloodborne pathogens, NIH Guidelines, biosecurity and animal use.

Prerequisite: Graduate standing.

Schedule Type: Field Experience, Lecture

Contact Hours: 2.67 lecture, .33 other

Grade Mode: Standard Letter

EHS 50196 INDIVIDUAL INVESTIGATION IN ENVIRONMENTAL HEALTH SCIENCES 1-3 Credit Hours

(Repeatable for maximum 6 credits) Individual graduate investigation or research in areas related to environmental health sciences.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

EHS 52100 CLIMATE CHANGE AND POPULATION HEALTH 3 Credit Hours

(Slashed with PH 42100) This course reviews evidence on the rigorous scientific consensus confirming global warming and the mechanisms underlying climate change, with a focus on adverse population health impacts. Increases in the frequency and intensity of extreme weather events including heatwaves, tropical cyclones and severe storms create hazardous conditions including flooding, drought, wildfires, increases in vector-borne diseases, food and nutrition shortages, human displacement and mental health issues. Populations at increased risk are identified along with a consideration of climate ethics, justice and public health approaches used to address the population health effects. Strategies for abatement through injury and disease prevention, climate risk communication and strategies for mitigation including green energy and energy conservation are examined.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 53014 BUILT ENVIRONMENT AND PUBLIC HEALTH 3 Credit Hours

(Slashed with PH 43013) The impact of the built environment on human health is an issue of global importance. The focus of this course is preventing disease and injury while improving the health of populations by looking “upstream” at the built environment or those settings designed, created and maintained by human efforts. Population health effects of community design are explored through scientific literature, and include transportation, land use, parks and green space in the context of physical activity, food environments, air and water quality, injury prevention, social capital and health equity. Students examine and use population health tools to assess the built environment and develop strategies for creating sustainable healthy places through multidisciplinary collaboration, research and policy that promotes the health of the public.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 60191 VARIABLE CONTENT SEMINAR IN ENVIRONMENTAL HEALTH SCIENCES 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Seminar on current and important topics in environmental health sciences. Subject matter varies depending on the topic.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1-3 other

Grade Mode: Standard Letter

EHS 60192 PRACTICUM EXPERIENCE IN ENVIRONMENTAL HEALTH SCIENCES 3,6 Credit Hours

Observational and participation in public health activities of a public health agency, hospital or other approved organization. Students complete the field experience with joint supervision from the university and approved organization or agency.

Prerequisite: Graduate standing and special approval.

Schedule Type: Practical Experience

Contact Hours: 9-18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EHS 60195 SPECIAL TOPICS IN ENVIRONMENTAL HEALTH SCIENCES 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Special topics to sample new offerings on topics in environmental health sciences.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EHS 60292 APPLIED PRACTICE EXPERIENCE IN ENVIRONMENTAL HEALTH SCIENCES II 1 Credit Hour

(Repeatable for credit) Continuing enrollment for students participating in public health activities of a public health agency, hospital or other approved organization. Students complete the field experience with joint supervision from the university and an approved organization or agency.

Prerequisite: EHS 60192; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory

EHS 62018 ENVIRONMENTAL HEALTH CONCEPTS IN PUBLIC HEALTH 3 Credit Hours

(Slashed with EHS 72018) Provides a comprehensive overview of core topics in environmental health as related to public health.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 63010 APPLIED RISK ASSESSMENT 3 Credit Hours

Introduces the student to environmental and occupational hazards, assessing the risks associated with hazard exposure. Standard principles of risk assessment are emphasized including methods of hazard identification and regulation, quantitative exposure measurement, dose and toxicity relationships and risk management. Analysis of public policy regulatory guidance and health advisory watchdog recommendations are evaluated.

Prerequisite: EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 63011 APPLICATION OF RISK ANALYSIS IN ENVIRONMENTAL HEALTH 3 Credit Hours

Students are introduced to methods in risk analysis that are applied by U.S. federal, state, and local agencies in their assessment of chemical toxicants. Linkages between risk assessment, risk management, and risk communication will be studied as components of this process, along with issues and controversies in the analysis of environmental health risks.

Prerequisite: EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 63012 OCCUPATIONAL SAFETY AND HEALTH 3 Credit Hours

Survey of major concepts and issues relating health and safety in the workplace. Emphasis is on the application of public health principles and decision-making practices used by various worker populations for the prevention of injury and disease on the job. This course covers protective equipment, hazardous conditions, environmental toxins, risk assessment, prevention science approaches and workplace health promotion.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EHS 72018 ENVIRONMENTAL HEALTH CONCEPTS IN PUBLIC HEALTH 3 Credit Hours

(Slashed with EHS 62018) Provides a comprehensive overview of core topics in environmental health as related to public health.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Epidemiology (EPI)

EPI 50013 CLINICAL EPIDEMIOLOGY BASICS 3 Credit Hours
(Slashed with PH 40013) Course develops an understanding of clinical research, good clinical practices, research environments and methods used in clinical research. Students gain an understanding of the use of clinical investigation, from the product development stage to the application of investigations in contract research organization. Ethical implications and regulatory issues are examined.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 50014 CLINICAL TRIALS MANAGEMENT 3 Credit Hours
(Slashed with PH 40014) Course examines the good clinical practices guidelines. Students learn how to conduct and manage clinical trials; understand clinical trials data; develop instruments and protocols; recognize quality control and data issues; know approaches to recruitment, retention and participant assessment; identify adverse events and measurement of response variables; and acquire skill in study close-out procedures.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 50015 SCIENTIFIC WRITING FOR CLINICAL RESEARCH 3 Credit Hours

(Slashed with PH 40015) Course provides students the tools to develop proficiency with scientific reading, conduct presentations and demonstrate skill with scientific writing, with the goal of preparing clinical researchers to be able to communicate findings to the science community and general population. Course includes an examination of the science literature in clinical trials research.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 50017 PHARMACOEPIDEMIOLOGY 3 Credit Hours

(Cross-listed with PH 40017) Introduction to the field of pharmacoepidemiology, which uses epidemiology methods to understand medication use and distribution at the population level. Course examines risk-benefit and epidemiology approaches to examining medication use and therapeutic trials. Drug and device manufacturing to market are explored.

Prerequisite: BST 62019 and EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 50018 REGULATORY AFFAIRS IN CLINICAL RESEARCH 3 Credit Hours

(Slashed with PH 40018) Course provides the tools for students to develop an understanding of the researcher and organization responsibility in research and development of clinical trials products. Students understand regulations from the government and industry, privacy concerns, liability and ethical issues related to clinical trials research. Examples from the field are explored in detail.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 50196 INDIVIDUAL INVESTIGATION IN EPIDEMIOLOGY 1-3 Credit Hours

(Repeatable for maximum 6 credits) Individual graduate investigation or research in areas related to epidemiology.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

EPI 52010 UNDERSTANDING THE COVID-19 PANDEMIC 3 Credit Hours

(Slashed with PH 42010) In this course, students examine the various aspects of the ongoing coronavirus pandemic. They learn foundational information in epidemiology, virology and immunology, and examine the emergence and spread of SARS-CoV-2. They learn about responses to the epidemic, including policies aimed at slowing spread, and examine aspects of diagnostics and vaccine development relevant to controlling the spread of the virus.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 53089 PLAGUES THAT SHAPED THE WORLD 3 Credit Hours

(Slashed with EPI 73089) (Cross-listed with PH 43089) Course examines the Bubonic plague, HIV/AIDS, Ebola and pandemic influenza outbreaks to introduce students to the fundamentals of public health, establishing epidemiological principles that explain how plagues erupt and propagate, decimate populations and alter cultures. Inherent in the course's discussion are the social determinants that fuel plague outbreaks and slow recovery. Examples of emerging infectious diseases and threats of bioterrorism are discussed as new plagues for which creative solutions are still required. Students take city excursions and a field trip to assess cultural changes resulting from historical plagues.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 60191 VARIABLE CONTENT SEMINAR IN EPIDEMIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EPI 80191) Seminar on current and important topics in epidemiology. Subject matter varies depending on the topic.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EPI 60192 APPLIED PRACTICE EXPERIENCE IN EPIDEMIOLOGY 2-4 Credit Hours

(Repeatable for credit) Observation of and participation in public health activities of a public health agency, hospital or other approved organization. The student completes the field experience with joint supervision from the university and approved organization or agency.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 10-20 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 60195 SPECIAL TOPICS IN EPIDEMIOLOGY 1-3 Credit Hours

(Repeatable for a maximum 6 credit hours) (Slashed with EPI 80195)

Special topics to sample new offerings on topics in epidemiology.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EPI 60292 APPLIED PRACTICE EXPERIENCE IN EPIDEMIOLOGY II 1 Credit Hour

(Repeatable for credit) Continuing enrollment for students participating in public health activities of a public health agency, hospital or other approved organization. Students complete the field experience with joint supervision from the university and an approved organization or agency.

Prerequisite: EPI 60192; and graduate standing.

Schedule Type: Practical Experience

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 62017 FUNDAMENTALS OF PUBLIC HEALTH EPIDEMIOLOGY 3 Credit Hours

(Slashed with EPI 72017) Introduces principles, methods and application of epidemiology. Covers the history of epidemiology, concepts of disease causation and prevention, measures of disease frequency and excessive risk, epidemiologic study designs, causal inference, outbreak investigation and screening. Provides experience with calculation of rate standardization; measures of disease frequency, association and impact; and sensitivity and specificity of screening tests. Highlights applications of epidemiology to understanding of disease etiology, transmission, pathogenesis and prevention; evaluation and public policy development.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 62028 METHODS OF EVIDENCE BASED PUBLIC HEALTH 3 Credit Hours

(Slashed with EPI 72028) Explores tools and techniques used to quantitatively determine the effectiveness of public health interventions in the social sciences.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63014 EPIDEMIOLOGY OF CHRONIC DISEASES 3 Credit Hours

(Slashed with EPI 83014) With a life course approach to chronic disease epidemiology, this course focuses on cardiovascular, respiratory and cerebrovascular diseases and cancer. Health and disease are addressed from a multicausal perspective, which includes individual behaviors; psychosocial issues; and sociodemographic, biological and physiological factors. Time points for prevention and intervention are identified.

Prerequisite: EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63015 EPIDEMIOLOGY OF INFECTIOUS DISEASES 3 Credit Hours

(Slashed with EPI 83015) Surveys the history, principles, methods and practice of infectious disease epidemiology by (1) defining and understanding infectious disease epidemiology surveys, (2) collecting and measuring surveillance data, (3) interpreting epidemiology data and (4) predicting evidence-based outcomes. Primarily a course in epidemiology, students learn some infectious disease microbiology as well.

Prerequisite: EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63016 PRINCIPLES OF EPIDEMIOLOGIC RESEARCH 3 Credit Hours

(Slashed with EPI 83016) Course builds upon EPI 62017 to explore deeper the concepts and methods in epidemiologic research. Reviews the measures of disease frequency; association and impact; epidemiologic reasoning and causal inference; and methods and techniques for designing, implementing, analyzing and interpreting various epidemiologic study designs. Discusses advantages and limitations of various study designs. Explores threats to validity, precision and generalizability of epidemiologic studies.

Prerequisite: BST 62019 and EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63019 EXPERIMENTAL DESIGNS FOR CLINICAL RESEARCH 3 Credit Hours

(Slashed with EPI 83019) Principles of experimental designs as they apply to clinical research and clinical trials are presented at an intermediate level. Students understand randomized control trial studies and alternative designs. Study methodology, including randomization and blinding techniques, is covered. Topics include evidence-based medicine; risk prediction and scores; instruments and measurement; data issues; and recruitment, retention and adherence.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63020 ADVANCED EPIDEMIOLOGY AND CLINICAL RESEARCH METHODS 3 Credit Hours

(Slashed with EPI 83020) This advanced course focuses on why particular methods, study designs or approaches are used in particular investigative scenarios in clinical research. Students develop an advanced understanding and application of epidemiology methods in clinical research.

Prerequisite: EPI 63019; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63021 ETHICAL ISSUES IN PUBLIC HEALTH AND CLINICAL RESEARCH 3 Credit Hours

(Slashed with EPI 83021) Introduces students to historical and contemporary ethical issues that arise during public health and clinical or biomedical research studies. Broadly covers human subjects research, the responsible conduct of research and the good clinical practice guidelines.

Prerequisite: EPI 62017; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63034 LONGITUDINAL DATA ANALYSIS 3 Credit Hours

(Slashed with EPI 73034) Statistical techniques for analyzing longitudinal, or repeated measures, data. Focuses primarily on application of the various statistical models covered, with direct application illustrated using standard statistical software. Topics covered include univariate and multivariate analysis of variance for repeated measures, mixed-effects models (HLM or multilevel models), covariance pattern models, generalized estimating equations (GEE), mixed-effects logistic regression models and missing data in longitudinal studies.

Prerequisite: BST 62019 and BST 63014; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 63192 RESEARCH PRACTICUM IN CLINICAL EPIDEMIOLOGY 1-3 Credit Hours

(Repeatable for credit) Research practicum allows students to gain hands-on experience conducting research in a clinical setting, such as a hospital or other approved organization. Students complete the experience under the supervision of a field preceptor and faculty member.

Prerequisite: Graduate standing.

Schedule Type: Practical Experience

Contact Hours: 3-9 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 63199 THESIS I 2-6 Credit Hours

Student must register for a total of 6 credit hours in the program. Student may register for 2 to 6 hours in a single semester

Prerequisite: Graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 2-6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 63299 THESIS II 2 Credit Hours

Thesis students must continue registration in Thesis II each semester until all degree requirements are met.

Prerequisite: EPI 63199; and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 2 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 72017 FUNDAMENTALS OF PUBLIC HEALTH EPIDEMIOLOGY 3 Credit Hours

(Slashed with EPI 62017) Introduces principles, methods and application of epidemiology. Covers the history of epidemiology, concepts of disease causation and prevention, measures of disease frequency and excessive risk, epidemiologic study designs, causal inference, outbreak investigation and screening. Provides experience with calculation of rate standardization; measures of disease frequency, association and impact; and sensitivity and specificity of screening tests. Highlights applications of epidemiology to understanding of disease etiology, transmission, pathogenesis and prevention; evaluation and public policy development.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 72028 METHODS OF EVIDENCE BASED PUBLIC HEALTH 3 Credit Hours

(Slashed with EPI 62028) Explores tools and techniques used to quantitatively determine the effectiveness of public health interventions in the social sciences.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 73025 EMERGING ISSUES IN INFECTIOUS DISEASE EPIDEMIOLOGY 3 Credit Hours

Investigates global emerging and reemerging infectious diseases. Students evaluate root causes of infectious disease emergence and predict outcomes. Data from primary literature is used to predict alternate outcomes. Specific disease models are used to evaluate and compare prevention, treatment and eradication strategies.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 73026 DESIGN AND IMPLEMENTATION OF HEALTH SURVEYS 3 Credit Hours

Covers survey design, variable construction, survey administration and data collection methods, variable coding and manipulation and data analysis. Students understand sampling methods and sample size. Large health surveys are discussed. Students gain practical experience through design and implementation of a health survey, which can be used to facilitate dissertation research or a publication.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 73027 BIOLOGICAL BASIS OF PUBLIC HEALTH 3 Credit Hours

Integrates the sciences of biology and molecular biology into the principles and practice of public health. Implicit in this course are learning objectives that establish the ecology of infectious disease, the impact of vaccines in disease prevention and the role of environmental toxins on human health and disease. Additionally, students propose policies, regulations and legislation designed to protect human health within the realm of personalized medicine.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 73034 LONGITUDINAL DATA ANALYSIS 3 Credit Hours

(Slashed with EPI 63034) Statistical techniques for analyzing longitudinal, or repeated measures, data. Focuses primarily on application of the various statistical models covered, with direct application illustrated using standard statistical software. Topics covered include univariate and multivariate analysis of variance for repeated measures, mixed-effects models (HLM or multilevel models), covariance pattern models, generalized estimating equations (GEE), mixed-effects logistic regression models and missing data in longitudinal studies.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 73089 PLAGUES THAT SHAPED THE WORLD 3 Credit Hours

(Slashed with EPI 53089)(Cross-listed with PH 43089) Course examines the Bubonic plague, HIV/AIDS, Ebola and pandemic influenza outbreaks to introduce students to the fundamentals of public health, establishing epidemiological principles that explain how plagues erupt and propagate, decimate populations and alter cultures. Inherent in the course's discussion are the social determinants that fuel plague outbreaks and slow recovery. Examples of emerging infectious diseases and threats of bioterrorism are discussed as new plagues for which creative solutions are still required. Students take city excursions and a field trip to assess cultural changes resulting from historical plagues.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture, 3 lab

Grade Mode: Standard Letter

EPI 80191 VARIABLE CONTENT SEMINAR IN EPIDEMIOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with EPI 60191) Seminar on current and important topics in epidemiology. Subject matter varies depending on the topic.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EPI 80195 SPECIAL TOPICS IN EPIDEMIOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with EPI 60195) Special topics to sample new offerings on topics in epidemiology.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EPI 80196 INDIVIDUAL INVESTIGATION IN EPIDEMIOLOGY 1-3 Credit Hours

Individual graduate investigation or research in areas related to epidemiology.

Prerequisite: Doctoral Standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

EPI 80198 DIRECTED RESEARCH IN EPIDEMIOLOGY 1-15 Credit Hours

(Repeatable for credit) Directed research or individual investigation in an area of interest and with the guidance of a Kent State faculty member.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Individual Investigation, Research

Contact Hours: 1-15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 80199 DISSERTATION I 15 Credit Hours

(Repeatable for credit) Registration for two semesters is required. First semester dissertation work begins and continues until completion of EPI 80299 and 30 hours of total dissertation work.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 80299 DISSERTATION II 15 Credit Hours

(Repeatable for credit) Second course of dissertation sequence completing requirement of with 30 total hours of dissertation work.

Prerequisite: EPI 80199; and doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EPI 83014 EPIDEMIOLOGY OF CHRONIC DISEASES 3 Credit Hours

(Slashed with EPI 63014) With a life course approach to chronic disease epidemiology, this course focuses on cardiovascular, respiratory and cerebrovascular diseases and cancer. Health and disease are addressed from a multicausal perspective, which includes individual behaviors; psychosocial issues; and sociodemographic, biological and physiological factors. Time points for prevention and intervention are identified.

Prerequisite: EPI 72017; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83015 EPIDEMIOLOGY OF INFECTIOUS DISEASES 3 Credit Hours

(Slashed with EPI 63015) Surveys the history, principles, methods and practice of infectious disease epidemiology by (1) defining and understanding infectious disease epidemiology surveys, (2) collecting and measuring surveillance data, (3) interpreting epidemiology data and (4) predicting evidence-based outcomes. Primarily a course in epidemiology, students learn some infectious disease microbiology as well.

Prerequisite: EPI 72017; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83016 PRINCIPLES OF EPIDEMIOLOGIC RESEARCH 3 Credit Hours

(Slashed with EPI 63016) Course builds upon EPI 62017 to explore deeper the concepts and methods in epidemiologic research. Reviews the measures of disease frequency; association and impact; epidemiologic reasoning and causal inference; and methods and techniques for designing, implementing, analyzing and interpreting various epidemiologic study designs. Discusses advantages and limitations of various study designs. Explores threats to validity, precision and generalizability of epidemiologic studies.

Prerequisite: BST 62019 and EPI 72017; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83017 EPIDEMIOLOGICAL ANALYSIS 3 Credit Hours

Provides practical instruction in the analysis and interpretation of data from various epidemiologic study designs, including cross-sectional, case-control and cohort studies. Reviews statistical concepts and epidemiologic studies designs; outlines a strategy for data analysis; and reviews relevant methodologic issues and applies stratified analysis methods and multivariable regression models to the studies. Develops an understanding of the underlying principles and assumptions, practical application and correct interpretation of the epidemiologic results. Provides hands-on experience on the application of epidemiologic analysis methods and presentation of the results.

Prerequisite: BST 83014 and EPI 63016; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83018 OBSERVATIONAL DESIGNS FOR CLINICAL RESEARCH 3 Credit Hours

Course provides students the skills to design, conduct and perform clinical epidemiology studies using an observational design. Students understand major concepts of clinical research, develop clinical research questions, and solve clinical research problems. Topics include study design, risk, causation, exposures, bias, measurement and validity and disease prognosis.

Prerequisite: BST 62019 and EPI 72017; and doctoral standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83019 EXPERIMENTAL DESIGNS FOR CLINICAL RESEARCH 3 Credit Hours

(Slashed with EPI 63019) Principles of experimental designs as they apply to clinical research and clinical trials are presented at an intermediate level. Students understand randomized control trial studies and alternative designs. Study methodology, including randomization and blinding techniques, is covered. Topics include evidence-based medicine; risk prediction and scores; instruments and measurement; data issues; and recruitment, retention and adherence.

Prerequisite: BST 62019 and EPI 72017; and doctoral standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83020 ADVANCED EPIDEMIOLOGY AND CLINICAL RESEARCH METHODS 3 Credit Hours

(Slashed with EPI 63020) This advanced course focuses on why particular methods, study designs or approaches are used in particular investigative scenarios in clinical research. Students develop an advanced understanding and application of epidemiology methods in clinical research.

Prerequisite: EPI 83018 and EPI 83019; and doctoral standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EPI 83021 ETHICAL ISSUES IN PUBLIC HEALTH AND CLINICAL RESEARCH 3 Credit Hours

(Slashed with EPI 63021) Introduces students to historical and contemporary ethical issues that arise during public health and clinical or biomedical research studies. Broadly covers human subjects research, the responsible conduct of research and the good clinical practice guidelines.

