DEPARTMENT OF HEALTH PROFESSIONS

330-941-3327

The department offers certificate, associate, baccalaureate, and master’s degree programs for future members of the health care delivery and public health professions.

General Education Courses

The department offers one course that satisfies general education requirements. KSS 1500 (https://catalog.ysu.edu/search/?P=KSS%201500/) Physical Activity Core Concepts may be applied in the Social and Personal Awareness domain. Please note that in order for KSS 1500 (https://catalog.ysu.edu/search/?P=KSS%201500/) Physical Activity Core Concepts to count in the SPA domain, students must take any two KSS Activity Classes (https://catalog.ysu.edu/undergraduate/colleges-programs/college-health-human-services/department-human-performance-exercise-science/#coursestext) in addition to KSS 1500 (https://catalog.ysu.edu/search/?P=KSS%201500/) Physical Activity Core Concepts. These courses do not have to be taken concurrently.

Associate programs are offered in:

- Emergency Medical Services
- Medical Laboratory Technology

Baccalaureate programs are offered in:

- Allied Health Completion Program
- Dental Hygiene
- Didactic Program in Dietetics
- Exercise Science
- Public Health, Health Education/ Health Promotion Track
- Public Health, Environmental Health Track
- Medical Laboratory Science
- Respiratory Care
- Gerontology
- Long Term Care Administration

Online Undergraduate Degree Programs

- Allied Health (BSAS)
- Public Health (BSAS)

Certificate programs are offered in:

- Emergency Medical Technician (EMT)
- Paramedic
- Health Information Systems
- Polysomnography
- Applied Gerontology

Minors are offered in:

- Minor in Community Health Planning and Evaluation
- Minor in Environmental Health and Safety
- Minor in Public Health
- Minor in Wellness
- Minor in Gerontology

Master’s degree programs are offered in:

- Respiratory Care
- Dietetics Future Model (DFM) – Master's in Public Health (MPH)
- Gerontology

The master’s degree program in respiratory care is available for licensed respiratory therapists. The master’s in Dietetics Future Model (DFM) program is a hybrid dietetics and public health master’s degree. This program uses a competency-based education model (CBM). The Master of Arts degree has an interdisciplinary focus on social epidemiology and aging. The program differs from the few others of its kind in the state, and it joins only a small number of other programs in the country. For more information regarding the Respiratory Care program, the Dietetics in Public Health, or Gerontology, refer to the graduate catalog.

There is a restriction on the number of students that can be accepted into the following programs since only a limited number of students can be accommodated: Medical laboratory science (medical technology), dental hygiene, and respiratory care. Detailed information on admission criteria and closing dates for applications are available in the Department of Health Professions, the Bitonte College of Health and Human Services Dean's Office, or the Admissions Office.

Important Notice

Fingerprinting, a criminal background check, and drug testing may be required as a condition for working with a variety of sites used by programs offered in this department. Some sites used by programs offered in the department require that a person have no felony convictions and have passed a drug test within the past year. Students unable to meet these site requirements may not be able to complete their degree from the department. If you have questions concerning these requirements, please see an advisor in the department.

For additional information, please visit the Office of Distance Education by e-mail distanceed@ysu.edu or by phone at (330) 941-1516.

Chair
Sara Michaliszyn, Ph.D., Associate Professor, Acting Chair
Professor
Kelly Colwell, Ed.D., Assistant Professor
Tiffany F. Hughes, Ph.D., Associate Professor
Debbie Juruaz, D.D.S., Professor
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Nicolette Powe, Dr.P.H., Assistant Professor
Amanda Roby, M.H.H.S., Assistant Professor
Salvatore Sanders, Ph.D., Professor
Suzanne Smith, M.Ed., Associate Professor
Silvia Stefan, Ed.D., Assistant Professor
Daniel J. Van Dussen, Ph.D., Professor
Mary Yacovone, M.Ed., Professor
Lecturer
Application of current health care philosophies in disease prevention. In-depth
AHLT 3708 Preventive Public Health Care 3 s.h.
AHLT 3704 Quantitative Methods in Health Sciences 3 s.h.
AHLT 3705 Pharmacotherapeutics 3 s.h.
AHLT 3706 Practice Management for Dental Hygiene 3 s.h.
AHLT 3707 Clinical Informatics for the Healthcare Provider 3 s.h.
Prelimi...
AHLT 3709 **Elements of Urban Environmental Health Practices** 3 s.h.
Focus on development and implementation issues of environmental and public health programs necessary for urban and rural communities to meet acceptable public health standards at the local health department level with emphasis on resources and staffing. AHLT 3708, or permission of instructor. Also listed as PHLT 3709.