Prerequisite: EPI 72017; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture, 3 lab

Grade Mode: Standard Letter

Exercise Physiology (EXPH)**EXPH 50612 EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours**

(Slashed with EXSC 40612) Designed to provide the students with a knowledge base in exercise leadership in the senior population and includes special populations. Students participate in the leading supervision and evaluation of the participant within the exercise program. They also assist in the collection of functional fitness data.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 53093 VARIABLE TITLE WORKSHOP IN EXERCISE SCIENCE AND EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXSC 43093) Workshop in exercise science or physiology, topics vary.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 55040 ADVANCED STRENGTH AND CONDITIONING 3 Credit Hours

(Slashed with EXSC 45040) Advanced principles in strength and conditioning. Learn and understand the energy systems, anatomy, physiology and proper lifting technique of strength, speed, agility and conditioning exercises for practical application with athletes.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 55065 EXERCISE TESTING 3 Credit Hours

(Slashed with EXSC 45065) Lecture and laboratory experiences dealing with the administration and interpretation of exercise tests.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 55070 ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST 3 Credit Hours

(Slashed with EXSC 45070) Designed to provide students with the knowledge base in electrocardiography. Students work on interpreting the 12-lead electrocardiogram with clinical case studies to enhance the knowledge base of the exercise specialist.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 55081 ADVANCED PHYSIOLOGY OF EXERCISE 3 Credit Hours

(Slashed with EXSC 45081) This course is designed to provide an augmented understanding of acute and chronic responses to exercise. Focus is placed on understanding the physiological responses at both the systems and the cellular levels. Emphasis is placed on muscle bioenergetics, environmental physiology, ergogenic aids, sex differences, extreme sports, children and adolescents in sport and exercise and a greater understanding of muscle and cardiorespiratory responses to exercise.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 60610 PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR 3 Credit Hours

(Slashed with EXPH 70610) Examine physiological changes which accompany advancing age. Special attention is paid to the effect of these changes on sensory motor and cognitive behavior.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 63050 RESEARCH PROCESS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 73050) The research process and statistical concepts applied to those in athletic training and exercise physiology.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 63051 QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 73051) Research design and statistical methods applied to exercise, physiology and athletic training.

Prerequisite: EXPH 63050; and graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 63091 RESEARCH SEMINAR 1 Credit Hour

(Repeatable for credit) (Slashed with EXPH 73091) Presentation and discussion of research by faculty and students. A total of 2 credits may be applied toward degree requirements.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 63096 INDIVIDUAL INVESTIGATION IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXPH 73096) Independent study completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

EXPH 63098 RESEARCH 1-15 Credit Hours

(Repeatable for credit) Research carried out by the student under the supervision of a faculty member.

Prerequisite: Graduate standing.

Schedule Type: Research

Contact Hours: 3-45 other

Grade Mode: Standard Letter-IP

EXPH 63193 VARIABLE TITLE WORKSHOP IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) Workshop in exercise physiology; topics vary. Maximum 4 hours applied to the degree.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 63195 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXPH 73195) Selected and varied topics of relevance in exercise physiology.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EXPH 63199 THESIS I 2-6 Credit Hours

(Repeatable for credit) Thesis students must register for a total of 6 hours, 2 to 6 hours in a semester distributed over several semesters if desired.

Prerequisite: Graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 6-18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 63299 THESIS II 2 Credit Hours

(Repeatable for credit) Thesis students must continue registration each semester until all degree requirements are met.

Prerequisite: EXPH 63199; and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 65075 MUSCLE FUNCTION AND EXERCISE 3 Credit Hours

(Slashed with EXPH 75075) Characteristics of skeletal muscle related to contraction during exercise, strength, elasticity, fatigue and training. Electromyograph analysis of muscle function emphasized.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65076 ENVIRONMENTAL STRESS AND EXERCISE 3 Credit Hours

(Slashed with EXPH 75076) Effects of heat, cold, pressure, pollution and psychological stress upon physiological responses to exercise. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65080 PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT 3 Credit Hours

(Slashed with EXPH 75080) Application of physiological concepts to human performance. Includes role of testing, training strength and endurance, nutritional considerations, environmental influences and adapted exercise programs.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65081 ENERGY METABOLISM AND BODY COMPOSITION 3 Credit Hours

(Slashed with EXPH 75081) Measurement of metabolic response to exercise. Topics include ergometry spirometry energy expenditure body composition and performance correlates of strength power and endurance.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65082 CARDIO-RESPIRATORY FUNCTION 3 Credit Hours

(Slashed with EXPH 75082) Measurement of the cardiovascular-respiratory response to exercise. Includes resting spirometry, lung function during exercise, electrocardiography, blood pressure, PWC testing and exercise prescription.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65083 EXERCISE ENERGY METABOLISM 3 Credit Hours

(Slashed with EXPH 75083) Energy transformations during exercise. Emphasis on controlling mechanisms that regulate the anabolic and catabolic responses to both acute and chronic exercise.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65084 CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE 3 Credit Hours

(Slashed with EXPH 75084) Responses of the cardiovascular and respiratory systems to exercise. Use of noninvasive methods to measure cardio-respiratory function emphasized. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65086 NEUROBIOLOGY OF MOVEMENT AND EXERCISE 3 Credit Hours

(Slashed with EXPH 75086) Provide students with knowledge to understand the role of the muscular and nervous systems in human movement and exercise. Motor disorders and rehabilitation techniques will also be discussed. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65192 INTERNSHIP IN EXERCISE PHYSIOLOGY 1-9 Credit Hours

(Repeatable for credit) Field experience in exercise physiology programs and testing in Kent State University adult fitness program or cooperating agencies.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 70610 PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR 3 Credit Hours

(Slashed with EXPH 60610) Examine physiological changes which accompany advancing age. Special attention is paid to the effect of these changes on sensory motor and cognitive behavior.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 73050 RESEARCH PROCESSES IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 63050) The research process and statistical concepts applied to athletic training and exercise physiology.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 73051 QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with EXPH 63051) Research design and statistical methods applied to exercise physiology and athletic training.

Prerequisite: EXPH 73050; and doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 73091 RESEARCH SEMINAR 1 Credit Hour

(Repeatable for credit) Presentation and discussion of research by faculty and students. A total of 2 credits may be applied toward degree requirements.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 73096 INDIVIDUAL INVESTIGATION IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXPH 63096) Independent student completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

EXPH 73195 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXPH 63195) Selected and varied topics of relevance in exercise physiology.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EXPH 75004 BIOMECHANICS 3 Credit Hours

Survey of biomechanics, with particular emphasis on skeletal muscle mechanics.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75075 MUSCLE FUNCTION AND EXERCISE 3 Credit Hours

(Slashed with EXPH 65075) Characteristics of skeletal muscle related to contraction during exercise, strength, elasticity, fatigue and training. Electromyograph analysis of muscle function emphasized.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75076 ENVIRONMENTAL STRESS AND EXERCISE 3 Credit Hours

(Slashed with EXPH 65076) Effects of heat, cold, pressure, pollution and psychological stress upon physiological responses to exercise. Lecture and laboratory.

Prerequisite: Doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75080 PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT 3 Credit Hours

(Slashed with EXPH 65080) Application of physiological concepts to human performance. Includes role of testing, training, strength and endurance, nutritional considerations, environmental influences and adapted exercise programs.

Prerequisite: Doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75081 ENERGY METABOLISM AND BODY COMPOSITION 3 Credit Hours

(Slashed with EXPH 65081) Measurement of metabolic response to exercise. Topics include ergometry, spirometry, energy expenditure, body composition and performance correlates of strength, power and endurance.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75082 CARDIO-RESPIRATORY FUNCTION 3 Credit Hours

(Slashed with EXPH 65082) Measurement of the cardiovascular-respiratory response to exercise. Includes resting spirometry, lung function during exercise, electrocardiography, blood pressure, PWC testing and exercise prescription.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75083 EXERCISE ENERGY METABOLISM 3 Credit Hours

(Slashed with EXPH 65083) Energy transformations during exercise. Emphasis on controlling mechanisms that regulate the anabolic and catabolic responses to both acute and chronic exercise.

Prerequisite: Doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75084 CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE 3 Credit Hours

(Slashed with EXPH 65084) Responses of the cardiovascular and respiratory systems to exercise. Use of noninvasive methods to measure cardio-respiratory function emphasized. Lecture and laboratory.

Prerequisite: Doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75086 NEUROBIOLOGY OF EXERCISE AND MOVEMENT 3 Credit Hours

(Slashed with EXPH 65086) Provides students with knowledge to understand the role of the muscular and nervous systems in human movement and exercise. Motor disorders and rehabilitation techniques will also be discussed.

Prerequisite: Graduate standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75192 INTERNSHIP IN EXERCISE PHYSIOLOGY 1-9 Credit Hours

(Repeatable for credit) Field experience in exercise physiology programs and testing in Kent State University adult fitness program or cooperating agencies.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 83098 RESEARCH 1-15 Credit Hours

(Repeatable for credit) (Slashed with ATTR 63098 and EXPH 63098) Research for doctoral students.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Research

Contact Hours: 3-45 other

Grade Mode: Standard Letter-IP

EXPH 83199 DISSERTATION I 15 Credit Hours

(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required, first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 45 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 83299 DISSERTATION II 15 Credit Hours

(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.

Prerequisite: EXPH 83199; and doctoral standing.

Schedule Type: Dissertation

Contact Hours: 45 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Exercise Science (EXSC)

EXSC 15003 CAREERS IN HEALTH AND MEDICAL SCIENCES 2 Credit Hours

(Cross-listed with ATTR 15003 and IHS 15003) An overview of the profession of Healthcare and Medical Professional associated including employment opportunities, academic preparation, and clinical preparation. This course will address the qualities and skills required for a comprehensive list of professional opportunities in the healthcare and medical fields with an emphasis on professionalism, cultural competencies, ethics and self care. Students will be required to work with faculty and health care and medical professionals to outline a personalized program to assist in their professional development.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EXSC 23093 VARIABLE TITLE WORKSHOP IN EXERCISE SCIENCE 1-3 Credit Hours

(Repeatable for credit) Workshop to develop mastery and application of knowledge and skills that address issues in exercise science; topics vary. Satisfactory/unsatisfactory (S/U) graded.

Prerequisite: None.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXSC 25057 HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB) 4 Credit Hours

(Cross-listed with ATTR 25057) Comprehensive examination of anatomy and physiology related to the organization of the body and basic cell and tissue types. Specific structure and function of the muscular, skeletal, integumentary, and nervous systems are addressed.

Prerequisite: None.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

EXSC 25058 HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB) 4 Credit Hours

(Cross-listed with ATTR 25058) Comprehensive examination of anatomy and physiology related to the human body under rest and exercise conditions. Specific structure and function of the metabolic, endocrine, lymphatic, digestive, urinary and reproductive systems are addressed. Advanced coverage of neurological, cardiovascular and respiratory systems are also addressed.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

EXSC 34000 EXERCISE SCIENCE FOR ESPORTS 3 Credit Hours

This course examines topics within the field of exercise science and relates them to esports performance. Topics will include physical activity, sedentary behavior, mental and physical health and exercise physiology. By relating these topics to esports, students will gain an understanding of what may enhance and also diminish sport performance.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXSC 35040 PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING 3 Credit Hours

(Equivalent to ATTR 35040) This course will discuss the practical and applied concepts related to strength and conditioning. Specifically, the course will focus on how to improve muscle strength, power, speed, agility, endurance, stamina, stability and muscle hypertrophy. Emphasis will be placed on the ability to create and administer safe and effective periodized training programs while ensuring safe and effective techniques fundamental to improvements in athletic performance.

Prerequisite: ATTR 25057 (and ATTR 25058) or BSCI 10020 (and BSCI 11010) or BSCI 21010 or BSCI 21020 or EXSC 25057 (and EXSC 25058).

Corequisite: ATTR 35054 (or EXSC 35054) and ATTR 35080 (or EXSC 35080).

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35054 BIOMECHANICS 3 Credit Hours

(Cross-listed with ATTR 35054) Anatomical and mechanical bases of human movement. Emphasis is placed on tools and techniques for motion analysis, mechanical concepts, forces and performance analysis. Lecture and laboratory.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35068 STATISTICS FOR THE EXERCISE SCIENTIST 3 Credit Hours

Measurement and statistics applied to physical education and exercise/sport sciences; laboratory experiences in statistics test construction and administration and evaluation.

Prerequisite: None.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35075 EXERCISE PROGRAMMING 3 Credit Hours

Problems and issues in developing exercise programs in institutional and commercial settings.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 21020.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35080 PHYSIOLOGY OF EXERCISE 4 Credit Hours

Response of the human to acute and chronic exercise with emphasis on the underlying physiological mechanisms.

Prerequisite: ATTR 25057 or BSCI 11010 or BSCI 21010 or EXSC 25057; and ATTR 25058 or BSCI 11020 or BSCI 21020 or EXSC 25058.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 40612 EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours

(Slashed with EXPH 50612) Designed to provide students with a knowledge base in exercise leadership in the older adult population, including special populations. Students participate in the leading, supervision and evaluation of participants within the exercise program. The also assist in the collection of functional fitness data.

Prerequisite: None.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 43093 VARIABLE TITLE WORKSHOP IN EXERCISE SCIENCE AND EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with EXPH 53093) Workshop in exercise science or physiology, topics vary.

Prerequisite: None.

Schedule Type: Workshop

Contact Hours: 1-3 lecture

Grade Mode: Satisfactory/Unsatisfactory

EXSC 43098 RESEARCH IN EXERCISE SCIENCE (ELR) 1-3 Credit Hours

(Repeatable for credit) Research project completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Special approval.

Schedule Type: Research

Contact Hours: 3-9 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

EXSC 45022 EXERCISE LEADERSHIP 2 Credit Hours

Designed to provide the students with the knowledge base in exercise leadership. Topic areas and competencies using a variety of techniques in leading and demonstrating safe and effective methods of applying the fundamental principles of exercise science. The exercise leader will demonstrate all forms of group exercise, flexibility and balance training. The final exam is the American College of Sports Medicine Certified Exercise Physiologist certification (ACSM-EP). To take this certification requires that you be in the last semester of your senior year.

Prerequisite: ATTR 25057 or BSCI 11010 or BSCI 21010 or EXSC 25057; and ATTR 25058 or BSCI 11020 or BSCI 21020 or EXSC 25058; and EXSC 35080; and senior standing.

Pre/corequisite: EXSC 45081.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EXSC 45023 PROFESSIONAL CERTIFICATE PREPARATION 2 Credit Hours

This course is designed to prepare students to take the the National Strength and Conditioning Association Certified Strength and Conditioning Specialist (NSCA CSCS). Material covered will include basic exercise science, training adaptations, and methods of resistance-exercise training.

Prerequisite: ATTR 25057 or BSCI 11010 or BSCI 21010 or EXSC 25057; and ATTR 25058 or BSCI 11020 or BSCI 21020 or EXSC 25058; and EXSC 35080; and senior standing.

Pre/corequisite: ATTR 35040 and EXSC 45081.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EXSC 45040 ADVANCED STRENGTH AND CONDITIONING 3 Credit Hours

(Slashed with EXPH 55040) Advanced principles in strength and conditioning. Learn and understand the energy systems, anatomy, physiology and proper lifting technique of strength, speed, agility and conditioning exercises for practical application with athletes.

Prerequisite: ATTR 25057 or BSCI 11010 or BSCI 21010 or EXSC 25057; and ATTR 25058 or BSCI 11020 or BSCI 21020 or EXSC 25058; and ATTR 21020; and EXSC 35040; and EXSC 35080.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXSC 45065 EXERCISE TESTING 3 Credit Hours

(Slashed with EXPH 55065) Lecture and laboratory experiences dealing with the administration and interpretation of exercise tests.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 21020.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: CTAG Exercise Science

EXSC 45070 ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST 3 Credit Hours

(Slashed with EXPH 55070) Designed to provide students with the knowledge base in electrocardiography. Students work on interpreting the 12-lead electrocardiogram with clinical case studies to enhance the knowledge base of the exercise specialist.

Prerequisite: ATTR 25057 or EXSC 25057 or BSCI 11010 or BSCI 21010; and ATTR 25058 or EXSC 25058 or BSCI 11020 or BSCI 21020.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXSC 45081 ADVANCED PHYSIOLOGY OF EXERCISE (WIC) 3 Credit Hours

(Slashed with EXPH 45081) This course is designed to provide an augmented understanding of acute and chronic responses to exercise. Focus is placed on understanding the physiological responses at both the systems and the cellular levels. Emphasis is placed on muscle bioenergetics, environmental physiology, ergogenic aids, sex differences, extreme sports, children and adolescents in sport and exercise and a greater understanding of muscle and cardiorespiratory responses to exercise.

Prerequisite: ATTR 25057 (and ATTR 25058) or BSCI 11010 (and BSCI 11020) or BSCI 21010 or BSCI 21020 or EXSC 25057 (and EXSC 25058); and EXSC 35080.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Writing Intensive Course

EXSC 45096 INDIVIDUAL INVESTIGATION IN EXERCISE SCIENCE (ELR) 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Independent study completed under the supervision of a faculty member. Written approval of supervising faculty member and school director required prior to registration.

Prerequisite: Special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

EXSC 45480 INTERNSHIP SEMINAR IN EXERCISE SCIENCE 1 Credit Hour

Overview of the internship possibilities that are available for the exercise science major. The American College of Sports Medicine (ACSM) certification workshops and the scope of the practice for the exercises specialist is discussed in detail.

Prerequisite: Special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

EXSC 45481 SEMINAR IN EXERCISE PHYSIOLOGY 1 Credit Hour

Provides an overview of the research possibilities and the internship possibilities that are available for the exercise science major. The Institutional Review Board, research methodology and the risks and benefits of research in the area of exercise science are discussed in detail. Also covers The American College of Sports Medicine (ACSM) certification workshops and the scope of the practice for the exercises specialist.

Prerequisite: Special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

EXSC 45492 INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR) 1-9 Credit Hours

(Repeatable for a maximum of 9 credit hours) Supervised experience providing practical experience in administration and operation of programs in physical fitness, health enhancement and or cardiac rehabilitation. 45 clock hours per credit hour.

Prerequisite: Special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

EXSC 46095 SPECIAL TOPICS IN EXERCISE SCIENCE 1-3 Credit Hours

(Repeatable for credit) Selected topics in exercise science dependent upon interest.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

Health Policy and Management (HPM)

HPM 50001 SEX: A WICKED PUBLIC HEALTH PROBLEM 3 Credit Hours

(Slashed with PH 40001) Wicked problems is a term developed during the 1970s by systems thinkers and planners, Horst Rittel and Melvin Webber (1973), to describe complex social problems that are resistant to solution. The term has recently been applied to public health issues that have proven to be difficult to address and are resistant to mitigation. Sexual and reproductive health behaviors, attitudes and cultural norms often produce problems at the individual and population levels that meet the criteria for designation as wicked problems. Effectively addressing these kinds of problems requires a correct understanding and application of public health principles and practices.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 50110 INTRODUCTION TO PUBLIC MENTAL HEALTH 3 Credit Hours

(Slashed with PH 40110) This course provides a broad overview of mental health from a public health perspective. The course is an introduction to population-based (or population-level) approaches to addressing mental health and supporting wellness. More specifically, the course discusses mental health from a public health perspective, including discussion of non-clinical interventions and programs designed to improve mental health and wellness of populations.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 50196 INDIVIDUAL INVESTIGATION IN HEALTH POLICY AND MANAGEMENT 1-3 Credit Hours

(Repeatable for maximum 6 credits) Individual graduate investigation or research in areas related to health policy and management.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

HPM 60001 ESSENTIALS OF HEALTH INSURANCE I 3 Credit Hours

This course introduces graduate students to the essentials of health insurance. Students develop a thorough understanding of the medical insurance industry. Students obtain industry knowledge resulting in their ability to interpret industry actions, reactions and transactions. In addition, they demonstrate their ability to interact with the industry as a public health professional, member of the industry or community member.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 60002 ESSENTIALS OF HEALTH INSURANCE II 3 Credit Hours

Course focuses on health insurance from a business perspective with a focus on innovation and ways to improve current processes and plans. As health insurance is an industry that has many aspects, this course places an emphasis on workplace health promotion. Concepts looked at from the perspective of workplace health can apply to many other aspects of health insurance. Throughout this course, innovation, leadership and business concepts from other industries are applied to health insurance and public health.

Prerequisite: HPM 60001; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 60089 GLOBAL HEALTH IMMERSION: GENEVA, SWITZERLAND 1-3 Credit Hours

(Slashed with HPM 80089)(Repeatable for credit) Participants explore a number of health concerns, policies and challenges with global importance and implications. Students investigate current global health policies and themes, and become familiar with the major players in global health including governmental and nongovernmental organizations and multinational agencies. Presentations are given by experts currently working in various regions of the world to solve such pressing global problems as HIV/AIDS, postwar trauma, tuberculosis, refugee health, non-communicable disease prevention and environmental contamination.

Prerequisite: Graduate standing; and special approval.

Schedule Type: International Experience, Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter-IP

HPM 60191 VARIABLE CONTENT SEMINAR IN HEALTH POLICY AND MANAGEMENT 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with HPM 80191) Seminar on current and important topics in health policy and management. Subject matter varies depending on the topic.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

HPM 60195 SPECIAL TOPICS IN HEALTH POLICY AND MANAGEMENT 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with HPM 80195) Special topics to sample new offerings on topics in health policy and management.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

HPM 60392 APPLIED PRACTICE EXPERIENCE IN HEALTH POLICY AND MANAGEMENT 2-4 Credit Hours

(Repeatable for credit) Observation of and participation in public health activities of a public health agency, hospital or other approved organization. The student completes the field experience with joint supervision from the university and approved organization or agency.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 10-20 other

Grade Mode: Satisfactory/Unsatisfactory-IP

HPM 60492 APPLIED PRACTICE EXPERIENCE IN HEALTH POLICY AND MANAGEMENT II 1 Credit Hour

(Repeatable for credit) Continuing enrollment for students participating in public health activities of a public health agency, hospital or other approved organization. Students complete the field experience with joint supervision from the university and an approved organization or agency.

Prerequisite: HPM 60392; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

HPM 62016 PUBLIC HEALTH ADMINISTRATION 3 Credit Hours

(Slashed with HPM 72016) Public health administration comprises efforts to improve the health of communities. Provides an overview for public health administration and practice, including organization, law, legislative relations, financing, workforce issues, leadership and surveillance.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 62017 HEALTHCARE LAW AND REGULATION 3 Credit Hours

Healthcare is one of the most heavily regulated industries in the United States. In order to contain spiraling costs, the federal and state governments are focusing on individual provider conduct in the context of fraud, waste and abuse scrutiny. This course covers the underlying theories behind healthcare law and regulation as well as specific provisions affecting the organization, delivery and payment of primary health services. Administrators and clinicians gain a basic understanding of the regulatory environment and provisions impacting their practice.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63003 HEALTH CARE SYSTEMS 3 Credit Hours

Provides a systems approach to delivering health care and public health services in the US. Includes an overview of public health, outpatient, inpatient, managed care, long term care and health services for special populations.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63004 PUBLIC HEALTH POLICY, LAW AND ETHICS 3 Credit Hours

Provides a comprehensive review of health policymaking, public health law and ethical principles as applied to public health decision making.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63005 FINANCIAL MANAGEMENT FOR PUBLIC HEALTH ORGANIZATIONS 3 Credit Hours

Provides an overview of financial management of public health organizations. Topics include planning for public health program budgeting, understanding costs and short- and long-term financing, accountability and control, reporting results and financial statement and financial conditions analysis.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63006 COST BENEFIT ANALYSIS IN PUBLIC HEALTH PROGRAMS 3 Credit Hours

Provides an overview of cost-benefit analysis as applied to the evaluation of public health programs. Students apply principles of cost-benefit analysis and related cost utility analysis to case studies in the public health sector.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63007 PUBLIC HEALTH PROGRAMS: PLANNING, IMPLEMENTATION AND EVALUATION 3 Credit Hours

Overview of developing, implementing and evaluating public health programs. Examines how public health programs can target different levels within a population, different determinants of health and strategies and interventions.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63008 HEALTHCARE PRIVACY AND SECURITY 3 Credit Hours

This course introduces students to the fundamental concerns addressed by the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The course explores various aspects of healthcare privacy and security, including the role of the privacy and security rules and how covered entities and business associates can successfully implement these within the institution. We also examine the HITECH Act provisions, enforcement and Omnibus Final Rule, which strengthened HIPAA regulations and provided additional safeguards for patients' protected health information (PHI). By the end of this course, students have a comprehensive understanding of healthcare privacy and security.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63009 HEALTHCARE COMPLIANCE I 3 Credit Hours

During this course, students examine the historical background of compliance programs and process involved in developing a compliance program primarily based in the health care system.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63010 HEALTHCARE COMPLIANCE II 3 Credit Hours

This course focuses on the compliance functions of a healthcare operation that implements, operates and evaluates the existing compliance program.

Prerequisite: HPM 63009; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63011 PUBLIC HEALTH EVALUATION METHODS 3 Credit Hours

This course provides an in-depth review of major concepts, methods and issues involved in evaluating public health programs and policy interventions. Students learn skills needed to conduct and use evaluations, with an emphasis on conceptual, methodological, organizational, political and ethical aspects associated with public health evaluation. Topics include development of evaluation questions, types of program evaluation (process, formative, impact, outcome), evaluation design (experimental, quasiexperimental and nonexperimental designs), collection of evaluation data and dissemination of evaluation results. Students gain practical experience through a series of exercises. Examples of effective methods and approaches are elaborated for multiple public health contexts.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63018 FOUNDATIONS FOR EFFECTIVE PUBLIC HEALTH LEADERSHIP 3 Credit Hours

Intended to provide students with an initial exploration of the leadership practices of public health leaders with an understanding of the basic skill set necessary for successful leadership on a continuing basis.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63019 WHOLE SYSTEMS APPROACHES TO LEADING ORGANIZATIONAL CHANGE IN PUBLIC HEALTH 3 Credit Hours

Intended to provide students with an initial exploration and overview of whole systems approaches to organizational change in public health settings, a more detailed working knowledge of key whole systems methodologies and a detailed working knowledge and practical experience with one of the most frequently used and favored whole systems approaches.

Prerequisite: Graduate standing.

Pre/corequisite: HPM 63018.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 63020 COMMUNITY HEALTH NEEDS ASSESSMENT 3 Credit Hours

(Slashed with HPM 73020) This course covers concepts and methods relevant to community health needs assessment, such as systems thinking; the use of quantitative and qualitative methods; primary and secondary data; and the role of community assessment in current national policy, including the Affordable Care Act, and on community health improvement. Students draw from multiple disciplines to assess health status and its determinants (social, behavioral and environmental), needs for health services and the capacity and resources of the local community. Students also learn to facilitate and evaluate the use of data for decision making by partnerships, organizations and policy makers.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 70199 PROFESSIONAL DEVELOPMENT EXPERIENCE 1 Credit Hour

Students work with faculty advisor to identify and attend at least six professional development activities that strengthen the students' understanding of professional and substantive aspects of the academic and research professions.

Prerequisite: Doctoral standing.

Schedule Type: Project or Capstone

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory-IP

HPM 72016 PUBLIC HEALTH ADMINISTRATION 3 Credit Hours

(Slashed with HPM 62016) Public health administration comprises efforts to improve the health of communities. Provides an overview for public health administration and practice, including organization, law, legislative relations, financing, workforce issues, leadership and surveillance.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 72030 GRANT WRITING IN PUBLIC HEALTH 3 Credit Hours

Doctoral students should take this course at the end of the program of study. Students in this doctoral-level course for public health learn the basics of grant writing for federal (NIH) and non-federal funding agencies with a particular emphasis on the components required of most grant proposals submitted for funding. This includes rationale for seeking funds, collaborations with community organizations and working with consultants and subcontractors. Students also learn about the basic sections of grant writing such as specific aims and hypotheses, developing your literature review, background and significance, research design and methodology, developing a budget and conducting research with human subjects. Students have the opportunity to write sample grant proposals and learn about the review and scoring process and post-award grant management.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 73020 COMMUNITY HEALTH NEEDS ASSESSMENT 3 Credit Hours

(Slashed with HPM 63020) This course covers concepts and methods relevant to community health needs assessment, such as systems thinking; the use of quantitative and qualitative methods; primary and secondary data; and the role of community assessment in current national policy, including the Affordable Care Act, and on community health improvement. Students draw from multiple disciplines to assess health status and its determinants (social, behavioral and environmental), needs for health services and the capacity and resources of the local community. Students also learn to facilitate and evaluate the use of data for decision making by partnerships, organizations and policy makers.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 73021 HEALTH CARE FINANCE 3 Credit Hours

Covers the financial environment of health services in the US, including accounting principles, financial statement analysis, delivery models, management control processes of budgeting and capital project analysis, managerial accounting, program development and financial plan.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 73022 STRATEGIC MANAGEMENT OF PUBLIC HEALTH ORGANIZATIONS 3 Credit Hours

Covers basic and advanced principles of strategic management of public health organizations including service area analysis, internal environment analysis, developing and evaluating strategic alternatives and quality indicators.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 73031 PUBLIC HEALTH POLICY ANALYSIS 3 Credit Hours

Provides a framework for conducting public health policy analysis. Applies concepts to case studies of health policies at the local, state and federal levels.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

HPM 80089 GLOBAL HEALTH IMMERSION: GENEVA, SWITZERLAND 1-3 Credit Hours

(Repeatable for credit) (Slashed with HPM 60089) Participants explore a number of health concerns, policies and challenges with global importance and implications. Students investigate current global health policies and themes, and become familiar with the major players in global health including governmental and nongovernmental organizations and multinational agencies. Presentations are given by experts currently working in various regions of the world to solve such pressing global problems as HIV/AIDS, postwar trauma, tuberculosis, refugee health, non-communicable disease prevention and environmental contamination.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: International Experience, Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter-IP

HPM 80191 VARIABLE CONTENT SEMINAR IN HEALTH POLICY AND MANAGEMENT 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with HPM 60191) Seminar on current and important topics in health policy and management. Subject matter varies depending on the topic.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

HPM 80195 SPECIAL TOPICS IN HEALTH POLICY AND MANAGEMENT 1-3 Credit Hours

(Slashed with HPM 60195)(Repeatable for maximum of 6 credit hours) Special topics to sample new offerings on topics in health policy and management.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

HPM 80196 INDIVIDUAL INVESTIGATION IN HEALTH POLICY AND MANAGEMENT 1-3 Credit Hours

Individual graduate investigation or research in areas related to health policy and management.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

HPM 80198 DIRECTED RESEARCH IN HEALTH POLICY AND MANAGEMENT 1-15 Credit Hours

(Repeatable for credit) Directed research or individual investigation for doctoral students in the Health Policy and Management concentration.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Research

Contact Hours: 1-15 other

Grade Mode: Standard Letter

HPM 80199 DISSERTATION I 15 Credit Hours

(Repeatable for credit) Registration for two semesters required, first semester dissertation work begins and continues until completion of Dissertation II and 30 hours of total dissertation work.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

HPM 80299 DISSERTATION II 15 Credit Hours

(Repeatable for credit) Registration for two semesters required, first semester dissertation work begins and continues until completion of 30 hours.

Prerequisite: HPM 80199; and doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

HPM 81000 PUBLIC HEALTH LAW AND REGULATION 3 Credit Hours

Enables students to describe, apply and explain key aspects and principles of law, regulation and policy relating to public health issues and topics. Requires students to master the content material for the course and apply it to particular topics or issues relating to public health. Students also are required to design and/or conduct a research project and explain their hypotheses, methods, findings and/or conclusions.

Prerequisite: HPM 62016; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Integrated Health Studies (IHS)

IHS 14020 MEDICAL TERMINOLOGY 3 Credit Hours

Identification of the meaning of various roots and terms and combining forms that are components of medical words, including anatomical physiological and pathological therapeutic terminology and implications for health literacy.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 15003 CAREERS IN HEALTH AND MEDICAL SCIENCES 2 Credit Hours

(Cross-listed with ATTR 15003 and EXSC 15003) An overview of the profession of Healthcare and Medical professions including employment opportunities, academic preparation, and clinical preparation. This course will address the qualities and skills required for a comprehensive list of professional opportunities in the healthcare and medical fields with an emphasis on professionalism, cultural competencies, ethics and self care. Students will be required to work with faculty and health care and medical professionals to outline a personalized program to assist in their professional development.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

IHS 32544 HUMAN SEXUALITY 3 Credit Hours

A study of the role and meaning of human sexuality throughout the life cycle for self and society.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 40091 SEMINAR FOR PRACTICUM IN INTEGRATED HEALTH STUDIES 2 Credit Hours

(Repeatable for credit) Seminar focuses on applying concepts from previous educational experiences to the practicum work experience.

Prerequisite: ATTR 15003 or EXSC 15003 or IHS 15003.

Corequisite: IHS 44092.

Schedule Type: Seminar

Contact Hours: 2 other

Grade Mode: Standard Letter

IHS 42041 HEALTH COACHING 3 Credit Hours

(Slashed with IHS 52041) Techniques of health coaching and motivational interviewing applied to health education. Individual and group approaches relative to personal, family and societal health issues.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 42222 ADULTING 101: SEVEN DIMENSIONS TO A HEALTHY ADULTHOOD 2 Credit Hours

The transition from college to post-college life can be uncertain. A design for the initial post-college years can alleviate the anxiety and stress that are often experienced. This course examines issues related to a 7 dimensional model of health-financial, environmental, emotional, intellectual, physical, social, occupational-and applies those dimensions to a post-college life design process.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

IHS 42779 HAPPINESS AND HEALTH 2 Credit Hours

(Slashed with IHS 52779) Happiness is a common life goal, yet how to achieve or maintain can be a challenge. The things people think should make them happy don't; and the things that have been proven to increase happiness are often a surprise. In this class, students explore proven methods to increase happiness, confront the common myths and misperceptions around it and discover how happiness is defined by cultures outside the United States. Students also explore how happiness is related to academic performance, immune function, diet, stress, heart disease and life expectancy.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

IHS 44010 RESEARCH DESIGN AND STATISTICAL METHODS IN THE HEALTH PROFESSIONS 3 Credit Hours

Fundamental concepts and procedures for systematic collection, analysis and interpretation of qualitative and quantitative data in health related fields includes group and single-subject designs and use of parametric and nonparametric statistics.

Prerequisite: PSYC 21621.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 44030 GAMBLING, GAMING AND HEALTH 3 Credit Hours

(Slashed with IHS 54030) This course will provide information related to gambling, gaming, and their convergence to facilitate insight into personal decision-making and health outcomes. Emerging gambling and gaming trends will be investigated along with exploration of attitudes toward these activities that influence personal and community health. There is an emphasis on the application of knowledge and skills to assess and reduce personal risk.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 44091 PROFESSIONAL SEMINAR IN INTEGRATED HEALTH STUDIES (WIC) 3 Credit Hours

(Repeatable for credit) This course presents and integrates the role of scientists, practitioners and administrators in the health care and human service professions as they attempt to meet the needs of the individual in diverse environments. Current issues will be addressed. 400 hours observation/work experience in health/human service-related fields required prior to registration for this course.

Prerequisite: Senior standing; and special approval.

Schedule Type: Seminar

Contact Hours: 3 other

Grade Mode: Standard Letter

Attributes: Writing Intensive Course

IHS 44092 PRACTICUM IN INTEGRATED HEALTH STUDIES (ELR) 3-10 Credit Hours

(Repeatable for credit) Practicum focuses on providing supervised practical experience in a health science, health care and human services organization which allows students to apply theoretical knowledge and skills learned in their coursework.

Prerequisite: Integrated health studies majors; and senior standing; and special approval.

Corequisite: IHS 40091.

Schedule Type: Practical Experience

Contact Hours: 9-30 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

IHS 46052 STRESS: RECOGNITION AND MANAGEMENT 2 Credit Hours

(Slashed with IHS 56052) An examination of stress, its role as a predisposing factor for various illnesses and diseases, types of stressors, the body's reaction to stress, and techniques for recognizing, preventing and reducing stress.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

IHS 52041 HEALTH COACHING 3 Credit Hours

(Slashed with IHS 42041) Techniques of health coaching and motivational interviewing applied to health education. Individual and group approaches relative to personal, family and societal health issues.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 52779 HAPPINESS AND HEALTH 2 Credit Hours

(Slashed with IHS 42779) Happiness is a common life goal, yet how to achieve or maintain can be a challenge. The things people think should make them happy don't; and the things that have been proven to increase happiness are often a surprise. In this class, students explore proven methods to increase happiness, confront the common myths and misperceptions around it and discover how happiness is defined by cultures outside the United States. Students also explore how happiness is related to academic performance, immune function, diet, stress, heart disease and life expectancy.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

IHS 54030 GAMBLING, GAMING AND HEALTH 3 Credit Hours

(Slashed with IHS 44030) This course will provide information related to gambling, gaming, and their convergence to facilitate insight into personal decision-making and health outcomes. Emerging gambling and gaming trends will be investigated along with exploration of attitudes toward these activities that influence personal and community health. There is an emphasis on the application of knowledge and skills to assess and reduce personal risk.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

IHS 56052 STRESS: RECOGNITION AND MANAGEMENT 2 Credit Hours

(Slashed with IHS 46052) An examination of stress, its role as a predisposing factor for various illnesses and diseases, types of stressors, the body's reaction to stress, and techniques for recognizing, preventing and reducing stress.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

Long-Term Care Administration (LTCA)**LTCA 43092 INTERNSHIP ADMINISTRATOR RESIDENCY I (ELR) 9 Credit Hours**

Internship in skilled nursing facility. One, 3 hour, on-campus seminar every three weeks (meets four times). Approximately 35-40 clock hours per week at internship site is required. Students participate in weekly online course discussions and have an on-site visit to their internship site during the semester.

Prerequisite: Minimum B grade in LTCA 44032; and human development and family studies majors or long-term care administration majors; and senior standing; and special approval.

Schedule Type: Lecture, Practical Experience

Contact Hours: 2 lecture, 33.33 other

Grade Mode: Standard Letter-IP

Attributes: Experiential Learning Requirement

LTCA 43192 INTERNSHIP ADMINISTRATOR RESIDENCY II (ELR) 9 Credit Hours

Internship in skilled nursing facility. One 3-hour, on-campus seminar every three weeks (meets four times). Approximately 35 clock hours per week at internship site is required. Students participate in weekly online course discussions and have an on-site visit to their internship site during the semester.

Prerequisite: Minimum B- grade in LTCA 43092; and human development and family studies major or long-term care administration; and senior standing; and special approval.

Schedule Type: Lecture, Practical Experience

Contact Hours: 2 lecture, 33.33 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

LTCA 44032 LONG-TERM CARE ADMINISTRATION I 3 Credit Hours

(Slashed with LTCA 54032) Presents an overview and introduction to the principles of long-term care administration and other administration options.

Prerequisite: Sophomore, junior or senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

LTCA 44033 LONG-TERM CARE ADMINISTRATION II 3 Credit Hours

(Slashed with LTCA 54033) Presents a focus on Assisted Living (AL) and Home and Community Based Services (HCBS) and Supports in long term care to align with accreditation standards for Nursing Home Administration-Health Services Executive (NHA-HSE).

Prerequisite: Minimum B- in LTCA 44032; and junior or senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

LTCA 54032 LONG-TERM CARE ADMINISTRATION I 3 Credit Hours
(Slashed with LTCA 44032) Presents an overview and introduction to the principles of long-term care (LTC) administration and other administration options.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

LTCA 54033 LONG-TERM CARE ADMINISTRATION II 3 Credit Hours
(Slashed with LTCA 44033) Presents a focus on Assisted Living (AL) and Home and Community Based Services (HCBS) and Supports in long term care to align with accreditation standards for Nursing Home Administration-Health Services Executive (NHA-HSE).

Prerequisite: Minimum B grade in LTCA 54032; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

LTCA 63092 INTERNSHIP ADMINISTRATOR RESIDENCY I 6 Credit Hours

Internship in skilled nursing facility and other lines of service. Seminar meetings during the semester. Weekly online discussions. Assignments and projects throughout the semester. Minimum 35 clock hours per week at internship site is required.

Prerequisite: Minimum B- grade in LTCA 54032; and graduate standing; and special approval.

Schedule Type: Lecture, Practical Experience

Contact Hours: 2 lecture, 33.33 other

Grade Mode: Standard Letter-IP

LTCA 63192 INTERNSHIP ADMINISTRATOR RESIDENCY II 6 Credit Hours

Internship in skilled nursing facility and other lines of service. Seminar meetings during the semester. Weekly online discussions. Assignments and projects throughout the semester. Minimum 35 clock hours per week at internship site is required.

Prerequisite: A minimum B grade in both LTCA 54032 and LTCA 63092; and graduate standing; and special approval.

Schedule Type: Practical Experience, Seminar

Contact Hours: 2 lecture, 33.33 other

Grade Mode: Standard Letter

Nutrition (NUTR)

NUTR 10011 A HOW TO FOR HEALTHY EATING 1 Credit Hour

Teaches basic nutrition information for healthy eating, including the important nutritional aspects of cooking, shopping, dining and disease prevention related to dietary intake.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 23012 INTRODUCTORY FOOD SCIENCE 3 Credit Hours

(Cross-listed with HEM 23212) Principles of food preparation and quality evaluation, with an emphasis on food science concepts, nutrition, food consumption trends and government regulation.

Prerequisite: NUTR 23511.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 3 lab

Grade Mode: Standard Letter

NUTR 23016 WORLD FOOD CUSTOMS AND NUTRITION 3 Credit Hours

The course explores cultural food, dietary and agricultural practices of racial, ethnic and religious populations within the United States and globally.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 23112 INTRODUCTION TO THE PROFESSION: NUTRITION AND DIETETICS 1 Credit Hour

Discusses academic requirements for the Nutrition major, the history of the nutrition profession as well as current credentialing and licensing requirements. Explores the opportunities within the field of dietetics. Teaches methods to document academic, personal and professional skills.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 23510 QUANTITY FOOD PRODUCTION, SERVICE AND SAFETY 3 Credit Hours

(Cross-listed with HEM 23510) The application of management principles in quantity food production and service systems, including safety and sanitation; production forecasting and management; distribution; and service, commercial equipment and physical facilities. Introduction to inventory, recipe standardization and considerations of nutrition, quality and sustainability in quantity production.

Prerequisite: NUTR 23112.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 3 lab

Grade Mode: Standard Letter

NUTR 23511 SCIENCE OF HUMAN NUTRITION (KBS) 3 Credit Hours

Basic concepts and principles in the science of human nutrition, energy balance and weight control, individual nutrient needs, diet selection, nutrition related metabolism and physiological functions, nutritional diseases and current human nutrition controversies.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, TAG Health

NUTR 23520 SPORTS NUTRITION 3 Credit Hours

Teaches basic sports nutrition as well as practical applications of sports nutrition principles for students majoring in various healthcare related fields.

Prerequisite: NUTR 23511.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 33512 INTERMEDIATE NUTRITION SCIENCE 3 Credit Hours

Functions, sources, utilization and interactions of essential nutrients and associated physiology. Principles of designing a healthy diet using dietary standards and guidelines while considering nutrient needs of different populations.