AHLT 3710 **Gerodontology** 3 s.h.
In-depth study of geriatrics as it relates to dental hygiene care and specific concerns of the elderly. An extramural experience with a geriatric patient.
Prereq.: DHYG 1513.

AHLT 3711 **Health Care Information Systems** 3 s.h.
The course is comprehensive analysis of the concepts and applications of medical informatics. Relevant technologies and 'real world' skills are presented in the field of Medical Informatics using data and medical software.
Prereq.: AHLT 3704 or consent of instructor.

AHLT 3717 **Health Care Policy** 3 s.h.
A comprehensive overview of the American healthcare system. Particular attention given to the design and implementation of the Affordable Care Act.
Prereq.: BIOL 1545 or EMS 1501 or MATC 2600 or MLT 1501 or AHLT major or POL 1560 or permission of instructor.

AHLT 3720 **EMS Management** 3 s.h.
A review of EMS system design, staffing, chain of command, medical education, policies and procedures, record keeping, inter-agency relationships, community resources and involvement, and legal aspects relevant to private and public emergency medical services.
Prereq.: EMS 2614.

AHLT 3721 **Pediatric Emergency Care** 3 s.h.
A study of the pathophysiology, symptomatology, advanced diagnostic and therapeutic techniques of medical and traumatic emergencies unique to the pediatric patient.
Prereq.: EMS 2640.

AHLT 3740 **Pathology of Infectious Diseases** 3 s.h.
Pathology, prevention, transmission, and treatment of infectious disease; emphasis on nosocomial, opportunistic, and emerging bacterial, fungal, parasitic, and viral organisms.
Prereq.: BIOL 1545 or BIOL 1551 and BIOL 1552, or permission of instructor.

AHLT 3745 **Impact of Medical Records on Healthcare Reimbursement** 3 s.h.
This course is designed to provide the Health Care Professional with knowledge of private, group and government insurance submissions, as well as the diagnostic and procedural coding system to manage electronic medical records. A review of ethical and legal requirements will be examined in relation to laws and regulations as they apply to insurance submission and electronic health records as well.
Prereq.: MATC 2602, MATC 2612 or MATC 2600 or approval from instructor.

AHLT 3755 **Principles of Occupational Health and Safety** 3 s.h.
Contemporary concepts of occupational health and safety as they apply to health-related environments. Includes development of elements needed to implement comprehensive health and safety plans.
Prereq.: AHLT 3708.

AHLT 4801 **Special Topics** 1-3 s.h.
The directed study and research of a special problem or issue related to the health field. The topic of interest allows the student to participate in the investigation of aspects of administration, education, business, or research as these pertain to the particular health specialty. May be repeated for a total of 6 s.h.
Prereq.: AHLT 5840 or permission of instructor.

AHLT 4804 **Stress and the Health Care Professional** 3 s.h.
Personal reactions of those involved in health education or the delivery of health care to patients, families, and their health environment. Indicators of stress and coping strategies, organizational systems, communication theory, conflict resolution, problem solving, and burnout.
Prereq.: AHLT 5840 or permission of instructor.

AHLT 4805 **Health Education for Allied Health** 3 s.h.
University as well as hospital-based programs reviewed in regard to accreditation, clinical vs didactic instruction, use of simulations, and evaluation techniques. Public health education and the role of the Allied Health professional. A major learning unit and/or research project required.
Prereq.: AHLT 5840 or PHLT 3701 or permission of instructor.

AHLT 4806 **Research Methods** 3 s.h.
Measurement and interpretation of health data and their application in the research process. Research design considerations, data collection methods, and data analysis of health care research projects.
Prereq.: AHLT 3704.

AHLT 4808 **Environmental Health Concerns** 3 s.h.
Industrial hygiene, hazardous and infections waste, air and quality, and sanitation policies in health care facilities. Pertinent federal, state, and local legislation.
Prereq.: AHLT 3708 or permission of instructor.