Prerequisite: NUTR 23511.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 33522 INTRODUCTION TO NUTRITION ASSESSMENT 3 Credit Hours

Application of nutrition principles, including nutrition-focused physical assessment, dietary intake assessment, nutrition surveys, introduction to medical records, nutrition interviewing, dietary standards and food exchange lists.

Prerequisite: NUTR 23511.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

NUTR 33532 BUSINESS AND MANAGEMENT OF NUTRITION SERVICES 3 Credit Hours

Course explores the business management side of dietetics. Covers application of management theories, from dietetic programs and services to budgeting, billing and coding, in addition to quality improvement in dietetics programs and departments.

Prerequisite: NUTR 23511.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 41095 SPECIAL TOPICS IN NUTRITION 1-4 Credit Hours

(Repeatable for credit)(Slashed with NUTR 51095) Discussion of a major topic within a specific field in nutrition and dietetics. Topic varies per course offering.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

NUTR 41096 INDIVIDUAL INVESTIGATION IN NUTRITION 1-3 Credit Hours

(Repeatable for credit) Students undertake an independent study in an area of nutrition and dietetics that is not covered by a regular course offering, with the guidance of a Kent State faculty member.

Prerequisite: Special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter

NUTR 43013 RESEARCH AND STATISTICAL METHODS IN NUTRITION AND DIETETICS (WIC) 3 Credit Hours

Student gain experience in research methods related to nutrition and dietetics, principles of experimental design, data analysis and techniques of scientific writing.

Prerequisite: NUTR 33512.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Writing Intensive Course

NUTR 43030 FOOD SERVICE SYSTEMS MANAGEMENT 3 Credit Hours

(Slashed with HTM 53030 and NUTR 53030)(Cross-listed with HEM 43030) Food service systems management, including systems theory; menu planning and evaluation; procurement; food production systems; sustainability; layout and design basics. Management concepts in non-commercial food service, including financial control, marketing, quality, management, leadership and human resources.

Prerequisite: HEM 23212 or NUTR 23012; and HEM 23510 or NUTR 23510.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 43512 MACRONUTRIENT NUTRITIONAL BIOCHEMISTRY 3 Credit Hours

Course explores the mechanisms through which the macronutrients meet biological needs and how these related to applied human nutrition.

Prerequisite: (ATTR 25057 (or EXSC 25057) and ATTR 25058 (or EXSC 25058)) or (BSCI 21010 and BSCI 21020); and NUTR 33512; and NUTR 33522; and CHEM 20481.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 43513 MICRONUTRIENT NUTRITIONAL BIOCHEMISTRY 3 Credit Hours

Course explores the mechanisms through which micronutrients meet human biological needs in the relationship to underlying applied human nutrition.

Prerequisite: (EXSC 25057 and EXSC 25058) or (ATTR 25057 and ATTR 25058) or (BSCI 21010 and BSCI 21020); and CHEM 20481; and NUTR 33512; and NUTR 33522.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 43516 COMMUNITY NUTRITION (ELR) 3 Credit Hours

Introduction to nutrition problems and practices in the community. Principles and techniques of effective education, learning and behavior change theories and techniques. The course will also include topics regarding types of nutrition programming available and public health nutrition topics. Includes an experiential laboratory component with a focus on planning, implementation, evaluation and outcomes in nutrition education, as well as nutrition communication, programming and counseling techniques.

Prerequisite: NUTR 33532 and NUTR 33512.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

NUTR 43518 LIFECYCLE NUTRITION 3 Credit Hours

(Slashed with NUTR 53518) Explores the nutrition needs through growth, development and aging. Focus is on nutritional needs and issues during conception, pregnancy, lactation, infancy, childhood, adolescence, adulthood and older adulthood.

Prerequisite: NUTR 33512.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 43522 INTEGRATIVE AND FUNCTIONAL NUTRITION 2 Credit Hours

(Slashed with NUTR 53522) Introduces the foundations of integrative and functional medicine as it relates to nutrition. Includes personalized nutrition, nutrigenomics, complementary and alternative therapies, nutraceuticals and functional foods, in addition to the interaction of food on supplement and drug efficacy.

Prerequisite: NUTR 33512.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

NUTR 43524 NUTRITION AND DIETETICS: PROFESSIONAL PRACTICE
2 Credit Hours

Development of professional awareness, leadership and career goals. Evaluation of professional growth and formulation of plans for continued growth in the profession of nutrition and dietetics.

Prerequisite: Nutrition major; and senior standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

NUTR 43532 METHODS AND EXPERIENCES IN NUTRITION OUTREACH
3 Credit Hours

(Slashed with NUTR 53532) Students learn methods for development and evaluation techniques used for nutrition outreach programming; the role of community nutrition education in public health; and the impact of nutrition programming on disease prevention and management. Students engage in service learning opportunities in community nutrition education.

Prerequisite: Special approval.

Schedule Type: Lecture, Practical Experience

Contact Hours: 2.5 lecture, 4 other

Grade Mode: Standard Letter

NUTR 43540 MEDICAL NUTRITION THERAPY I **3 Credit Hours**

(Slashed with NUTR 53540) Exploration of the nutrition care process, including documentation, standardized language, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutrition needs. Students engage in case studies and nutrition assessment exercises.

Prerequisite: (ATTR 25057 and ATTR 25058) or (BSCI 21010 and BSCI 21020) or (EXSC 25057 AND EXSC 25058); and CHEM 20481; and NUTR 33512; and NUTR 33522; and senior standing.

Corequisite: NUTR 43541.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 43541 MEDICAL NUTRITION THERAPY I LABORATORY **1 Credit Hour**

(Slashed with NUTR 53541) Simulated laboratory experiences of the nutrition care process, including documentation, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutrition needs related to behavioral nutrition, gastrointestinal disorders, obesity, diabetes, cardiovascular disease and anemia. Students will engage in simulated case studies.

Prerequisite: CHEM 20481; and NUTR 33512; and NUTR 33522; and senior standing.

Corequisite: NUTR 43540.

Schedule Type: Laboratory

Contact Hours: 2 lab

Grade Mode: Standard Letter

NUTR 43542 MEDICAL NUTRITION THERAPY II **3 Credit Hours**

(Slashed with NUTR 53542) Continued exploration of the nutrition care process, including relevant documentation, standardized language, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutritional needs. Students engage in case studies and nutritional assessments.

Prerequisite: NUTR 43540.

Corequisite: NUTR 43543.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 43543 MEDICAL NUTRITION THERAPY II LABORATORY **1 Credit Hour**

(Slashed with NUTR 53543) Simulated laboratory experiences of the nutrition care process, including documentation, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutrition needs related to wounds and burns, renal diseases, immune disorders, oncology, eating disorders, pediatrics and those requiring nutrition support. Students will engage in simulated case studies.

Prerequisite: Senior standing.

Corequisite: NUTR 43542.

Schedule Type: Laboratory

Contact Hours: 2 lab

Grade Mode: Standard Letter

NUTR 45092 PRACTICUM IN NUTRITION (ELR) **1-3 Credit Hours**

Application of education in pre-professional experience in clinical, community and nutrition foodservice environments. Combination of nutrition experiences throughout the semester.

Prerequisite: Special approval.

Schedule Type: Practical Experience

Contact Hours: 3-9 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

NUTR 45098 RESEARCH IN NUTRITION (ELR) **1-3 Credit Hours**

Students engage in research under the supervision of a nutrition faculty member. Students may develop a research idea or work on faculty-led research.

Prerequisite: Special approval.

Schedule Type: Research

Contact Hours: 3-9 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

NUTR 51095 SPECIAL TOPICS IN NUTRITION **1-4 Credit Hours**

(Repeatable for credit) (Slashed with NUTR 41095) Discussion of a major topic within a specific field in nutrition and dietetics. Topic varies per course offering.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-4 lecture

Grade Mode: Standard Letter

NUTR 51096 INDIVIDUAL INVESTIGATION IN NUTRITION **1-3 Credit Hours**

(Repeatable for credit) Students undertake an independent study in an area of nutrition and dietetics that is not covered by a regular course offering, with the guidance of a Kent State faculty member.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter

NUTR 53030 FOOD SERVICE SYSTEMS MANAGEMENT 3 Credit Hours

(Slashed with NUTR 43030) (Cross-listed with HEM 43030 and HTM 53030) Food service systems management, including systems theory; menu planning and evaluation; procurement; food production systems; sustainability; layout and design basics. Management concepts in non-commercial food service, including financial control, marketing, quality, management, leadership and human resources.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 53518 LIFECYCLE NUTRITION 3 Credit Hours

(Slashed with NUTR 43518) Explores the nutrition needs through growth, development and aging. Focus is on nutritional needs and issues during conception, pregnancy, lactation, infancy, childhood, adolescence, adulthood and older adulthood.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 53522 INTEGRATIVE AND FUNCTIONAL NUTRITION 2 Credit Hours

(Slashed with NUTR 43522) Introduces the foundations of integrative and functional medicine as it relates to nutrition. Includes personalized nutrition, nutrigenomics, complementary and alternative therapies, nutraceuticals and functional foods, in addition to the interaction of food on supplement and drug efficacy.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

NUTR 53532 METHODS AND EXPERIENCES IN NUTRITION OUTREACH 3 Credit Hours

(Slashed with NUTR 43532) Students learn methods for development and evaluation techniques used for nutrition outreach programming; the role of community nutrition education in public health; and the impact of nutrition programming on disease prevention and management. Students engage in service learning opportunities in community nutrition education.

Prerequisite: Nutrition major; and graduate standing; and special approval.

Schedule Type: Lecture, Practical Experience

Contact Hours: 2.5 lecture, 4 other

Grade Mode: Standard Letter

NUTR 53540 MEDICAL NUTRITION THERAPY I 3 Credit Hours

(Slashed with NUTR 43540) Exploration of the nutrition care process, including documentation, standardized language, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutrition needs. Students engage in case studies and nutrition assessment exercises.

Prerequisite: Graduate standing.

Corequisite: NUTR 53541.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 53541 MEDICAL NUTRITION THERAPY I LABORATORY 1 Credit Hour

(Slashed with NUTR 43541) Simulated laboratory experiences of the nutrition care process, including documentation, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutrition needs related to behavioral nutrition, gastrointestinal disorders, obesity, diabetes, cardiovascular disease and anemia. Students will engage in simulated case studies.

Prerequisite: Graduate standing.

Corequisite: NUTR 53540.

Schedule Type: Laboratory

Contact Hours: 2 lab

Grade Mode: Standard Letter

NUTR 53542 MEDICAL NUTRITION THERAPY II 3 Credit Hours

(Slashed with NUTR 43542) Continued exploration of the nutrition care process, including relevant documentation, standardized language, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutritional needs. Students engage in case studies and nutritional assessments.

Prerequisite: Graduate standing.

Corequisite: NUTR 53543.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 53543 MEDICAL NUTRITION THERAPY II LABORATORY 1 Credit Hour

(Slashed with NUTR 43543) Simulated laboratory experiences of the nutrition care process, including documentation, nutrition assessment, interpretation of laboratory values and individualized patient care and planning for disease and nutrition needs related to wounds and burns, renal diseases, immune disorders, oncology, eating disorders, pediatrics, and those requiring nutrition support. Student will engage in simulated case studies.

Prerequisite: Graduate standing.

Corequisite: NUTR 53542.

Schedule Type: Laboratory

Contact Hours: 2 lab

Grade Mode: Standard Letter

NUTR 61015 NUTRITION PATHOPHYSIOLOGY 3 Credit Hours

This course will overview the physiologic and metabolic process of organ systems that are integral to diseases related to nutrition. The treatment methods for these diseases will also be introduced.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 61019 ANALYSIS AND EVALUATION OF NUTRITION RESEARCH 3 Credit Hours

This course explores the application of nutrition research to practice. The course describes the importance of research in advancing the profession of nutrition and dietetics, the components of nutrition research and how to utilize and critique nutrition related research to inform nutrition practice.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 61098 RESEARCH 1-3 Credit Hours

(Repeatable for credit) Research for master's-level students. Credit earned may be applied toward meeting degree requirements with school approval.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Research

Contact Hours: 3-9 other

Grade Mode: Standard Letter

NUTR 62001 DIETETIC INTERNSHIP SEMINAR I 1 Credit Hour

Discussion-based course focused on leadership development and completion of required dietetic internship program competencies. This course is to be taken during the first semester of the dietetic internship program. Weekly on-campus course participation focused on supervised practice experience and completion of assignments for competency completion per accreditation standards. Course designed to foster professional skill development, leadership, mentorship and advancement of critical thinking skills required for an entry-level Registered Dietitian Nutritionist (RDN).

Prerequisite: Graduate standing.

Pre/corequisite: NUTR 63592.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Standard Letter

NUTR 62002 DIETETIC INTERNSHIP SEMINAR II 1 Credit Hour

Discussion-based course focused on leadership development and completion of required dietetic internship program competencies. This course will be taken concurrently with the second semester of internship. Weekly on-campus course participation focused on supervised practice experience and completion of assignments for competency completion per accreditation standards. Course designed to foster professional skill development, leadership, mentorship and advancement of critical thinking skills required for an entry-level Registered Dietitian Nutritionist (RDN).

Prerequisite: Graduate standing.

Pre/corequisite: NUTR 64592.

Schedule Type: Seminar

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 62003 DIETETIC INTERNSHIP SEMINAR III 1 Credit Hour

Discussion-based course focused on leadership development and completion of required dietetic internship program competencies. This course will be taken concurrently with the third semester of internship. Weekly on-campus course participation focused on supervised practice experience and completion of assignments for competency completion per accreditation standards. Course designed to foster professional skill development, leadership, mentorship and advancement of critical thinking skills required for an entry-level Registered Dietitian Nutritionist (RDN).

Prerequisite: Graduate standing.

Pre/corequisite: NUTR 63592.

Schedule Type: Seminar

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 63199 THESIS I 2-6 Credit Hours

(Repeatable for credit) Thesis students must register for a total of 6 hours, 2 to 6 hours in a single semester distributed over several semesters if desired.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Masters Thesis

Contact Hours: 6-18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

NUTR 63299 THESIS II 2 Credit Hours

(Repeatable for credit) Students must continue registration each semester until all degree requirements are met.

Prerequisite: NUTR 63199; and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

NUTR 63399 CAPSTONE 3-6 Credit Hours

(Repeatable for credit) This course serves as a culminating experience of the graduate program in nutrition. Students will demonstrate mastery of knowledge and skills through the development of an in-depth final project that bridges theory and practice. The project allows student to integrate their learning across the program, apply it to a professional issue and prepare for future career opportunities.

Prerequisite: Graduate standing.

Schedule Type: Project or Capstone

Contact Hours: 3-6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

NUTR 63517 COMMUNITY AND PUBLIC HEALTH NUTRITION: PROGRAMS, POLICY AND PRACTICE 3 Credit Hours

An in-depth examination of the science, policy and practice of community and public health nutrition. It focuses on the role of nutrition in promoting, maintaining and improving the health of populations and communities including nutrition policy, programming and communication. Students will apply advanced concepts in nutrition science, public health, and behavioral theory to address contemporary nutrition challenges at local, national and global levels.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 63518 ADVANCED SPORTS NUTRITION 3 Credit Hours

Course focuses on nutritional concepts and principles related to athletic performance including energy needs, metabolism, and utilization in sports, macronutrient needs and metabolism, micronutrient needs of athletes, nutrient timing considerations, hydration needs and practices and other special considerations.

Prerequisite: Graduation standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 63519 ADVANCED STUDY OF MICRONUTRIENTS 3 Credit Hours

Course covers intake, digestion and absorption of nutrients.

Prerequisite: Nutrition major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 63520 MACRONUTRIENT NUTRITION 3 Credit Hours

Course covers metabolic utilization of macronutrients for body processes.

Prerequisite: Nutrition major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 63521 NUTRITION AND DISEASE: CLINICAL APPLICATIONS 3 Credit Hours

Recent trends and concepts in research and practice of therapeutic dietetics.

Prerequisite: NUTR 61015; and nutrition major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 63522 COMMUNICATION, MANAGEMENT AND PROFESSIONALISM IN DIETETICS 3 Credit Hours

Explores the importance of communication in a variety of medias as it relates to leadership and management and overall professionalism in nutrition. The areas of management focus include foodservice, community and clinical nutrition management.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

NUTR 63525 DIETETIC PRACTICE: COMMUNITY 1 Credit Hour

Discussion focusing on nutrition care in the community setting. Evaluation and interpretation of the scientific literature.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 63526 DIETETIC PRACTICE: MANAGEMENT 1 Credit Hour

Discussion focusing on the management of food and nutrition services. Evaluation and interpretation of the scientific literature.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 63527 DIETETIC PRACTICE: CLINICAL 1 Credit Hour

Discussion focusing on nutrition care in the acute practice setting. Evaluation and interpretation of the scientific literature.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

NUTR 63592 DIETETIC INTERNSHIP 1-2 Credit Hours

(Repeatable for credit) Supervised practice component of dietetic internship.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 16-32 other

Grade Mode: Satisfactory/Unsatisfactory

Public Health (PH)

PH 10000 EXPLORING CAREERS IN PUBLIC HEALTH 1 Credit Hour

Provides an overview of the diverse career opportunities available in the field. Explores various public health issues from the perspectives of public health professionals from the core disciplines in public health: social behavioral sciences, environmental health, health policy and management, epidemiology and biostatistics. Students learn about how public health professionals approach issues and the types of professional roles and activities they bring to addressing each issue.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

PH 10001 INTRODUCTION TO PUBLIC HEALTH 3 Credit Hours

An overview of the evolution and practices of the dynamic field of public health in the United States and globally. Students are introduced to the structure and functions of public health organizations and practice.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 10002 INTRODUCTION TO GLOBAL HEALTH 3 Credit Hours

An overview of the biological, social and environmental contributors to health and diseases in populations around the world, including case studies of selected infectious diseases, nutritional deficiencies and health effects of environmental change.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 10003 EXPLORING CAREERS IN GLOBAL HEALTH 1 Credit Hour

Course provides students with an introduction to global health and an overview of the diverse career opportunities available in the field. The global health sector is evolving as one of the primary career destinations and is moving beyond the traditional roles of science, pharmacy, medicine and nursing; additional areas also include communications, technology, data scientists, finance, management, legal, linguistics, international relations, and most important, cross functional skills are needed.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

PH 10004 FOUNDATIONS OF PUBLIC HEALTH 3 Credit Hours

Curious about how public health shapes our world? This course introduces the big ideas behind public health and health sciences, from their history and philosophy to the science that drives them. Students learn about topics like disease prevention, health equity and the role of public health in everyday life. Through projects, readings and discussions, students tackle real-world health challenges in the U.S. and beyond. Open to students from any major, this course covers the foundational public health competencies and gives students the tools to think critically about today's most urgent health issues.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 10195 SPECIAL TOPICS IN PUBLIC HEALTH 1-3 Credit Hours
(Repeatable for credit) Subject varies depending on the emerging issue.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

PH 15092 PUBLIC HEALTH FIELD EXPERIENCE I (ELR) 1-3 Credit Hours

(Repeatable for credit) Entry-level internship experience in a public health setting under the supervision of a site preceptor and university supervisor. Students gain experience in public health work.

Prerequisite: Special approval.

Schedule Type: Practical Experience

Contact Hours: 3-10 other

Grade Mode: Satisfactory/Unsatisfactory

Attributes: Experiential Learning Requirement

PH 20000 PUBLIC HEALTH PROFESSIONAL PRACTICE I 1 Credit Hour

Professional development course designed to expose future public health leaders to the diverse field of public health and develop attainable career goals. Students begin the development of personal goals and a portfolio of work that build during the entire program. This course fosters an understanding of public health as a profession.

Prerequisite: Sophomore standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

PH 20001 ESSENTIALS OF EPIDEMIOLOGY 3 Credit Hours

Students are introduced to strategies adopted by public health professionals to study distribution and identification of important biologic, social and environmental determinants of diseases and health-related states within specific populations.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 20010 INTRODUCTION TO PUBLIC HEALTH INFORMATICS 3 Credit Hours

Provides an overview of informatics principles applied in public health settings. Issues addressed include definitions, approaches, competencies, applications and the national health information network. Topical areas are digital literacy, electronic communication, system development, information use, project management, procurement, accountability, research, data standards, databases, human resource management, and confidentiality and security.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 20015 ZOMBIE OUTBREAK 3 Credit Hours

Teaches the basic survival skills necessary to protect you, your family and the public from a variety of natural and manmade "apocalypses." Students apply the basics of emergency Public Health management to a zombie outbreak.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 20195 SPECIAL TOPICS IN PUBLIC HEALTH 1-3 Credit Hours
(Repeatable for credit) Subject varies depending on the emerging issue.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

PH 20392 COMMUNITY HEALTH WORKER CERTIFICATION II- INTERNSHIP (ELR) 3 Credit Hours

(Repeatable for Credit) Internship course providing necessary contact hours for the Ohio Community Health Worker Certification.

Corequisite: PH 23000.

Schedule Type: Practical Experience

Contact Hours: 9 other

Grade Mode: Standard Letter-IP

Attributes: Experiential Learning Requirement

PH 22001 PLAGUES AND PANDEMICS: HOW INFECTION SHAPED CULTURE AND HISTORY 3 Credit Hours

Infectious diseases continue to affect us all in the present, and plagues have shaped the course of history. From the Justinian plague in the 6th Century to the decimation of Native populations in the US by smallpox to the 1918 influenza pandemic, human history has been influenced by microbes—and our culture, in turn, can affect the generation of new plagues. This course is appropriate both for humanities majors looking for an introduction to infectious diseases as well as science majors looking to better understand infectious diseases in their historical and cultural context, and the way these diseases have (and continue to) shape history. Ultimately, students should be able to understand the basics of infectious disease epidemiology and disease control within a wide cultural and historical context. The course will encompass various topics in microbiology and infectious disease, using primarily popular non-fiction books on these subjects as sources.

Prerequisite: None.

Schedule Type: Lecture, Seminar

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 23000 COMMUNITY HEALTH WORKER CERTIFICATION I 3 Credit Hours

Students are guided through the competencies of a Community Health Worker (CHW). Students are introduced to soft skills and culture including, but not limited to, basic health care, community resources, advocacy, communication and service skills related to working with communities. Lifespan development is also covered including, but not limited to, basic health information and education regarding prevention and treatment throughout the lifespan.

Prerequisite: None.

Corequisite: PH 20392.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 25092 PUBLIC HEALTH FIELD EXPERIENCE II (ELR) 1-3 Credit Hours

(Repeatable for credit) Mid-level internship experience in a public health setting under the supervision of a site preceptor and university supervisor. Students gain experience in public health work.

Prerequisite: Special approval.

Schedule Type: Practical Experience

Contact Hours: 3-10 other

Grade Mode: Satisfactory/Unsatisfactory

Attributes: Experiential Learning Requirement

PH 30000 PUBLIC HEALTH PROFESSIONAL PRACTICE II 1 Credit Hour

Professional development course designed to further prepare future public health leaders to the diverse field of public health. The career portfolio will be further developed. Career goals will be re-evaluated and the strategies for goal attainment reassessed. The understanding of public health as a profession will be further developed. Graduate or professional education as an option will be discussed in greater detail.
Prerequisite: PH 20000; and junior standing.

Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

PH 30002 INTRODUCTORY BIostatISTICS 3 Credit Hours

An introduction to statistical methodology in the field of public health. Students learn the statistical skills to read scientific articles, understand the statistical methods used and interpret the results on their own.

Prerequisite: Any Kent Core Mathematics and Critical Reasoning course.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30004 PUBLIC HEALTH RESEARCH 3 Credit Hours

Approaches and steps involved in defining public health problems and conducting research about these problems. Students are introduced to how to evaluate published public health research.

Prerequisite: ENG 21011 or HONR 10297; and PH 30002.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30005 SOCIAL AND BEHAVIORAL SCIENCE THEORIES IN PUBLIC HEALTH 3 Credit Hours

An overview of the contributions of the social and behavioral sciences to human health behavior, including application of studies in the area of health promotion, health protection and disease prevention in public health.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30006 INTRODUCTION TO ENVIRONMENTAL HEALTH AND SAFETY 3 Credit Hours

Introduction to the environment at risk, environmental epidemiology, environmental toxicology, environmental policy and regulation, watershed management, safe drinking water, wastewater management, vector-borne and zoonotic disease, air quality, solid and hazardous waste, food protection, radiation safety and injury prevention, occupational health and safety, total worker health and the built environment.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30007 PREVENTION AND CONTROL OF DISEASES 3 Credit Hours

Provides an overview of concepts involved in biological mechanisms of disease at cell, individual and community levels, and insight into strategies used in preventing and controlling diseases at the population and/or community level within this framework.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30009 ENVIRONMENTAL HEALTH AND SAFETY REGULATIONS AND POLICY 3 Credit Hours

Develops a framework for understanding the regulatory structure of environmental and occupational health and safety regulations and policy in the U.S. Federal, state, and local levels of government are reviewed as well as major agencies and regulations.

Prerequisite: PH 30006.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30012 COMMUNICABLE DISEASES 3 Credit Hours

A survey of communicable diseases of global public health significance, including the epidemiology and forensics associated with disease transmission, vaccination strategies and practices, and human responses to infectious disease. Students are introduced to infectious disease pathogens and the practices and procedures for their surveillance, handling and control.

Prerequisite: PH 20001 and 30007.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30014 STRATEGIES FOR PREVENTION IN PUBLIC HEALTH 3 Credit Hours

Provides a review of population strategies for health promotion and disease prevention from a social-ecological perspective, highlighting the importance of evidence-based, equitable, and ethical approaches.

Prerequisite: PH 30007.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30015 UNITED STATES HEALTH CARE SYSTEM 3 Credit Hours

Provides an overview of the U.S. healthcare delivery system, including operations, stakeholders and the role of government with a particular emphasis on public health's role in health care. Students gain an understanding of inpatient and outpatient services, the various roles of healthcare professionals, private and public financing and the impact of managed care. The primary focus is the public health system.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PH 30020 FUNDAMENTALS OF HEALTH PRIVACY 1 Credit Hour

This course provides an overview of compliance for healthcare privacy and security within the context of the Health Insurance Portability and Accountability Act (HIPAA). Current topics such as electronic health records and the challenges posed by social media are explored.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

PH 30025 FUNDAMENTALS OF HEALTHCARE COMPLIANCE 1 Credit Hour

This course provides an overview of fraud, waste and abuse compliance in the healthcare industry. The practical and legal basis for compliance programs is explored as well as their creation, implementation and maintenance.

Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 1 lecture
Grade Mode: Standard Letter

PH 30033 PUBLIC HEALTH POLICY AND DECISION MAKING 3 Credit Hours

An introductory survey of the formulation to implementation of public health policies for various public health issues, and the use of practical administrative tools such as strategic planning, economic evaluation and decision analysis.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 30106 ENVIRONMENTAL TOXICOLOGY 3 Credit Hours

Basic toxicological principles applied to studies of environmental health are surveyed. Basic concepts of toxicological testing, dose response, animal and other models, dose curves, LD50's, risk assessment, threshold theories, classifications of harmful effects, environmental pathways, metabolism and elimination are reviewed. Biological effects and the effect of select toxins on body systems are reviewed. Major groups of toxins and their effects are reviewed. Toxin behavior in air, water, wastewater, soil and environmental media are studied.

Prerequisite: PH 30006.

Schedule Type: Laboratory, Lecture

Contact Hours: 2.8 lecture, .2 lab

Grade Mode: Standard Letter

PH 30110 HAZARDOUS MATERIALS MANAGEMENT 3 Credit Hours

Covers the use of hazardous materials. Emphasis is on the safe management of hazardous materials in the workplace and community, their procurement, storage, regulation, pollution problems, use, release, clean up, disposal, and their control, to prevent workplace and community health and safety problems.

Prerequisite: PH 30006.

Schedule Type: Field Experience, Lecture

Contact Hours: 2.67 lecture, .33 lab

Grade Mode: Standard Letter

PH 30195 SPECIAL TOPICS IN PUBLIC HEALTH 1-3 Credit Hours

(Repeatable for credit) Subject varies depending on the emerging issue.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

PH 32005 EMERGING ISSUES IN COMMUNITY HEALTH 3 Credit Hours

Provides students with exposure to touchstone issues in public health programming that have social and behavioral science implications. Topics reflect emergent priority areas and are expected to vary from semester to semester. Examples of current, emerging issues that may be covered include the Healthy People 2020 initiative, leading health indicators, role of CDC, state and local health departments and NGOs in promoting health behaviors, program recruitment, retention, evaluation and generalization challenges, ethical issues including informed consent and voluntary change, funding challenges for prevention programs, grant writing exposure, role of politics in public health programming, evidenced-based practices and practice-based evidence.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 34001 PUBLIC HEALTH INTERVENTIONS I 3 Credit Hours

Provides an overview of the planning and development of public health interventions including environmental, social, and behavioral public health issues from a social-ecological perspective, with attention to evidence-based, theoretical, and ethical approaches.

Prerequisite: PH 30005.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 34002 PUBLIC HEALTH INTERVENTIONS II 3 Credit Hours

Provides an overview of public health intervention implementation, evaluation, and sustainability, with examples of public health interventions in practice and exploration into the future of public health interventions.

Prerequisite: PH 34001.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 35001 COMMUNITY-BASED PUBLIC HEALTH PRACTICE (ELR) 3 Credit Hours

Course focuses on the fundamentals of applying community engagement, organization, and development principles to create successful community public health interventions. Addresses work in at-risk and diverse communities using methods optimal for public health practice, including public health ethics, faith-based initiatives in community health, community health assessment and measurement methods, coalition building, and frameworks for developing health policy. Will also review the basic principles of health-related non-profit organization management and support.

Prerequisite: None.

Schedule Type: Lecture, Practical Experience

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

PH 35005 ADVOCACY AND ACTIVISM IN PUBLIC HEALTH 3 Credit Hours

Public health advocacy and activism are areas of increasing importance for those in public health at both national and international levels because they offer more direct approaches to achieve lasting social and political change. This course provides a foundation to the theory, evidence-base and strategies that can be harnessed to bring about change to improve the lives and health of populations, and explains how activism has an essential role in public health policy and practice.

Prerequisite: Junior or senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 35010 RACISM: A PUBLIC HEALTH CRISIS 3 Credit Hours

Across the US, an increasing number of communities have declared racism as a public health crisis. This declaration is not based on an isolated incident, rather, it is the acknowledgement that racism is structural and has been embedded within the institutional policies and societal norms that are present in our everyday lives. This course will: Recognize racism in the US as a significant cause of poor health, disease, and persistent dis-ease among Black Americans; Explore the relationship between racism and health through a historic accounting of social, political, economic, and environmental conditions post-slavery through current events; and, identify how, research, and advocacy can address anti-Black racism and promote health equity.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture, 0 lab, 0 other

Grade Mode: Standard Letter

PH 40000 PUBLIC HEALTH PROFESSIONAL PRACTICE III 1 Credit Hour

Professional development course designed to launch graduates into the workforce or graduate school. The career portfolio, resume, and cover letters will be finalized. Interviewing and application skills will be developed. Working with a College of Public Health career counselor students will develop job search strategies and begin the application process. Students continuing their education in a graduate program will work on application materials.

Prerequisite: PH 30000; and senior standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

PH 40001 SEX: A WICKED PUBLIC HEALTH PROBLEM 3 Credit Hours

(Slashed with HPM 50001) Wicked problems is a term developed during the 1970s by systems thinkers and planners, Horst Rittel and Melvin Webber (1973), to describe complex social problems that are resistant to solution. The term has recently been applied to public health issues that have proven to be difficult to address and are resistant to mitigation. Sexual and reproductive health behaviors, attitudes and cultural norms often produce problems at the individual and population levels that meet the criteria for designation as wicked problems. Effectively addressing these kinds of problems requires a correct understanding and application of public health principles and practices.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40013 CLINICAL EPIDEMIOLOGY BASICS 3 Credit Hours

(Slashed with EPI 50013) Course develops an understanding of clinical research, good clinical practices, research environments and methods used in clinical research. Students gain an understanding of the use of clinical investigation, from the product development stage to the application of investigations in contract research organization. Ethical implications and regulatory issues are examined.

Prerequisite: PH 20001.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40014 CLINICAL TRIALS MANAGEMENT 3 Credit Hours

(Slashed with EPI 50014) Course examines the good clinical practices guidelines. Students learn how to conduct and manage clinical trials; understand clinical trials data; develop instruments and protocols; recognize quality control and data issues; know approaches to recruitment, retention and participant assessment; identify adverse events and measurement of response variables; and acquire skill in study close-out procedures.

Prerequisite: PH 40013.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40015 SCIENTIFIC WRITING FOR CLINICAL RESEARCH 3 Credit Hours

(Slashed with EPI 50015) Course provides students the tools to develop proficiency with scientific reading, conduct presentations and demonstrate skill with scientific writing, with the goal of preparing clinical researchers to be able to communicate findings to the science community and general population. Course includes an examination of the science literature in clinical trials research.

Prerequisite: ENG 21011 or HONR 10297.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40017 PHARMACOEPIDEMIOLOGY 3 Credit Hours

(Cross-listed with EPI 50017) Introduction to the field of pharmacoepidemiology, which uses epidemiology methods to understand medication use and distribution at the population level. Course examines risk-benefit and epidemiology approaches to examining medication use and therapeutic trials. Drug and device manufacturing to market are explored.

Prerequisite: PH 40013 and PH 40014.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40018 REGULATORY AFFAIRS IN CLINICAL RESEARCH 3 Credit Hours

(Slashed with EPI 50018) Course provides the tools for students to develop an understanding of the researcher and organization responsibility in research and development of clinical trials products. Students understand regulations from the government and industry, privacy concerns, liability and ethical issues related to clinical trials research. Examples from the field are explored in detail.

Prerequisite: PH 40013 and PH 40014.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40060 PUBLIC HEALTH LABORATORY METHODS 3 Credit Hours

(Slashed with EHS 50060) Course introduces the student to the fundamental theory and hands on use to track specimen collection and laboratory analysis. Environmental specimens are examined for their public health importance using classical and modern techniques. Students learn classical laboratory methods and their modern use in the laboratory environment. Examples include culture and microscopic identification of microorganisms, identification of disease vectors, detection of newborn disease and detection of terrorism agents.

Prerequisite: BSCI 30140 or CHEM 10062 or CHEM 10971 or PH 30006.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 1 lab

Grade Mode: Standard Letter

PH 40089 GLOBAL HEALTH IMMERSION: GENEVA, SWITZERLAND (ELR) 1-3 Credit Hours

(Repeatable for credit) Participants explore a number of health concerns, policies and challenges with global importance and implications. Students investigate current global health policies and themes, and become familiar with the major players in global health including governmental and nongovernmental organizations and multinational agencies. Presentations are given by experts currently working in various regions of the world to solve such pressing global problems as HIV/AIDS, post-war trauma, tuberculosis, refugee health, non-communicable disease prevention and environmental contamination.

Prerequisite: PH 10001 and PH 10002; and junior standing; and special approval.

Schedule Type: International Experience, Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter-IP

Attributes: Experiential Learning Requirement

PH 40092 INTERNATIONAL HEALTH PRACTICUM (ELR) 3-6 Credit Hours

(Repeatable for credit) A supervised internship in global/international health.

Prerequisite: PH 10002; and junior or senior standing.

Schedule Type: Practical Experience

Contact Hours: 10-20 other

Grade Mode: Satisfactory/Unsatisfactory

Attributes: Experiential Learning Requirement

PH 40100 VECTOR-BORNE AND ZOOLOGIC DISEASES (ELR) 3 Credit Hours

Presents a broad overview of major considerations related to human health and the vector-borne diseases transmitted by rodents and arthropods (insects and arachnids). Control measures, including rodent control, local mosquito control programs, and integrated pest management (IPM) concepts with safe pesticide use are reviewed. Application of FIFRA regulations are presented. An overview of issues associated with zoonotic diseases transmitted by animals, such as rabies, and their control are also included. Vector and reservoir relationships are explored.

Prerequisite: PH 30006.

Schedule Type: Field Experience, Lecture

Contact Hours: 2.67 lecture, .33 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

PH 40102 SOLID AND HAZARDOUS WASTE MANAGEMENT 3 Credit Hours

(Slashed with EHS 50102) Solid and hazardous waste programs and practices are explored. Pollution prevention, safety, sanitation practices, sustainability concepts, management and regulations pertinent to solid and hazardous waste such as RCRA are discussed and studied. Consumption, garbage handling, landfill design and disposal, sustainability concepts, reuse, recycling, composting and other waste strategies are presented. Hazardous waste and material issues throughout the environment, such as HW disposal, TSD facilities, underground storage tanks, Superfund, brownfields and related issues are introduced.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40103 FOOD PROTECTION 3 Credit Hours

(Slashed with EHS 50103) Topics surrounding foodborne disease prevention and food sanitation relative to quality control, food service and processing systems are introduced. Foodborne disease agents, microbiology, epidemiology and outbreak investigation techniques are explored. The regulatory process and agencies at the wholesale, retail and food service levels are introduced. Ohio food regulations are covered, including the Ohio Uniform Food Code. Basic preparation to conduct food serve inspections and foodborne disease investigations as part of agency regulatory programs and the opportunity to earn the National Restaurant Association ServSafe Manager certification are provided.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40104 AIR QUALITY AND POLLUTION CONTROL 3 Credit Hours

(Slashed with EHS 50104) Basic survey of air pollution and its control. The respiratory system and body's response to air pollutants of different types are reviewed and related illnesses such as asthma are studied. The Clean Air Act, NESHAPS and related regulations are surveyed. Ambient air quality standards, the effect of climate and other air pollution concepts are reviewed. Measurement and control methods for both particulate and gaseous contaminants are surveyed.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40105 WATER AND WASTEWATER MANAGEMENT 3 Credit Hours

(Slashed with EHS 50105) Explores issues surrounding water pollution and human health and the environmental treatment systems developed to provide safe water and sewage disposal. Private and public water and sewage systems are studied. Federal and state regulations, including the Safe Drinking Water Act and Clean Water Act, are reviewed.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40109 LABORATORY SAFETY AND HYGIENE 3 Credit Hours

(Crosslisted with EHS 50109) Basic introduction to laboratory safety, chemical hygiene, and biosafety. Includes the research compliance programs of institutions (IBC, IACUC, IRB, RSC) and the OSHA Chemical Hygiene Standard requirements and program responsibilities. General lab safety concepts are reviewed, along with chemical handling and storage, fumehoods and ventilation, hazardous waste disposal, radiation safety, and lab design. Basic principles of biosafety are covered, BSL 1-4 levels, biosafety cabinets, select agents, bloodborne pathogens, NIH Guidelines, biosecurity and animal use.

Prerequisite: PH 30006.

Schedule Type: Field Experience, Lecture

Contact Hours: 2.67 lecture, .33 other

Grade Mode: Standard Letter

PH 40110 INTRODUCTION TO PUBLIC MENTAL HEALTH 3 Credit Hours

(Slashed with HPM 50110) This course provides a broad overview of mental health from a public health perspective. The course is an introduction to population-based (or population-level) approaches to addressing mental health and supporting wellness. More specifically, the course discusses mental health from a public health perspective, including discussion of non-clinical interventions and programs designed to improve mental health and wellness of populations.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 40191 SEMINAR IN PUBLIC HEALTH 1-3 Credit Hours

(Repeatable for credit) Seminar on current and important topics in public health. Subject matter varies depending on topic.

Prerequisite: None.

Schedule Type: Seminar

Contact Hours: 1-3 other

Grade Mode: Standard Letter

PH 40195 SPECIAL TOPICS IN PUBLIC HEALTH 1-3 Credit Hours

(Repeatable for credit) Subject varies depending on the emerging issue.

Prerequisite: Junior or senior standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

PH 40196 INDIVIDUAL INVESTIGATION IN PUBLIC HEALTH 1-3 Credit Hours

(Repeatable for maximum 6 credits) Individual undergraduate investigation or research on specific public health issues.

Prerequisite: Junior or senior standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter

PH 41000 ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT 3 Credit Hours

Entails leadership and management principles in environmental and occupational health and safety (EOHS), and helps students develop skills needed to become an effective supervisor. Issues such as regulatory structure, program and community planning, policy development, budgeting, staffing and staff development, strategic planning, training, professionalism and assessment are reviewed. Board development, dealing with difficult people and situations, legal, social, political, and economic effects on EOHS programs are dealt with. Related issues such as ethics, human resources, workers comp, court appearances, media relations and communications are reviewed.

Prerequisite: PH 30006 and 30102 and 30105 and 30106; and senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 41092 FIELD EXPERIENCE IN MEETING THE BASIC HEALTH AND HUMAN NEEDS (ELR) 3 Credit Hours

(Repeatable for credit) Provides practical skills in simple, affordable appropriate technologies that can offer solutions for meeting basic health and human needs in the developing world at the household and community levels. Technologies are organized into five modules: 1) food, agriculture, and nutrition; 2) water and sanitation; 3) alternative household energy; 4) primary health care; and 5) community development needs and resource assessment. All five modules cover appropriate technologies that while meeting the basic needs have significant impact on health of the individuals and communities. Principles of participatory community development and sensitivity to cross-cultural, gender, and ecological issues are emphasized throughout the training.

Prerequisite: Special approval.

Schedule Type: Field Experience

Contact Hours: 8 other

Grade Mode: Satisfactory/Unsatisfactory

Attributes: Experiential Learning Requirement

PH 42010 UNDERSTANDING THE COVID-19 PANDEMIC 3 Credit Hours

(Slashed with EPI 52010) In this course, students examine the various aspects of the ongoing coronavirus pandemic. They learn foundational information in epidemiology, virology and immunology, and examine the emergence and spread of SARS-CoV-2. They learn about responses to the epidemic, including policies aimed at slowing spread, and examine aspects of diagnostics and vaccine development relevant to controlling the spread of the virus.

Prerequisite: Junior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 42092 ENVIRONMENTAL, OCCUPATIONAL, HEALTH AND SAFETY INTERNSHIP (ELR) 4-6 Credit Hours

The purpose of the environmental and occupational health and safety internship is to supplement the student in-class learning experiences with practical hand-on skills and work practice experiences that helps them develop the environmental competencies required for success in the field.