AHLT 4810 **Management Skills for Health Professionals** 3 s.h.
A study of the conceptual framework of supervision in Health Care Organizations with emphasis on managerial skills, formulation of policies, principles of budgeting, performance appraisals, and community relations.
Prereq.: AHLT 5840, AHLT 4805, or permission of instructor.

AHLT 4820 **Directed Research** 3 s.h.
Individual study of an issue related to the health care field. Students must present research at a faculty and student forum.
Prereq.: Senior standing and AHLT 4806 or a research methods course approved by the course instructor.
Gen Ed: Capstone.

AHLT 4825 **Patient Advocacy for the Health Professional** 3 s.h.
This course is designed for the health care professional and focuses on basic concepts of patient advocacy in healthcare facilities. Examines the problems in healthcare quality and how advocacy by professionals can ensure that best practices are adopted. An emphasis on conceptual frameworks, debates, and ethical issues within the field are utilized. Patient centered care, patient safety systems, patient involvement and leadership design, delivery and access will be addressed.
Prereq.: Junior Status, AHLT 3708, or consent of the instructor.

AHLT 4831L **Industrial Hygiene Laboratory** 1 s.h.
Application of basic concepts of industrial hygiene including anticipation, recognition, and evaluation of environmental and safety hazards as they pertain to the workplace.

AHLT 4835 **Health Care Diversity** 1 s.h.
Strategies of communication that enable the student to understand socioeconomic, political, ethnic, and religious diversity in health care.
Prereq.: AHLT 5840 or permission of instructor.

AHLT 5807 **Epidemiology** 3 s.h.
A study of the interrelationships of the host, agent, and environment in determining the causation, frequency, and distribution of disease.
Prereq.: AHLT 3708, AHLT 5840, AHLT 4806, or permission of instructor.

AHLT 5816 **Environmental Regulations** 3 s.h.
Structure and function of federal, state, and local agencies responsible for implementing environmental legislation. Emphasis on the duties and authority of different health and environmental agencies and specific legislation dealing with environmental impacts.
Prereq.: AHLT 3708, AHLT 5807 or permission of instructor.

AHLT 5831 **Industrial Hygiene** 3 s.h.
Basic concepts of industrial hygiene including anticipation, recognition, and evaluation of environmental and safety hazards as they pertain to the workplace.
Prereq.: AHLT 3708, AHLT 4808 or permission of instructor.

AHLT 5840 **Comparative Health Systems** 3 s.h.
Problems and issues facing global health care systems including access to care, financing and rationing of services. A major project is included.
Prereq.: AHLT 3708 or permission of instructor.
**Dental Hygiene**

**DHYG 1514L Clinical Dental Hygiene Remediation 1 s.h.**
This course is designed to improve the dental hygiene student's clinical skills, and to develop the basic competencies essential for performing invasive dental hygiene procedures. The student's individual clinical deficiencies will be addressed, along with patient management and time utilization. This course may be repeated one time. Four hours of clinic per week for twelve weeks.

**Prereq.:** Unsatisfactory progress in clinical dental hygiene and/or recommendation of the clinic coordinator.

**DHYG 2601 Dental Hygiene 1 3 s.h.**
An introduction to providing dental hygiene care. Theories and principles of patient assessment, prevention of disease transmission, instrumentation, instrument sharpening, and coronal polishing. Application of risk assessment as it relates to the treatment plan through case studies.

**Prereq.:** Admission to the Dental Hygiene Program.

**DHYG 2601L Clinical Dental Hygiene 1 2 s.h.**
Preclinical dental hygiene instruction in a simulation laboratory. Introduction of basic dental hygiene procedures and equipment operation. Six hours of lab per week.

**Prereq.:** Admission to the Dental Hygiene Program.

**DHYG 2602 Dental Hygiene 2 2 s.h.**
Discussion of appropriate preventive dental agents and devices to improve various dental conditions and implementation techniques. Development of individualized patient education instruction and a tobacco cessation program as part of the dental hygiene care plan.

**Prereq.:** HYG 2601.

**DHYG 2602L Clinical Dental Hygiene 2 2 s.h.**
Continuation of pre-clinical dental hygiene instruction in the clinical setting. Includes comprehensive patient care planning and implementation techniques. Twelve hours of lab per week.

**Prereq.:** HYG 2601L.

**DHYG 2620 Head and Neck Anatomy 2 s.h.**
A study of the anatomy of the head and neck, oral structures and tooth morphology.