Prerequisite: Junior or senior standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 13.33-20 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

PH 42100 CLIMATE CHANGE AND POPULATION HEALTH 3 Credit Hours

(Slashed with EHS 52100) This course reviews evidence on the rigorous scientific consensus confirming global warming and the mechanisms underlying climate change, with a focus on adverse population health impacts. Increases in the frequency and intensity of extreme weather events including heatwaves, tropical cyclones and severe storms create hazardous conditions including flooding, drought, wildfires, increases in vector-borne diseases, food and nutrition shortages, human displacement and mental health issues. Populations at increased risk are identified along with a consideration of climate ethics, justice and public health approaches used to address the population health effects. Strategies for abatement through injury and disease prevention, climate risk communication and strategies for mitigation including green energy and energy conservation are examined.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 43013 BUILT ENVIRONMENT AND PUBLIC HEALTH 3 Credit Hours

(Slashed with EHS 53014) The impact of the built environment on human health is an issue of global importance. The focus of this course is preventing disease and injury while improving the health of populations by looking "upstream" at the built environment or those settings designed, created and maintained by human efforts. Population health effects of community design are explored through scientific literature, and include transportation, land use, parks and green space in the context of physical activity, food environments, air and water quality, injury prevention, social capital and health equity. Students examine and use population health tools to assess the built environment and develop strategies for creating sustainable healthy places through multidisciplinary collaboration, research and policy that promotes the health of the public.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 43014 PUBLIC HEALTH AND MASS INCARCERATION 3 Credit Hours

This course will examine incarceration using a public health lens. Students will examine the epidemiology of mass incarceration in the U.S., infectious and chronic diseases of those incarcerated, incarceration as a self-sustaining epidemic with generations of imprisonment, access to health care of those behind bars and on release, and the contagion of punishment including collateral damage to children, families and neighborhoods. The course will conclude with a public health model for ending mass incarceration.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 43089 PLAGUES THAT SHAPED THE WORLD (ELR) 3 Credit Hours

(Slashed with EPI 53089 and and EPI 73089) Course examines the Bubonic plague, HIV/AIDS, Ebola and pandemic influenza outbreaks to introduce students to the fundamentals of public health, establishing epidemiological principles that explain how plagues erupt and propagate, decimate populations and alter cultures. Inherent in the course's discussion are the social determinants that fuel plague outbreaks and slow recovery. Examples of emerging infectious diseases and threats of bioterrorism are discussed as new plagues for which creative solutions are still required. Students take city excursions and a field trip to assess cultural changes resulting from historical plagues.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

PH 43092 INTERNSHIP IN CLINICAL TRIALS RESEARCH (ELR) 3-6 Credit Hours

The internship will place students in a clinical trials setting (e.g., contract research organization, hospital, or academic setting) where they can gain hands on experience conducting clinical trials and clinical research. The internship is 300 hours and can be taken in the last one to two semesters. The purpose of the internship is to provide the student with practical experiences that will make them marketable for a position in clinical research upon graduation.

Prerequisite: PH 40013 and PH 40014.

Schedule Type: Practical Experience

Contact Hours: 3-6 other

Grade Mode: Satisfactory/Unsatisfactory

Attributes: Experiential Learning Requirement

PH 44000 HEALTH DISPARITIES (WIC) 3 Credit Hours

Understanding the factors involved in health disparities at the national and global level, and the impact of health disparities on public health.

Prerequisite: ENG 21011 or HONR 10297; and 15 credit hours of public health courses; and junior or senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Writing Intensive Course

PH 44003 ENVIRONMENTAL HEALTH ISSUES IN LOW- AND MIDDLE-INCOME COUNTRIES 3 Credit Hours

Covers the important environmental health issues of concerns in low- and middle-income countries and appropriate intervention strategies. Topics include clean drinking water and sanitation, indoor air pollution, outdoor air pollution, environmental management, sustainability and health.

Prerequisite: Public health or anthropology major; and junior or senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44004 GLOBAL HEALTH IMMERSION: LATIN AMERICA 3 Credit Hours

The principal objective of this summer intersession course is to immerse students into the history, culture and public health systems of Latin American countries Colombia Ecuador. Students will have the opportunity to visit major cities, i.e., Cali, Colombia, and Quito, Ecuador, rural areas, and well-known tourist destinations (Cartagena, Colombia, Otavalo, Ecuador). Students will gain an understanding of current scientific research on tropical diseases of local public health relevance, such as malaria. The course will focus on the basic biology of disease, mechanisms of transmission (epidemiology), and efforts to develop vaccines against malaria. The course is designed primarily for sophomores, juniors and seniors who are public health, nursing, or biological science majors. Master's level students will also be accepted. Knowledge of basic Spanish language is useful but not necessary.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44005 LEGAL ASPECTS OF HEALTH SERVICES MANAGEMENT 3 Credit Hours

Provides an overview of legal and regulatory essentials in health services management. Provides a historical perspective on legal aspects of health care as well as an introduction to law, tort law, criminal aspects, contracts, civil procedure and trial practice as related to health care. Students examine how liability impacts corporate structures, health departments and health care professionals and examine issues related to patient consent, legal reporting requirements, labor relations and patient rights.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44010 PUBLIC HEALTH PLANNING AND FINANCE 3 Credit Hours

Introduces students to business planning of health services. Students obtain skills in public health financial decision-making, including general principles of public health accounting, budgeting and financial planning.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44015 PUBLIC HEALTH MANAGEMENT 3 Credit Hours

Provides an overview of management and leadership concepts, principles and practice as applied to public health management. Students learn basic skills in team-building, developing board relationships, strategic planning, fiscal management, marketing, conflict resolution and negotiation in healthcare management. Coursework integrates principles of ethics and professionalism, effective communication, managing complex and culturally diverse workplaces and the changing role of public health managers.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44020 PUBLIC HEALTH ETHICS IN PRACTICE, POLICY AND RESEARCH 3 Credit Hours

Provides an introduction to public health ethics, including the key foundations, concepts and frameworks for evaluating ethical issues in the public health setting.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44025 PRINCIPLES OF PUBLIC HEALTH LEADERSHIP 3 Credit Hours

Designed to introduce students to skill-sets and leadership practices necessary for successful public health leadership, with an emphasis on leading positive and sustainable change in real world situations. It also familiarizes students with key aspects of partnership building and advocacy for the purposes of improving health. Particular skills include coalition/partnership development, health advocacy, team building, mentoring and leadership.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

PH 44092 INTERNSHIP IN PUBLIC HEALTH (ELR) 3-6 Credit Hours

(Repeatable for credit) Capstone internship experience in a public health setting under the supervision of a site preceptor and university supervisor. Students gain experience in public health work.

Prerequisite: Junior or senior standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-6 other

Grade Mode: Satisfactory/Unsatisfactory

Attributes: Experiential Learning Requirement

PH 45092 SERVICE-LEARNING PRACTICUM IN COMMUNITY-BASED PUBLIC HEALTH (ELR) 3 Credit Hours

(Repeatable for credit) Course is designed to provide an opportunity for students to engage in a variety of public health settings under the supervision of faculty. The practicum experience is focused on developing skills needed to implement change to improve population health, providing a setting in which students may integrate and apply the skills and knowledge acquired through their coursework. Students are exposed to some of the benefits and challenges encountered by public health professionals on a routine basis.

Prerequisite: Junior standing.

Pre/corequisite: PH 35001.

Schedule Type: Lecture, Practical Experience

Contact Hours: 1 lecture, 6 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

PH 49099 CAPSTONE EXPERIENCE IN PUBLIC HEALTH (ELR) 3 Credit Hours

Case studies of various strategies used in addressing various public health issues are discussed within an evaluative framework.

Prerequisite: 21 credit hours of Public Health (PH) courses; and junior standing.

Schedule Type: Lecture, Project or Capstone

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

PH 49199 PUBLIC HEALTH PORTFOLIO (ELR) 3 Credit Hours

Students create a culminating portfolio of selected assignments from across the B.S.P.H. curriculum. The assignments are edited and assembled into a coherent narrative of the core public health competencies reflective of the student's career ambitions.

Prerequisite: 21 credit hours of Public Health (PH) courses; and senior standing.

Schedule Type: Project or Capstone

Contact Hours: 3 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

PH 61199 INTEGRATIVE LEARNING EXPERIENCE 1 Credit Hour

Students complete an integrative learning experience that demonstrates a synthesis of foundational and major-specific competencies. Students, in consultation with faculty, select foundational and major-specific competencies appropriate to the student's educational and professional goals.

Prerequisite: 30 credit hours of Biostatistics (BST) or Environmental Health Sciences (EHS) or Epidemiology (EPI) or Health Policy and Management (HPM) or Social and Behavioral Sciences (SBS) courses; and graduate standing.

Schedule Type: Project or Capstone

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Social and Behavioral Sciences (SBS)

SBS 50196 INDIVIDUAL INVESTIGATION IN SOCIAL AND BEHAVIORAL SCIENCES 1-3 Credit Hours

(Repeatable for credit) Individual graduate investigation or research in areas related to social and behavioral sciences.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 1-3 other

Grade Mode: Standard Letter-IP

SBS 60002 QUANTITATIVE METHODS IN SOCIAL AND BEHAVIORAL SCIENCES 3 Credit Hours

Introduces basic quantitative methods used for social and behavioral scientific research. First, the course focuses on the measurement of socio-behavioral phenomena and relationship between measurement and statistics. Next, the course examines the interrelated roles of scientific theory and design of socio-behavioral research studies. Lastly, the course focuses on building appropriate multiple linear regression and/or analysis of variance statistical models to provide valid analysis of data collected for socio-behavioral research.

Prerequisite: BST 62019; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 60020 PROGRAM EVALUATION II: APPLICATION IN THE REAL WORLD 3 Credit Hours

(Slashed with SBS 80020) This course provides students with a more in-depth examination of program evaluation for public health professionals and the opportunity to apply their evaluation knowledge and skills to an existing health intervention. The content delves deeply into formative and summative evaluation, including theoretical underpinnings, professional standards, research design and data collection and analysis. Students are required to apply this knowledge to a selected program and produce an evaluation proposal acceptable for submission to a funding agency.

Prerequisite: HPM 63011; and graduate standing.

Schedule Type: Seminar

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 60021 SOCIAL AND BEHAVIORAL SCIENCE THEORIES 3 Credit Hours

Examines fundamental social and behavioral science theoretical frameworks that explain health behaviors with an emphasis on application through universal prevention approaches to inform both research and program evaluation designs.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 60030 CODING FOR QUALITATIVE RESEARCH 1 Credit Hour

(Slashed with SBS 80030) The purpose of this course is to provide students with a brief but thorough overview of the basic process of coding text-based, unstructured data for qualitative research projects. Focus is on coding for descriptive or basic qualitative research.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 15 lecture

Grade Mode: Standard Letter

SBS 60040 TRANSCRIBING INDIVIDUAL AND GROUP INTERVIEWS FOR QUALITATIVE RESEARCH 1 Credit Hour

(Slashed with SBS 80040) The purpose of this course is to provide students an overview of, and applied practice in transcribing audio-recorded interview data as preparation for qualitative analysis techniques.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 15 lecture

Grade Mode: Standard Letter

SBS 60191 VARIABLE CONTENT SEMINAR IN SOCIAL AND BEHAVIORAL SCIENCES 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Seminar on current and important topics in social and behavioral sciences. Subject matter varies depending on the topic.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

SBS 60195 SPECIAL TOPICS IN SOCIAL AND BEHAVIORAL SCIENCES 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Special topics to sample new offerings on topics in social and behavioral sciences.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

SBS 60392 APPLIED PRACTICE EXPERIENCE IN SOCIAL AND BEHAVIORAL SCIENCES 2-4 Credit Hours

(Repeatable for credit) Observation of and participation in public health activities of a public health agency, hospital or other approved organization. The student completes the field experience with joint supervision from the university and approved organization or agency.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 10-20 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SBS 60492 APPLIED PRACTICE EXPERIENCE IN SOCIAL AND BEHAVIORAL SCIENCES II 1 Credit Hour

(Repeatable for credit) Continuing enrollment for students participating in public health activities of a public health agency, hospital or other approved organization. Students complete the field experience with joint supervision from the university and an approved organization or agency.

Prerequisite: SBS 60392; and graduate standing.

Schedule Type: Practical Experience

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SBS 63008 GRANT WRITING IN SOCIAL AND BEHAVIORAL SCIENCES 3 Credit Hours

Students learn the basics of grant writing for federal and non-federal funding agencies with a particular emphasis on the components of most proposals for funding. This includes rationale for seeking funds, collaborations with community organizations and working with consultants and subcontractors. Students also learn about the basic sections of grant writing such as specific aims and hypotheses, developing a literature review, background and significance, research design and methodology, developing a budget and conducting research with human subjects. Students have an opportunity to write sample grant proposals and learn about the review and scoring process and post-award grant management.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 63010 QUALITATIVE METHODS FOR PUBLIC HEALTH RESEARCH 3 Credit Hours

(Slashed with SBS 83010) During this course, students are guided through exploration of the uses and value of qualitative approaches to research with humans through a combination of resource review and guided applied practice. Students are provided with information about various methodologies that comprise qualitative inquiry, and engage in practice efforts to analyze provided data and assess the quality of research reports.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 63011 QUALITATIVE DATA ANALYSIS 3 Credit Hours

(Slashed with SBS 83011) Students are introduced to the process and goals of qualitative data analysis relevant to research design and study purpose, and are provided opportunities to conduct coding and other types of qualitative data analysis using both computer-assisted and manual processes. Qualitative approaches potentially considered throughout this course include grounded theory, phenomenology, descriptive or generic approaches, content analysis, mixed methods and others depending on needs and interests of students in the class. Students additionally learn about and practice quality control measures that include creation of an audit trail, "member checking," composition of analytic memos and other forms of researcher-initiated documentation.

Prerequisite: SBS 63010; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 63030 SEMINAR IN SOCIAL AND BEHAVIOR SCIENCES 3 Credit Hours

Explores case studies in the social and behavioral sciences about topics that address the leading health indicators, including substance use (alcohol, tobacco and other drugs), obesity (physical activity and nutrition), HIV and STIs, mental health, injury, immunization, access to healthcare and social determinants of health.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 3 other

Grade Mode: Standard Letter

SBS 64600 EMERGING ISSUES IN LGBTQ+ PUBLIC HEALTH PRACTICE 3 Credit Hours

This course is an overview of emerging issues and their related challenges in the field of LGBTQ+ public health practice. In particular, this course focuses on emerging LGBTQ+ public health issues, with special emphasis on several current public health topics. Lectures, reading assignments, videos, assignments and individual projects are used to introduce students to the diversity and complexity of emerging public health issues and challenges associated with addressing them.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 64630 SEXUAL ORIENTATION AND GENDER IDENTITY IN PUBLIC HEALTH PRACTICE 3 Credit Hours

This course introduces students to the diverse concepts of sexual orientation and gender identity through the lens of public health practice. The course prepares public health leaders and clinical practitioners to think critically about the unique health concerns and inherent systems of homophobia and heterosexism that negatively impact the health of the LGBTQ+ community and how to navigate LGBTQ+ public health practice to make positive community health change. Lectures, reading assignments, videos, assignments and individual projects are used to introduce students to the diversity and complexity of emerging public health issues and challenges associated with addressing them.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 64634 SOCIAL DETERMINANTS OF HEALTH BEHAVIORS 3 Credit Hours

(Slashed with SBS 74634) Overviews the social determinants of health and dynamic interplay between individual behaviors and community structures (systems orientation), including public policy, social and built environments, commercial messages, access to services, cultural norms, psychosocial hazards and poverty as causal effects that either provide opportunity or constraints to health. Also examines systems approaches to preventing public health threats from issues including substance use (alcohol, tobacco and other drugs), physical inactivity, poor dietary practices, unsafe sexual behaviors, violence and injury and mental health.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 64700 COMMUNITY-BASED SUBSTANCE ABUSE PREVENTION FOR PUBLIC HEALTH PROFESSIONALS 3 Credit Hours

This course provides foundational knowledge for substance abuse prevention. In addition, this course enhances the knowledge and skills of public health professionals to enable them to implement evidence-based substance use prevention interventions and policies. Primary emphasis is on evidence-based interventions, policies and implementation quality and sustainability.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 64701 COMMUNITY-BASED PUBLIC HEALTH IMPLEMENTATION SYSTEMS 3 Credit Hours

This course focuses on public health prevention science and its application to the implementation of substance use interventions. The content focuses on community systems for addressing substance use problems that affect whole communities. These community systems incorporate evidence-based prevention interventions at various levels of influence within a socio-ecological perspective. Students will examine the development of community organizations that come together to address specific problems, and how they network and integrate with existing organizations that provide community services. The content draws from the International Standards on Drug Use Prevention that were published by the United Nations Office on Drugs and Crime (2013; 2015) and the European Drug Prevention Quality Standards published by the European Monitoring Centre on Drugs and Drug Addiction (2011). Primary emphasis is on evidence-based interventions and policies and on implementation quality and sustainability.

Prerequisite: SBS 64700; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 65010 RACISM: A PUBLIC HEALTH CRISIS 3 Credit Hours

Across the US, an increasing number of communities have declared racism as a public health crisis. This declaration is not based on an isolated incident, rather, it is the acknowledgement that racism is structural and has been embedded within the institutional policies and societal norms that are present in our everyday lives. This course will: Recognize racism in the US as a significant cause of poor health, disease, and persistent dis-ease among Black Americans; Explore the relationship between racism and health through a historic accounting of social, political, economic, and environmental conditions post-slavery through the current events of 2020; and, identify how, research, and advocacy can address anti-Black racism and promote health equity.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 73018 THEORIES OF PREVENTION SCIENCE 3 Credit Hours

Provides a background and theoretical review of prevention science as a multi-disciplinary field focusing on systematic inquiry on health behaviors including substance use (alcohol, tobacco and other drugs), physical activity, dietary practices, mental health, violence and injury and sexual behaviors.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 73019 EVALUATION RESEARCH METHODS IN PREVENTION SCIENCE 3 Credit Hours

This course examines the methods used by prevention science researchers to determine the effectiveness of public health programs. Focus is on advanced formative, process, impact and outcome evaluation methods. Qualitative and quantitative analysis techniques used for assessing program process and effects are discussed in the context of research evaluation.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 73020 ADVANCED RESEARCH METHODS IN PREVENTION SCIENCE 3 Credit Hours

Focuses primarily on advanced quantitative methods in the application of prevention science.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 74634 SOCIAL DETERMINANTS OF HEALTH BEHAVIORS 3 Credit Hours

(Slashed with SBS 64634) Overviews the social determinants of health and dynamic interplay between individual behaviors and community structures (systems orientation), including public policy, social and built environments, commercial messages, access to services, cultural norms, psychosocial hazards and poverty as causal effects that either provide opportunity or constraints to health. Also examines systems approaches to preventing public health threats from issues including substance use (alcohol, tobacco and other drugs), physical inactivity, poor dietary practices, unsafe sexual behaviors, violence and injury and mental health.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 80020 PROGRAM EVALUATION II: APPLICATION IN THE REAL WORLD 3 Credit Hours

(Slashed with SBS 60020) This course provides students with a more in-depth examination of program evaluation for public health professionals and the opportunity to apply their evaluation knowledge and skills to an existing health intervention. The content delves deeply into formative and summative evaluation, including theoretical underpinnings, professional standards, research design and data collection and analysis. Students are required to apply this knowledge to a selected program and produce an evaluation proposal acceptable for submission to a funding agency.

Prerequisite: HPM 63011; and doctoral standing.

Schedule Type: Seminar

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 80030 CODING FOR QUALITATIVE RESEARCH 1 Credit Hour

(Slashed with SBS 60030) The purpose of this course is to provide students with a brief but thorough overview of the basic process of coding text-based, unstructured data for qualitative research projects. Focus is on coding for descriptive or basic qualitative research; other methodologies are reviewed based on student needs.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 15 lecture

Grade Mode: Standard Letter

SBS 80040 TRANSCRIBING INDIVIDUAL AND GROUP INTERVIEWS FOR QUALITATIVE RESEARCH 1 Credit Hour

(Slashed with SBS 60040) The purpose of this course is to provide students an overview of, and applied practice in transcribing audio-recorded interview data as preparation for qualitative analysis techniques, using both content-focused and conversation-analytic approaches.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 15 lecture

Grade Mode: Standard Letter

SBS 80100 EMERGING ISSUES IN PREVENTION SCIENCE 3 Credit Hours

Survey of relevant challenges and issues facing prevention science researchers.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 80191 VARIABLE CONTENT SEMINAR IN SOCIAL AND BEHAVIORAL SCIENCES 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Seminar on current and important topics in social and behavioral sciences. Subject matter varies depending on the topic.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

SBS 80195 SPECIAL TOPICS IN SOCIAL AND BEHAVIORAL SCIENCES 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) Special topics to sample new offerings on topics in social and behavioral sciences.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

SBS 80196 INDIVIDUAL INVESTIGATION IN SOCIAL AND BEHAVIORAL SCIENCES 1-3 Credit Hours

Individual graduate investigation or research in areas related to social and behavioral sciences.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

SBS 80198 DIRECTED RESEARCH IN PREVENTION SCIENCE 1-6 Credit Hours

(Repeatable for credit) Directed research or individual investigation for doctoral students.

Prerequisite: Doctoral standing.

Schedule Type: Research

Contact Hours: 3-18 other

Grade Mode: Standard Letter

SBS 80199 DISSERTATION I 15 Credit Hours

(Repeatable for credit) Registration for two semesters required, first semester dissertation work begins and continues until completion of Dissertation II and 30 hours of total dissertation work.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SBS 80299 DISSERTATION II 15 Credit Hours

(Repeatable for credit) Second course of dissertation sequence completing requirement of with 30 total hours of dissertation work.

Prerequisite: SBS 80199; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SBS 83010 QUALITATIVE METHODS FOR PUBLIC HEALTH RESEARCH 3 Credit Hours

(Slashed with SBS 63010) During this course, students are guided through exploration of the uses and value of qualitative approaches to research with humans through a combination of resource review and guided applied practice. Students are provided with information about various methodologies that comprise qualitative inquiry, and engage in practice efforts to analyze provided data and assess the quality of research reports.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SBS 83011 QUALITATIVE DATA ANALYSIS 3 Credit Hours

(Slashed with SBS 63011) Students are introduced to the process and goals of qualitative data analysis relevant to research design and study purpose, and are provided opportunities to conduct coding and other types of qualitative data analysis using both computer-assisted and manual processes. Qualitative approaches potentially considered throughout this course include grounded theory, phenomenology, descriptive or generic approaches, content analysis, mixed methods and others depending on needs and interests of students in the class. Students additionally learn about and practice quality control measures that include creation of an audit trail, "member checking," composition of analytic memos and other forms of researcher-initiated documentation.

Prerequisite: SBS 83010; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

Speech Pathology and Audiology (SPA)

SPA 10002 INTRODUCTION TO COMMUNICATION DISORDERS AND DIFFERENCES 3 Credit Hours

An introduction to communication disorders and differences using (a) case studies via film and video review and critique, (b) lecture and (c) class discussions. Covers speech, language, swallowing and hearing disorders and cultural and linguistic differences in communication.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 14500 INTRODUCTION TO PSYCHOLINGUISTICS FOR COMMUNICATION SCIENCES AND DISORDERS 3 Credit Hours

Students examine current theory and research specific to typical language — with a significant focus on the cognitive processes that inform their understanding of social, psychological and linguistic aspects of language use and understanding in the context of communication sciences and disorders.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 33101 HEARING AND SPEECH SCIENCE 3 Credit Hours

Acoustics, psychoacoustics and acoustics of speech production and perception.

Prerequisite: Admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 34102 APPLIED PHONETICS 3 Credit Hours

Basic principles of speech production and phonetic transcriptions of English with the international phonetic alphabet; emphasis on general American dialect.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 34103 ANATOMY AND PHYSIOLOGY OF SPEECH AND HEARING 3 Credit Hours

Functional anatomy and physiology of the respiratory, phonatory, articulatory, neural and auditory systems as they are used with normal and abnormal speech and hearing.

Prerequisite: SPA 34104.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 34104 SPEECH AND LANGUAGE ACQUISITION 3 Credit Hours

Normal development and linguistic analysis of language systems, including phonology, morphology, syntax, semantics and pragmatics.

Pre/corequisite: SPA 34102.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 34106 ARTICULATORY AND PHONOLOGICAL DISORDERS 3 Credit Hours

Assessment and remediation of disorders of articulation and phonology.

Prerequisite: SPA 34102 and SPA 34104; and admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 34107 LANGUAGE DISORDERS IN CHILDREN AND ADOLESCENTS 3 Credit Hours

Introduction to assessment and intervention procedures associated with language disorders in children and adolescents.

Prerequisite: SPA 34104.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 34210 SPEECH AND LANGUAGE DEVELOPMENT 3 Credit Hours

Normal development and linguistic analysis of language systems, including phonology, morphology, syntax, semantics and pragmatics. This course is for non-Speech Pathology and Audiology majors.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 43402 AUDIOMETRY 3 Credit Hours

(Slashed with SPA 53402) Measurement of human hearing by pure-tone and speech audiometry; evaluation of middle ear function by immittance audiometry; screening techniques; pathologies of the conductive and sensorineural systems.

Prerequisite: SPA 33101; and admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 43404 AURAL REHABILITATION 3 Credit Hours

(Slashed with SPA 53404) Basic principles, variables and techniques for understanding, evaluating and improving receptive communication of hearing-impaired individuals.

Prerequisite: SPA 33101 and SPA 34102 and SPA 43402; and admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 43405 CLINICAL PREPARATION IN AUDIOLOGY (ELR) 2 Credit Hours

Exercises and practical experiences in audiometric procedures, test interpretation and audiological diagnosis.

Prerequisite: Admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours).

Pre/corequisite: SPA 43402.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 1 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

SPA 44010 SOCIAL COMMUNICATION DEVELOPMENT AND DISORDERS IN AUTISM SPECTRUM DISORDERS 3 Credit Hours

(Slashed with SPA 54010) Provides an understanding of the social, communication and language needs of those with autism spectrum disorder, from childhood through adulthood. Examines the cognitive, neurological, social and environmental components influencing social, communicative functioning. Reviews contemporary assessment and intervention strategies. Explores the use of assistive technology to enhance social communicative functioning in those with autism spectrum disorder.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 44020 MEDICAL ASPECTS OF AUTISM SPECTRUM DISORDERS 3 Credit Hours

(Cross-listed with SPED 44020)(Slashed with SPED 54020) Description of medical issues facing individuals with autism spectrum disorder (ASD) and their families. Examination of etiology, co-occurring disabilities and disorder and treatment options in relation to individuals with autism spectrum disorder.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 44030 AUTISM SPECTRUM DISORDERS OVER THE LIFESPAN 3 Credit Hours

(Slashed with SPA 54030, SPA 74030 and SPED 54030) Provides students with a review of the significant aspects related to educational, social, vocational transitions for children, adolescents and young adults with autism spectrum disorder. Students learning skills necessary to evaluate and develop programs designed to meet the changing and long term needs of those with autism spectrum disorder.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 44089 VARIABLE TOPIC INTERNATIONAL EXPERIENCE IN SPEECH PATHOLOGY AND AUDIOLOGY (ELR) 1-4 Credit Hours

(Repeatable for credit)(Slashed with SPA 54089 and SPA 74089) A faculty-led study abroad experience that integrates traditional classroom learning with experiential activities and site visits outside the United States. International experience courses may have pre- and post-travel classroom study. Course activities may include, but are not limited to, classroom study, research, field work, internships and service learning.

Prerequisite: None.

Schedule Type: International Experience, Lecture

Contact Hours: 1-4 other

Grade Mode: Standard Letter-IP

Attributes: Experiential Learning Requirement

SPA 44096 INDEPENDENT STUDY: SPEECH PATHOLOGY AND AUDIOLOGY 1-6 Credit Hours

(Repeatable for credit) Readings and/or research on problems approved by the school director in consultation; with student's adviser and project director.

Prerequisite: Speech Pathology and Audiology major and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-18 other

Grade Mode: Standard Letter-IP

SPA 44111 NEURAL PROCESSES 3 Credit Hours

(Slashed with SPA 54111) Anatomy and physiology of the nervous system underlying human neuromotor movements. Topics include definition and fundamental concepts; afferent and efferent systems; cortical anatomy and function; cranial nerves; theories of brain function; and neural maturation and learning.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 44112 AGE-RELATED CHANGES IN COMMUNICATION 3 Credit Hours

(Slashed with SPA 54112) Nonpathological age-related changes in speech, language and voice. Topics include structural changes in orofacial, laryngeal and respiratory mechanism; sequelae for speech, language and voice in the elderly; effects of age on swallowing; facilitating conversational interactions with elderly individuals.

Prerequisite: Admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 44310 CLINICAL PROCEDURES IN SPEECH PATHOLOGY 3 Credit Hours

This course addresses evaluation and intervention procedures in the field of speech-language pathology across the lifespan.

Prerequisite: Admittance into the Speech Pathology and Audiology professional phase (minimum 3.000 overall GPA at 60 credit hours); and senior standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 44311 CLINICAL PREPARATION IN SPEECH-LANGUAGE PATHOLOGY (ELR) (WIC) 2 Credit Hours

The course covers the essential professional written communication associated with evaluation and intervention methodology for individuals with communication disorders.

Prerequisite: Admittance into the Speech Pathology and Audiology professional phase (3.000 overall GPA at 60 credit hours).

Pre/corequisite: SPA 44310.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement, Writing Intensive Course

SPA 53402 AUDIOMETRY 3 Credit Hours

(Slashed with SPA 43402) Measurement of human hearing by puretone and speech audiometry# evaluation of middle ear function by immittance audiometry# screening techniques# pathologies of the conductive and sensorineural systems.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 53404 AURAL REHABILITATION 3 Credit Hours

(Slashed with SPA 43404) Basic principles, variables and techniques for understanding, evaluating and improving receptive communication of hearing-impaired individuals.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 54010 SOCIAL COMMUNICATION DEVELOPMENT AND DISORDERS IN AUTISM SPECTRUM DISORDERS 3 Credit Hours

(Slashed with SPA 44010) Provides an understanding of the social, communication and language needs of those with autism spectrum disorder, from childhood through adulthood. Examines the cognitive, neurological, social and environmental components influencing social, communicative functioning. Reviews contemporary assessment and intervention strategies. Explores the use of assistive technology to enhance social communicative functioning in those with autism spectrum disorder.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 54030 AUTISM SPECTRUM DISORDERS OVER THE LIFESPAN 3 Credit Hours

(Cross-listed with SPED 54030)(Slashed with SPA 44030 and SPA 74030)

Provides students with a review of the significant aspects related to educational, social, vocational transitions for children, adolescents and young adults with autism spectrum disorder. Students learn skills necessary to evaluate and develop programs designed to meet the changing and long term needs of individuals with autism spectrum disorder.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 54089 VARIABLE TOPIC INTERNATIONAL EXPERIENCE IN SPEECH PATHOLOGY AND AUDIOLOGY 1-4 Credit Hours

(Repeatable for credit)(Slashed with SPA 44089 and SPA 74089) A faculty-led study abroad experience that integrates traditional classroom learning with experiential activities and site visits outside the United States. International experience courses may have pre- and post-travel classroom study. Course activities may include, but are not limited to, classroom study, research, field work, internships and service learning.

Prerequisite: Graduate standing.

Schedule Type: International Experience, Lecture

Contact Hours: 1-4 other

Grade Mode: Standard Letter-IP

SPA 54096 INDEPENDENT STUDY: SPEECH PATHOLOGY AND AUDIOLOGY 1-6 Credit Hours

(Repeatable for credit) Readings and/or research on problems approved by the school director in consultation with student's adviser and project director.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-18 other

Grade Mode: Standard Letter-IP

SPA 54111 NEURAL PROCESSES 3 Credit Hours

(Slashed with SPA 44111) Anatomy and physiology of the nervous system underlying human neuromotor movements. Topics include definition and fundamental concepts; afferent and efferent systems; cortical anatomy and function; cranial nerves; theories of brain function; and neural maturation and learning.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 54112 AGE-RELATED CHANGES IN COMMUNICATION 3 Credit Hours

(Slashed with SPA 44112) Nonpathological age-related changes in speech, language and voice. Topics include structural changes in orofacial, laryngeal and respiratory mechanism; sequelae for speech, language and voice in the elderly; effects of age on swallowing; facilitating conversational interactions with elderly individuals.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 54309 AUTISM SPECTRUM DISORDERS: THEORY AND DIAGNOSIS 3 Credit Hours

(Cross-listed with SPED 54309)(Slashed with SPED 44309 and SPA 74309) Provides an overview of autism spectrum disorder (ASD). Examines the history, characteristics and prevalence of ASD. The different theoretical models for understanding ASD are explored as they relate to assessment and intervention.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 60708 CRITICAL ANALYSIS OF RESEARCH 2 Credit Hours

(Slashed with SPA 70708) Development of a reading knowledge of research and the ability to evaluate the quality of research studies.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 63691 SEMINAR IN AUDIOLOGY 3 Credit Hours

(Repeatable for credit)(Slashed with SPA 73691) Research, readings and discussion in any of these areas: aural rehabilitation, amplification, psychoacoustics, auditory physiology, medical audiology, hearing conservation.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 3 other

Grade Mode: Standard Letter

SPA 64091 SEMINAR IN COMMUNICATION DISORDERS 1-3 Credit Hours

(Repeatable for credit) Special topics seminar for advanced students in speech-language pathology and audiology. Presentations and discussion of research projects are required.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1-3 other

Grade Mode: Standard Letter-S/U-IP

SPA 64093 VARIABLE TOPIC WORKSHOP IN COMMUNICATION DISORDERS 1-3 Credit Hours

(Repeatable for credit)(Slashed with SPA 74093) Variable topic workshop offered when need arises, either on or off campus to update training in a particular area of speech pathology.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

SPA 64096 INDIVIDUAL INVESTIGATION IN SPEECH PATHOLOGY AND AUDIOLOGY 1-6 Credit Hours

(Repeatable for credit) Independent study of topics to be selected in consultation with graduate faculty.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3.6-21.6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SPA 64098 RESEARCH 1-15 Credit Hours

(Repeatable for credit) Research for master's level graduate students.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Research

Contact Hours: 3.6-54 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SPA 64199 THESIS I 2-6 Credit Hours

(Repeatable for credit) Thesis students must register for a total of 6 credit hours, 2 to 6 credit hours in a single semester distributed over several semesters if desired.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Masters Thesis

Contact Hours: 7.2-21.6 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SPA 64299 THESIS II 2 Credit Hours

(Repeatable for credit) Thesis students must continue registration each semester until all degree requirements are met.

Prerequisite: SPA 64199; and graduate standing; and special approval.

Schedule Type: Masters Thesis

Contact Hours: 7.2 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SPA 64301 APHASIA 3 Credit Hours

(Slashed with SPA 74301) Neuroanatomy, etiologies, symptomatologies, evaluation procedures and treatment techniques relating to aphasia in adults.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64302 LANGUAGE ASSESSMENT AND INTERVENTION IN EARLY CHILDHOOD 3 Credit Hours

(Slashed with SPA 74302) Methods of language assessment and intervention for infants, toddlers and preschoolers who are either at risk or diagnosed as presenting language delays or disabilities.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64303 DISORDERS OF ARTICULATION AND PHONOLOGY 3 Credit Hours

(Slashed with SPA 74303) Diagnosis and remediation of children's articulation and phonological disorders.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64304 ACQUIRED COGNITIVE COMMUNICATIVE IMPAIRMENTS 3 Credit Hours

(Slashed with SPA 74304) Cognitive functions and etiologies, symptomologies, evaluation and treatment methods related to adults with cognitive communicative disorders subsequent to right hemisphere damage, traumatic brain injury, dementia and related impairments.

Prerequisite: Speech Language Pathology major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64305 FLUENCY DISORDERS 3 Credit Hours

(Slashed with SPA 74305) Nature, theories and their derived therapeutic approaches to the treatment of fluency disorders.

Prerequisite: Speech Language Pathology major; and graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64306 VOICE DISORDERS 2 Credit Hours

(Slashed with SPA 74306) Normal aspects of voice production, etiology and symptomatology of voice disorders, diagnostic procedures and management techniques.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 64308 LANGUAGE ASSESSMENT AND INTERVENTION WITH SCHOOL-AGE POPULATIONS 3 Credit Hours

(Slashed with SPA 74308) Theoretical background knowledge and practical assessment and intervention techniques for school-age children who demonstrate language disorders.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64311 AUTISM SPECTRUM DISORDERS 2 Credit Hours

Provides an overview of the social, communication and language needs of those with autism spectrum disorder. Reviews contemporary assessment and intervention strategies. This course is designed to prepare pre-service speech language pathologists with foundational information about autism spectrum disorders.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 64312 MOTOR SPEECH DISORDERS IN CHILDREN AND ADULTS 3 Credit Hours

(Slashed with SPA 74312) Anatomic and physiologic bases of congenital and acquired motor speech disorders. Etiology, symptomatology, evaluation and treatment techniques related to variety of motor speech disorders in children and adults.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64354 PEDIATRIC MEDICAL ISSUES 2 Credit Hours

(Slashed with SPA 74354) Nature and rehabilitative procedures for speech-language pathology practice with pediatric medical issues, including dysphagia, maxillofacial anomalies and resonance disorders.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 64356 ADULT DYSPHAGIA 3 Credit Hours

(Slashed with SPA 74356) Anatomy, etiologies, symptomatology, evaluation procedures and treatment techniques relating to swallowing disorders in adults.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64492 CLINICAL PRACTICE IN SPEECH PATHOLOGY AND AUDIOLOGY 8 Credit Hours

(Repeatable for credit) Supervised clinical practice with clients who have speech, hearing or language problems.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 24 other

Grade Mode: Standard Letter-IP

SPA 64525 PUBLIC SCHOOL TECHNIQUES IN COMMUNICATION DISORDERS: INQUIRY INTO PROFESSIONAL PRACTICE 3 Credit Hours

Inquiry into speech pathology and audiology as practiced in the school setting; emphasis on speech language pathologist or audiologist as disciplined investigator. Combination of themes, including organizational procedures, therapy techniques, collaboration, ethics and research.

Prerequisite: Graduate standing; and special approval.

Corequisite: SPA 64592.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64592 STUDENT TEACHING IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY 8 Credit Hours

Inquiry into speech pathology and audiology as practiced in the school setting; emphasis on speech language pathologist or audiologist as disciplined investigator. Combination of themes including organization, procedures, therapy techniques, collaboration, ethics and research. Students are required to complete Bureau of Criminal Investigation and Identification (BCII) and Federal Bureau of Investigation (FBI) background checks and submit the results to authorized personnel at their assigned "school/agency" before the first day of the semester in which student teaching/ internship will take place.

Prerequisite: Graduate standing; and special approval.

Corequisite: SPA 64525.

Schedule Type: Practical Experience

Contact Hours: 40 other

Grade Mode: Satisfactory/Unsatisfactory

SPA 64600 RESEARCH METHODS IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY 3 Credit Hours

(Slashed with SPA 74600) Methodologies for collecting, analyzing and interpreting data for clinical and research purposes in speech language pathology and audiology.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 64601 COMMUNICATION MODALITIES AND ASSISTIVE TECHNOLOGY 2 Credit Hours

(Slashed with SPA 74601) Nature, etiologies and correlates of speech/ language communication disorders and differences that may indicate a need for a multi-modal communication approach. Includes an emphasis on assistive technology for communication, language, learning and literacy.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 2 other

Grade Mode: Standard Letter

SPA 65092 CLINICAL PRACTICUM I IN SPEECH LANGUAGE PATHOLOGY 2-3 Credit Hours

(Repeatable for credit) Supervised, introductory clinical experience in assessment and intervention within the Scope of Practice of speech-language pathology per the current practice policy and standards of the American Speech Language Hearing Association (ASHA). To facilitate clinical competency and accrual of required clinical clock hours per current ASHA standards, students must enroll in clinical practicum each semester that they are not enrolled in externship or student teaching. Practicum requirements may include attendance at a weekly clinical colloquium. Students must earn minimum B grade in this course to register for SPA 65192.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Colloquium, Practical Experience

Contact Hours: 6-9 other

Grade Mode: Standard Letter-IP

SPA 65192 CLINICAL PRACTICUM II IN SPEECH AND LANGUAGE PATHOLOGY 2-3 Credit Hours

(Repeatable once for credit) Supervised clinical experience in assessment and intervention with populations within the Scope of Practice of speech-language pathology per the current practice policies and standards of the American Speech-Language Hearing Association (ASHA). To facilitate increased independence toward clinical competency and accrual of required clinical clock hours per current ASHA standards, students must enroll in clinical practicum each semester that they are not enrolled in externship or student teaching. Students must earn minimum B grade in this course to register for SPA 65292.

Prerequisite: SPA 65092 with a minimum B grade; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 6-9 other

Grade Mode: Standard Letter-IP

SPA 65292 CLINICAL PRACTICUM III IN SPEECH LANGUAGE PATHOLOGY 2-3 Credit Hours

(Repeatable for credit) Supervised clinical experience in assessment and intervention with populations within the Scope of Practice of speech-language pathology per the current practice policies and standards of the American Speech-Language Hearing Association (ASHA). To facilitate increased independence in clinical competency and accrual of required clinical clock hours per current ASHA standards, students must enroll in a clinical practicum each semester that they are not enrolled in externship or student teaching. Students must earn a minimum B grade in this course to register in SPA 65392.

Prerequisite: SPA 65192 with a minimum B grade; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 6-9 other

Grade Mode: Standard Letter-IP

SPA 65392 CLINICAL PRACTICUM IV IN SPEECH LANGUAGE PATHOLOGY 2-3 Credit Hours

(Repeatable for credit) Supervised clinical experience in assessment and intervention with populations within the Scope of Practice of speech-language pathology per the current practice policies and standards of the American Speech-Language Hearing Association (ASHA). To facilitate increased independence in clinical competency and accrual of required clinical clock hours per current ASHA standards, students must enroll in a clinical practicum each semester that they are not enrolled in an externship or student teaching. Students must earn a minimum B grade in this course to register for externship or student teaching.

Prerequisite: SPA 65292 with a minimum B grade; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 6-9 other

Grade Mode: Standard Letter-IP

SPA 65492 EXTERNSHIP IN SPEECH LANGUAGE PATHOLOGY: ADULT 4-8 Credit Hours

(Repeatable for credit) Considered a culminating clinical experience. Includes supervised, hands-on clinical experience with patients in adult care settings such as hospitals, rehabilitation and long-term care facilities.

Prerequisite: SPA 65292 or SPA 65392 with a minimum B grade; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 20-40 other

Grade Mode: Standard Letter-IP

SPA 65592 EXTERNSHIP IN SPEECH LANGUAGE PATHOLOGY: PEDIATRIC 4-8 Credit Hours

(Repeatable for credit) Considered a culminating clinical experience, students may choose this course as an alternative to student teaching in speech-language pathology. Includes supervised, hands-on clinical experience with children and adolescents in pediatric care settings such as hospitals and other habilitation and rehabilitation facilities.

Prerequisite: SPA 65292 or SPA 65392 with a minimum B grade; and graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 20-40 other

Grade Mode: Standard Letter-IP

SPA 70192 GRADUATE AUDIOLOGIST I 3 Credit Hours

Supervised clinical practicum in audiology, which encompasses audiologic assessments and audiologic habilitation.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 9 other

Grade Mode: Standard Letter

SPA 70292 GRADUATE AUDIOLOGIST II 3 Credit Hours

Supervised clinical practicum in audiology requiring the independent performance of audiologic assessment procedures, audiologic rehabilitation and vestibular assessment and rehabilitation.

Prerequisite: SPA 70192; and doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 9 other

Grade Mode: Standard Letter

SPA 70392 GRADUATE AUDIOLOGIST III 6 Credit Hours

Supervised clinical practicum in audiology, which encompasses the entire range of audiologic procedures, including neurophysiological based procedures.