**Prereq.:** Admission to the Dental Hygiene program.

**DHYG 2620L Head and Neck Anatomy Lab 1 s.h.**
Applied study of the anatomy of the head and neck, oral structures and tooth morphology. Three hours of lab per week.

**Prereq.:** Admission to the Dental Hygiene program.

**DHYG 2630 Management of Medical/Dental Emergencies 2 s.h.**
Instruction in the prevention, recognition, and management of medical emergencies in the dental office. Emphasis on case studies to develop critical thinking and decision-making skills in patient management.

**Prereq.:** Admission to the Dental Hygiene Program.

**DHYG 2640 Oral Histology 2 s.h.**
A study of the tissues of the human body and embryological development.

**Prereq.:** HYG 2620.

**DHYG 2603 Dental Hygiene 3 3 s.h.**

**Prereq.:** HYG 2602.

**DHYG 2603L Clinical Dental Hygiene 3 3 s.h.**
Clinic application of dental hygiene techniques on student partners and clinic patients. Emphasis on applied preventive measures and patient education. Nine hours of clinic per week.

**Prereq.:** HYG 2602L.

**DHYG 2604 Dental Hygiene 4 3 s.h.**
Concepts of nutrition science as they relate to the evaluation and education of dental hygiene patients with emphasis on caries risk assessment.

**Prereq.:** HYG 2603.

**DHYG 2604L Clinical Dental Hygiene 4 3 s.h.**
Clinical application of dental hygiene techniques. Emphasis on the interpretation of patient assessment and evidence based research to evaluate patients' oral health and to develop effective treatment plans. Nine hours of clinic per week.

**Prereq.:** HYG 3703.

**DHYG 3750 Oral Pathology 2 s.h.**
The cause and nature of disease, together with anatomical, histological and functional changes. Observation and evaluation of the patients’ systemic and oral health status as it relates to treatment planning. Special emphasis is given to oral pathology and case studies.

**Prereq.:** HYG 2640.

**DHYG 3760 Dental Radiology 3 s.h.**
History and development of radiographs, radiographic theory and techniques, hazardous effects of radiation, and methods of protection. Emphasis on interpretation of normal anatomic structures and pathologic entities; and the use of diagnosis in prevention of dental and related diseases.

**Prereq.:** HYG 2602L.

**DHYG 3760L Dental Radiology Lab 1 s.h.**
The techniques necessary to expose, develop, and mount dental films with emphasis in radiographic interpretation. Three hours of lab per week.

**Prereq.:** HYG 2602L.

**DHYG 3770 Periodontology 3 s.h.**
The study of prevention, diagnosis, and treatment of diseases affecting the gingival and supporting structures of the teeth, as well as implant placement and maintenance. Emphasis is on acquisition of knowledge of the histopathology of disease and the biologic basis for periodontal therapy.

**Prereq.:** HYG 2640.

**DHYG 3780 Pharmacology 2 s.h.**
Importance of pharmacological aspects of those drugs and drug groups with which the dentist and dental hygienist are directly and indirectly concerned. Application of pharmacology in treatment planning.

**Prereq.:** HYG 2630.

**DHYG 3790 Local Anesthesia and Pain Control for Dental Hygienists 2 s.h.**
Instruction in the anatomy, physiology, pharmacology, and administration of local anesthesia and other pain control methods.

**Prereq.:** HYG 3703L or permission of the Program Director.

**DHYG 3790L Local Anesthesia and Pain Control Clinic 1 s.h.**
Application of the techniques of local anesthetic administration and pain control on anatomical models and clinical partners. Three hours of clinic per week.

**Prereq.:** HYG 3703L or permission of the Program Director.

**DHYG 4805 Dental Hygiene 5 3 s.h.**
The role of the dental hygienist in providing care for special needs patients by recognizing the necessary treatment plan modifications due to physical, mental, medical, and social factors.

**Prereq.:** HYG 3704.

**DHYG 4805L Clinical Dental Hygiene 5 4 s.h.**
Advanced clinical application of dental hygiene techniques with emphasis on patient management and radiographic assessment resulting in an individualized and comprehensive treatment plan for periodontal patients. Twelve hours of clinic per week.

**Prereq.:** HYG 3704L.

**DHYG 4806 Dental Hygiene 6 2 s.h.**
A study of dental specialties enhancing students’ knowledge, and understanding. Indications for referral, specialized instruments, diagnostic tests, and specific oral hygiene instructions will be discussed.

**Prereq.:** HYG 4805.

**DHYG 4806L Clinical Dental Hygiene 6 4 s.h.**
Continued application of dental hygiene techniques with emphasis on professionalism and competency in private practice. Twelve hours of clinic per week.

**Prereq.:** HYG 4805L.
DHYG 4830 Dental Materials 1 s.h.
The sources, physical properties, methods of manufacturing, and uses of various dental materials. Emphasis on the newest products, and interpretation of research supporting product effectiveness.
Prereq.: DHYG 3704L.

DHYG 4830L Dental Materials Lab 1 s.h.
Clinical application of selected dental materials and four-handed dentistry enhancing the students' understanding of dental procedures. Technical procedures and delegated responsibilities will be completed on manikins, and student partners.
Prereq.: DHYG 3704L.

DHYG 4840 Directed Dental Hygiene Research 3 s.h.
Development of research skills including problem identification, development of a hypothesis, research design, data collection, analysis, and interpretation. Approved dental hygiene topics will be completed as a group under faculty supervision.
Prereq.: AHLT 4806.
Gen Ed: Capstone.

DHYG 4845 Expanded Functions for the Dental Hygienist 3 s.h.
Review of tooth morphology, properties and manipulation of dental restorative material, and techniques and procedures for restoring teeth with amalgam and tooth colored direct restorations. Concepts of four-handed dentistry and knowledge to perform as an Expanded Functions Dental Auxiliary (EFDA).
Prereq.: DHYG 2620, DHYG 2620L and junior standing or consent of instructor.

DHYG 4845L Expanded Functions for the Dental Hygienist Lab 1 s.h.
Laboratory application of restorative techniques utilizing the principles and skills of restorative four-handed dentistry. Preparation of the dental hygiene student to perform the duties of an expanded function dental auxiliary.
Prereq.: DHYG 2620, DHYG 2620L and junior standing or consent of instructor.
Coreq.: DHYG 4845.

DHYG 4850 Dental Public Health 3 s.h.
An introduction to public health dentistry, a study of the epidemiology of dental disease, writing grant proposals, and implementation of health promotion theories. Preventing and controlling dental disease through organized community efforts is addressed.
Prereq.: DHYG 4805.

DHYG 4850L Community Clinics 1 s.h.
Oral health care services provided by senior dental hygiene students at community sites. Culturally competent care to underserved populations is the primary course emphasis. Forty-five hours of community clinical experience throughout the semester.
Prereq.: DHYG 4805L.

DHYG 4855L Expanded Functions Clinical 2 s.h.
Clinical implementation of expanded functions dental auxiliary skills gained in DHYG 4854L. Planned, evaluated and supervised clinical experience.
Prereq.: DHYG 2620, DHYG 2620L, and DHYG 4854L or consent of instructor.

DHYG 4860 Ethics and Practice Concepts 2 s.h.
The historical, professional, legal, and ethical aspects of dental hygiene. Study of practice management topics relevant to the changing roles of hygienists with emphasis on quality care in a patient centered practice.
Prereq.: DHYG 4905.

Emergency Medical Services
EMS 1500 Emergency Medical Technician 4 s.h.
Provides the basic knowledge and skills to be an Emergency Medical Technician. Meets all National Highway and Safety administration National Emergency Medical Services Education Standards and the State of Ohio Approved Emergency Medical Services Curriculum Standards for the Emergency Medical Technician. Must be taken concurrently with EMS 1500L and EMS 1500C.

EMS 1500C Emergency Medical Technician Clinical and Field Internship 1 s.h.
Clinical and Field Internship experience necessary to acquire the skills required to be an Emergency Medical Technician. Meets all national and state curriculum standards for the EMT. Must be taken concurrently with EMS 1500 and EMS 1500L. Ten hours per week after week 12.
EMS 1500L Emergency Medical Technician Laboratory 2 s.h.
Laboratory experience necessary to acquire skills required to be an Emergency Medical Technician. Meets all National and State curriculum standards for the EMT. Six hour lab. Must be taken concurrently with EMS 1500 and EMS 1500C.
EMS 1501 Introduction to Prehospital Medicine 1 s.h.
Introduction to the roles, responsibilities, EMS systems, and medical and legal considerations of the EMS profession.
Prereq.: Admission to the EMS program.
EMS 1502 General Pathophysiology for the Paramedic 3 s.h.
Study of general lifespan development of the body, how pathophysiologic changes affect it. Provides a foundational basis for viewing the body as a system, understanding its functions, anticipated reaction to injury, illness and intervention.
Prereq.: Admission to EMS program or permission of instructor.
EMS 1503 Patient Assessment and Airway Management 3 s.h.
Intensive course designed to prepare the student in the methodology of advanced patient assessment, and the relevance of clinical signs and symptoms identified. Airway anatomy, equipment, procedures as they pertain to advanced airway management.
Prereq.: Admission to EMS program or permission of instructor.
EMS 1504 Principles of Trauma 3 s.h.
Study of traumatic emergencies normally encountered prehospitaly with emphasis on pathophysiology, etiology, symptomatology, and management.
Prereq.: Admission to EMS program or permission of Program Director.
EMS 1505 Emergency Medical Techniques 1 Lab 1 s.h.
Includes simulated emergency traumatic situations and actual patient contact emphasizing physical assessment, patient interviewing, and management techniques. Meets 3 hours per week. Must be taken concurrently with EMS 1501, EMS 1502, EMS 1503, and EMS 1504.
Prereq.: Admission to the EMS program or special permission of program director.
EMS 1506 Emergency Medical Services Clinical 1 1 s.h.
Clinical experiences in the emergency department and in the operating room allowing the student to work on various skills necessary for the paramedic. Total of 90 clinical hours. Must be taken concurrently with EMS 1503 and EMS 1505.
Prereq.: Admission to EMS program or permission of instructor.
EMS 1507 Cardiovascular Emergencies 3 s.h.
Intense study of the etiology, pathophysiology, symptomatology, and management principles for cardiovascular emergencies. Includes electrophysiological principles of EKG interpretation. Must be taken concurrently with EMS 1508.
Prereq.: Admission to EMS program or permission of instructor.
EMS 1508 Cardiovascular Techniques Lab 1 s.h.
Performance of fundamental techniques employed in the management of cardiovascular emergencies. Three hours lab per week. Must be taken concurrently with EMS 1507.
Prereq.: EMS 1502, EMS 1503, and EMS 1504.
EMS 1512 Medical Conditions and Management Techniques 3 s.h.
Study of pathophysiology, symptomatology, etiology, and management techniques of commonly encountered medical emergencies. Must be taken concurrently with EMS 1513.
Prereq.: EMS 1502, EMS 1503, EMS 1504.
EMS 1513 Emergency Medical Techniques 2 Lab 1 s.h.
Simulated situations and actual patient contact emphasizing performance of emergency medical techniques utilized to manage common medical emergencies. Must be taken concurrently with EMS 1512.
**Prereq.:** EMS 1505.

EMS 1514 Emergency Medical Services Operations 1 s.h.
Introduction to common rescue tools and techniques utilized in basic victim disentanglement and extrication.
**Prereq.:** Admission to EMS program or permission of instructor.

EMS 1515 Clinical Experience 2 1 s.h.
Hospital clinical experience to include rotations through the following: Adult emergency department, critical and intensive care units. Total of 95 hours. Must be taken concurrently with EMS 1508 and EMS 1513.
**Prereq.:** EMS 1506.

EMS 1516 Prehospital Field Experience 1 1 s.h.
Field experience with an approved advanced life support unit under the direct supervision of a selected paramedic field preceptor. Total of 200 hours. To be taken concurrently with EMS 1507 and EMS 1512.
**Prereq.:** EMS 1504.

EMS 2600 Emergency Medical Services Special Populations 3 s.h.
Study of etiology, pathophysiology, symptomatology and management of special needs patients. Includes gynecology, obstetrics, neonatology, pediatrics, geriatrics, behavioral, abuse/assault, infectious and communicable diseases, and chronic care. Must be taken concurrently with EMS 2601.
**Prereq.:** EMS 1507 and EMS 1512 or permission of instructor.

EMS 2601 Emergency Medical Techniques 3 Lab 1 s.h.
Techniques necessary to effectively manage conditions in EMS 2600. Three hour lab. Must be taken concurrently with EMS 2600 and EMS 2605.
**Prereq.:** Admission to the EMS program or permission by program director.

EMS 2603 Clinical Experience 3 2 s.h.
Precempted hospital clinical in the adult and pediatric emergency department; obstetrics