Prerequisite: Doctoral standing.

Schedule Type: Practical Experience

Contact Hours: 18 other

Grade Mode: Standard Letter

SPA 70492 GRADUATE AUDIOLOGIST IV 8 Credit Hours

Full-time clinical practicum in audiology at an off-campus site. Students taking the course must have successfully completed the Praxis Examination.

Prerequisite: Doctoral standing.

Schedule Type: Practical Experience

Contact Hours: 24 other

Grade Mode: Standard Letter

SPA 70592 GRADUATE AUDIOLOGIST V 8 Credit Hours

Full-time external audiology clinical placement with a licensed and appropriately credentialed preceptor who provides clinical teaching. This experience provides a capstone learning experience in the full scope of practice in the profession of audiology.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 24 other

Grade Mode: Standard Letter

SPA 70615 CENTRAL AUDITORY PROCESSING EVALUATION AND MANAGEMENT 2 Credit Hours

Study of audiologic evaluation and (re)habilitation procedures for people central auditory processing disorders.

Prerequisite: SPA 70705 and SPA 70706; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70616 HEARING-AID FITTING AND SELECTION ACROSS THE LIFESPAN 4 Credit Hours

Examination of the theory and practice of fitting hearing aids across the lifespan. Emphasis on special clinical procedures, research needs and evolving technology in hearing instruments.

Prerequisite: SPA 70713; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70618 IMPLANTABLE TECHNOLOGY 4 Credit Hours

Study of implantable devices in children and adults, including equipment, candidacy, programming, fitting and troubleshooting.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70627 MULTICULTURAL ISSUES IN AUDIOLOGY 2 Credit Hours

An introduction to varying cultures and the audiologist's roles and responsibilities in planning treatment with a member of these cultures.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70630 PRACTICE MANAGEMENT IN AUDIOLOGY 3 Credit Hours

Study of issues that impact the management of audiological practices, including establishing a private practice, reimbursement, marketing, record keeping and professional liability.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70691 SEMINAR IN AUDIOLOGY 2 Credit Hours

(Repeatable for credit) Selected current topics in audiology with emphasis on review of current literature.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Seminar

Contact Hours: 2 other

Grade Mode: Standard Letter

SPA 70701 BASIC AND APPLIED PHYSICAL ACOUSTICS FOR AUDIOLOGY 4 Credit Hours

Study of physical acoustics, basic electricity and electronics, as well as principles, methodology, calibration and maintenance of audiologic equipment.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70702 ANATOMY AND PHYSIOLOGY OF PERIPHERAL AUDITORY AND VESTIBULAR SYSTEMS 4 Credit Hours

A study of the anatomy, biophysics and physiology of the auditory and vestibular systems.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70703 SPEECH ACOUSTICS AND SPEECH PERCEPTION 2 Credit Hours

Study of the nomenclature, acoustics, measurement and perception of speech sounds and their impact and interpretation in audiology.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70704 CRITICAL ANALYSIS OF RESEARCH IN AUDIOLOGY 2 Credit Hours

General introduction to the research process with an emphasis on acquiring a reading knowledge of research and an ability to evaluate research.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70705 AUDITORY DISORDERS 2 Credit Hours

Study of conditions/diseases that can affect the auditory system.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70706 ANATOMY AND PHYSIOLOGY UNDERLYING NEURO-OTOLOGY 4 Credit Hours

An in-depth study of the anatomy and physiology of the central auditory and vestibular nervous system. (Includes a lab.)

Prerequisite: SPA 70702; and Audiology major; and doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

SPA 70707 PSYCHOACOUSTICS 3 Credit Hours

Study of the principles, procedures and research of psychoacoustics; the relationships between the physical dimensions of auditory stimuli and the resultant perceptual experience with normal and impaired hearing.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70708 CRITICAL ANALYSIS OF RESEARCH 2 Credit Hours

(Slashed with SPA 60708) Development of a reading knowledge of research and the ability to evaluate the quality of research studies.

Prerequisite: SPA 70704; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70709 AUDIOLOGIC ASSESSMENT 3 Credit Hours

Theoretical basis for tests underlying basic audiologic assessments.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70710 INDUSTRY AND COMMUNITY NOISE 3 Credit Hours

Theoretical principles of noise measurement; etiology of noise-induced hearing loss and acoustic trauma; industrial hearing conservation programs; occupational safety and health act; community and recreational noise evaluation and management.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70712 DIAGNOSIS OF AUDITORY DISORDERS 3 Credit Hours

Underlying theory and principles of administration and interpretation of site-of-lesion tests.

Prerequisite: SPA 70709; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70713 HEARING AID TECHNOLOGY 4 Credit Hours

Study of amplification systems for the hearing impaired.

Prerequisite: SPA 70701; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70714 GERONTOLOGICAL ISSUES IN AUDIOLOGY 3 Credit Hours

Physiological, psychological and sociological theories of aging with a focus on the etiology, symptomatology, assessment and rehabilitation of older adults with hearing impairments.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70717 PEDIATRIC AUDIOLOGY 3 Credit Hours

Study of audiologic diagnostic and auditory habilitative protocols for the birth-to-3 population. Both assessment and management strategies are emphasized.

Prerequisite: SPA 70709; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70719 COUNSELING IN AUDIOLOGY 3 Credit Hours

Focus on interviewing, counseling and interacting with individuals with hearing impairments, their families and significant others.

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70721 EVALUATION AND MANAGEMENT OF BALANCE DISORDERS 3 Credit Hours

Study of the balance mechanism; differential diagnostic assessment of balance disorders, including electronystagmography, posturography and rotational testing; rehabilitation of the balance disordered patient. (Lab included.)

Prerequisite: Audiology major; and doctoral standing.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

SPA 70725 MEDICAL MANAGEMENT OF AUDITORY DISORDERS 2 Credit Hours

A study of the multidisciplinary approach to medical/surgical management of patients with auditory and vestibular disorders.

Prerequisite: SPA 70712; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 70726 ELECTROPHYSIOLOGICAL TECHNIQUES IN AUDIOLOGY 3 Credit Hours

Study of evoked responses used in diagnostic audiology, including P300; audiology verification (VER); auditory late response (ALR); electroneuronography (ENoG); middle latency response (MLR); electrocochleography (ECoChG); auditory brainstem response (ABR); and steady-state evoked responses (SSER).

Prerequisite: SPA 70706; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 70732 AUDIOLOGIC TREATMENT ACROSS THE LIFESPAN 4 Credit Hours

Study of current methodologies employed in the audiologic treatment of people with hearing loss across the lifespan. Implementation of remedial strategies is emphasized.

Prerequisite: SPA 70616; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70733 ADVANCED ELECTROPHYSIOLOGIC AND VESTIBULAR MEASURES 4 Credit Hours

Advanced considerations in balance function assessment and management and in the study of evoked responses used in diagnostic audiology.

Prerequisite: SPA 70721 and SPA 70726; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 4 lecture

Grade Mode: Standard Letter

SPA 70734 PRINCIPLES IN PRECEPTING 1 Credit Hour

Examination of the concepts and practices essential to the preceptor role. Emphasis on professional standards, adult learning theories, communication styles, ethical principles and the multiple roles of a preceptor (educator, role model, mentor, facilitator and evaluator).

Prerequisite: SPA 70748; and Audiology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

SPA 70753 LABORATORY FOR ELECTROPHYSIOLOGICAL TECHNIQUES IN AUDIOLOGY 1 Credit Hour

Laboratory exercises for the assessment of auditory disorders, including electrocochleography, the auditory brainstem response and auditory steady state responses.

Prerequisite: Audiology major; and doctoral standing.

Pre/corequisite: SPA 70726.

Schedule Type: Laboratory

Contact Hours: 3 lab

Grade Mode: Standard Letter

SPA 70754 LABORATORY FOR EVALUATION AND MANAGEMENT OF BALANCE DISORDERS 1 Credit Hour

Laboratory exercises for the assessment of balance disorders, including videonystagmography, posturography and informal evaluations; approaches for the rehabilitation and treatment of the balance disordered patient.

Prerequisite: Audiology major; and doctoral standing.

Pre/corequisite: SPA 70721.

Schedule Type: Laboratory

Contact Hours: 3 lab

Grade Mode: Standard Letter

SPA 70755 LABORATORY FOR ADVANCED ELECTROPHYSIOLOGIC AND VESTIBULAR MEASURES 1 Credit Hour

Laboratory exercises for the assessment, management and treatment of auditory and vestibular disorders, including early, middle and late auditory evoked potentials and advanced vestibular measures.

Prerequisite: Audiology major; and doctoral standing.

Pre/corequisite: SPA 70733.

Schedule Type: Laboratory

Contact Hours: 3 lab

Grade Mode: Standard Letter

SPA 70791 FOURTH-YEAR SEMINAR 1 Credit Hour

(Repeatable for credit) In-depth consideration of topics/issues in the practice of audiology with emphasis upon issues related to clinical rotation.

Prerequisite: Doctoral standing; and special approval.

Pre/corequisite: SPA 70492 or SPA 70592.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Standard Letter

SPA 70892 INTERNSHIP III 2 Credit Hours

(Repeatable for credit) Clinical practicum in audiology during which students perform discrete tasks under supervision.

Prerequisite: Audiology major; and doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 18 other

Grade Mode: Standard Letter

SPA 70992 INTERNSHIP IV 2 Credit Hours

(Repeatable for credit) Clinical practicum in audiology during which students perform discrete tasks under supervision.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 18 other

Grade Mode: Standard Letter

SPA 73691 SEMINAR IN AUDIOLOGY 3 Credit Hours

(Repeatable for credit)(Slashed with SPA 63691) Research, readings and discussion in any of these areas: aural rehabilitation, amplification, psychoacoustics, auditory physiology, medical audiology, hearing conservation.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 3 other

Grade Mode: Standard Letter

SPA 74030 AUTISM SPECTRUM DISORDERS OVER THE LIFESPAN 3 Credit Hours

(Slashed with SPA 44030, SPA 54030 and SPED 54030) Provides students with a review of the significant aspects related to educational, social, vocational transitions for children, adolescents and young adults with autism spectrum disorder. Students learn skills necessary to evaluate and develop programs designed to meet the changing and long term needs of individuals with autism spectrum disorder.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74089 VARIABLE TOPIC INTERNATIONAL EXPERIENCE IN SPEECH PATHOLOGY AND AUDIOLOGY 1-4 Credit Hours

(Repeatable for credit)(Slashed with SPA 44089 and SPA 54089) A faculty-led study abroad experience that integrates traditional classroom learning with experiential activities and site visits outside the United States. International experience courses may have pre- and post-travel classroom study. Course activities may include, but are not limited to, classroom study, research, field work, internships and service learning.

Prerequisite: Doctoral standing.

Schedule Type: International Experience, Lecture

Contact Hours: 1-4 other

Grade Mode: Standard Letter-IP

SPA 74093 VARIABLE TOPIC WORKSHOP IN COMMUNICATION DISORDERS 1-3 Credit Hours

(Repeatable for credit)(Slashed with SPA 64093) Variable topic workshop offered when need arises, either on or off campus to update training in a particular area of speech pathology.

Prerequisite: Doctoral standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

SPA 74301 APHASIA 3 Credit Hours

(Slashed with SPA 64301) Neuroanatomy, etiologies, symptomatologies, evaluation procedures and treatment techniques relating to aphasia in adults.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74302 LANGUAGE ASSESSMENT AND INTERVENTION IN EARLY CHILDHOOD 3 Credit Hours

(Slashed with SPA 64302) Methods of language assessment and intervention for infants, toddlers and preschoolers who are either at risk or diagnosed as presenting language delays or disabilities.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74303 DISORDERS OF ARTICULATION AND PHONOLOGY 3 Credit Hours

(Slashed with SPA 64303) Diagnosis and remediation of children's articulation and phonological disorders.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74304 ACQUIRED COGNITIVE COMMUNICATIVE IMPAIRMENTS 3 Credit Hours

(Slashed with SPA 64304) Cognitive functions and etiologies, symptomologies, evaluation and treatment methods related to adults with cognitive communicative disorders subsequent to right hemisphere damage, traumatic brain injury, dementia and related impairments.

Prerequisite: Speech Language Pathology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74305 FLUENCY DISORDERS 3 Credit Hours

(Slashed with SPA 64305) Nature, theories and their derived therapeutic approaches to the treatment of fluency disorders.

Prerequisite: Speech Language Pathology major; and doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74306 VOICE DISORDERS 2 Credit Hours

(Slashed with SPA 64306) Normal aspects of voice production, etiology and symptomatology of voice disorders, diagnostic procedures and management techniques.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 74308 LANGUAGE ASSESSMENT AND INTERVENTION WITH SCHOOL-AGE POPULATIONS 3 Credit Hours

(Slashed with SPA 64308) Theoretical background knowledge and practical assessment and intervention techniques for school-age children who demonstrate language disorders.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74309 AUTISM SPECTRUM DISORDERS: THEORY AND DIAGNOSIS 3 Credit Hours

(Slashed with SPA 54309, SPED 44309 and SPED 54309) Provides an overview of autism spectrum disorder (ASD). Examines the history, characteristics and prevalence of ASD. The different theoretical models for understanding ASD are explored as they relate to assessment and intervention.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74312 MOTOR SPEECH DISORDERS IN CHILDREN AND ADULTS 3 Credit Hours

(Slashed with SPA 64312) Anatomic and physiologic bases of congenital and acquired motor speech disorders. Etiology, symptomatology, evaluation and treatment techniques related to variety of motor speech disorders in children and adults.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74354 PEDIATRIC MEDICAL ISSUES 2 Credit Hours

(Slashed with SPA 64354) Nature and rehabilitative procedures for speech-language pathology practice with pediatric medical issues, including dysphagia and maxillofacial anomalies and resonance disorders.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

SPA 74356 ADULT DYSPHAGIA 3 Credit Hours

(Slashed with SPA 64356) Anatomy, etiologies, symptomatologies, evaluation procedures and treatment techniques relating to swallowing disorders in adults.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74492 CLINICAL PRACTICE IN SPEECH PATHOLOGY AND AUDIOLOGY 1-12 Credit Hours

(Repeatable for credit) Supervised clinical practice with patients who have speech, hearing or language problems.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-36 other

Grade Mode: Standard Letter-IP

SPA 74592 CLERKSHIP I 1 Credit Hour

Introduction to clinical practicum in audiology. Directed observation of clinical practice, including audiologic diagnosis and audiologic rehabilitation are required.

Prerequisite: Audiology major; and doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3 other

Grade Mode: Satisfactory/Unsatisfactory

SPA 74600 RESEARCH METHODS IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY 3 Credit Hours

(Slashed with SPA 64600) Methodologies for collecting, analyzing and interpreting data for clinical and research purposes in speech language pathology and audiology.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SPA 74601 COMMUNICATION MODALITIES AND ASSISTIVE TECHNOLOGY 2 Credit Hours

(Slashed with SPA 64601) Nature, etiologies and correlates of speech language communication disorders and differences that may indicate a need for a multi-modal communication approach. Includes an emphasis on assistive technology for communication language, learning and literacy.

Prerequisite: Speech Language Pathology major; and doctoral standing.

Schedule Type: Seminar

Contact Hours: 2 other

Grade Mode: Standard Letter

SPA 74692 CLERKSHIP II 1 Credit Hour

Introduction to clinical practicum in audiology. Directed observation of clinical practice, including audiologic diagnosis and audiologic rehabilitation are required.

Prerequisite: Audiology major; and doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3 other

Grade Mode: Satisfactory/Unsatisfactory

SPA 75792 INTERNSHIP I 1 Credit Hour

(Repeatable for credit) Clinical practicum in audiology during which students perform discrete tasks under supervision.

Prerequisite: Audiology major; and doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3 other

Grade Mode: Standard Letter

SPA 76792 INTERNSHIP II 1 Credit Hour

(Repeatable for credit) Supervised clinical practicum in audiology during which students perform discrete clinical tasks while under supervision.

Prerequisite: SPA 75792; and Audiology major; doctoral standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 18 other

Grade Mode: Standard Letter

SPA 84091 SEMINAR IN COMMUNICATION DISORDERS 2 Credit Hours

(Repeatable for credit) Special topics seminar for advanced students in speech-language pathology and audiology. Presentations and discussion of research projects are required.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 2 other

Grade Mode: Standard Letter

SPA 84096 INDIVIDUAL INVESTIGATION IN SPEECH PATHOLOGY AND AUDIOLOGY 1-3 Credit Hours

(Repeatable for credit) Independent study of topics to be selected in consultation with graduate faculty.

Prerequisite: Doctoral standing.

Schedule Type: Individual Investigation

Contact Hours: 3.6-10.8 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SPA 84098 RESEARCH 1-15 Credit Hours

(Repeatable for credit) Research opportunities for doctoral students who have not yet passed their candidacy examination.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Research

Contact Hours: 3.6-54 other

Grade Mode: Standard Letter-IP

SPA 84199 DISSERTATION I 15 Credit Hours

(Repeatable for credit) Doctoral dissertation for which registration in at least two semesters is required, first of which will be semester in which dissertation work is begun and continuing until the completion of 30 credit hours.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

SPA 84299 DISSERTATION II 15 Credit Hours

(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 credit hours of SPA 84199 and continuing until all degree requirements are met.

Prerequisite: SPA 84199; and doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 18 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Sport, Exercise and Performance Psychology (SEPP)

SEPP 20026 PSYCHOLOGICAL FOUNDATIONS OF SPORT AND EXERCISE 3 Credit Hours

Psychological Foundations of Sport and Exercise is an overview of foundational concepts and principles essential to understanding the psychological aspects of sport and exercise. Emphasis is given to psychologically based frameworks and their application to sport; in particular, exercise behavior, performance enhancement, mental skills, health and well-being. Coursework reflects an application of sport and exercise psychology concepts to practitioners in sport-related professions such as coaching, athletic training, sport management, physical education or fitness instruction, among others.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 30019 PSYCHOSOCIAL PERSPECTIVES FOR GROWTH AND DEVELOPMENT IN YOUTH SPORT 3 Credit Hours

This course provides a holistic approach to youth sport participation. Pulling from the most current knowledge and views from a diversity of disciplines the course addresses comprehensive and relevant considerations in the field and brings attention to the influences impacting children and youth participating in a range of sport and performance activities. Knowledge from this course applies to any professional working with children and adolescents, from a leadership standpoint; such as coaches, teachers, dance, music or other instructors of any performance-related activity.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 32250 PSYCHOLOGICAL ASPECTS OF SPORT INJURY 3 Credit Hours

This course examines the various factors impacting athletes prior to and after a sport injury occurs. Understanding the relationship between biological, psychological, and social factors is critical to understanding, preventing, and rehabbing from a sport injury. Students will learn more about the consequences of sport injury, various psychological responses to sport injury, and the culture surrounding sport injury for athletes at different levels. In addition, various psychological concepts that can influence rehabilitation from an injury will be explored.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 40020 HIGH PERFORMANCE ATHLETES IN SPORT 3 Credit Hours

This course provides an understanding of various aspects of training, coaching, and best practices in working with athletes in a high-performance environment along with an emphasis on the social-psychological factors related to the successful performance of elite level athletes and teams.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 40221 EXERCISE PSYCHOLOGY 3 Credit Hours

This course is designed to examine the science and practice of exercise psychology from both a theoretical and applied perspective. Students are engaged in a comprehensive inquiry into behaviors and lifestyles that influence physical and mental health from physical activity, exercise and psychological lenses. Students explore topics such as stress, anxiety, cognitive functioning, mood, body image, personality, emotion and childhood inactivity/obesity as they relate to exercise behaviors and contexts. Students gain a general understanding of issues in exercise psychology related to theory, practice and research. In addition, students develop practical skills to promote exercise adherence and create an exercise intervention program.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 45007 PRINCIPLES AND APPLICATION OF SPORT PSYCHOLOGY 3 Credit Hours

This course encompasses the most current developments in the field of psychology with a strong foundation of the principles of human behavior in the sport and movement sciences. It incorporates sound practical theory with a focus on the application of that knowledge to be readily used by students in a range of sport and movement science careers; such as athletic training, coaching, sport management, consulting, physical education teachers and related areas with the goal to improve the sport performance and experience for all.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 45092 PRACTICUM IN SPORT PERFORMANCE (ELR) 1-3 Credit Hours

(Repeatable for credit) Supervised practical experiences within sport, exercise and performance psychology that are integrated with academic instruction. Forty-five contact hours per credit hour.

Prerequisite: Senior standing; and sport, exercise and performance psychology major or minor; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-9 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

SEPP 45300 MOTIVATION IN SPORT, PERFORMANCE AND MOVEMENT SETTINGS 3 Credit Hours

This course provides an in-depth and wide-ranging look at motivational theories and its application to sport, performance and physical activity.

It combines the many theoretical concepts of the diverse frameworks and principles with a survey of motivational interventions performed in the sport domain. Students leave the class with a rigorous and comprehensive knowledge of constructs, cutting-edge research, effective interventions and future outlook of motivation in sport.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

SEPP 48225 SPORT PERFORMANCE PSYCHOLOGICAL INTERVENTIONS 3 Credit Hours

This course combines the theoretical concepts of sport and performance psychology with applied skill development to enhance performance. Students will gain knowledge of psychological skills training, learn techniques and develop confidence in their skills to work with athletes and performers. The focus of this course is on both, educational psychological interventions for personal development as well as teaching athletes strategies to enhance mental skill. Learning will be done hands-on, via case studies or scenario-based activities. Through the course of this class this course, students will create and present their individual program for an athlete or performer. This course will include learning and understanding the APA/AASP ethics' code to develop awareness of the boundaries of ethical conduct of the profession.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter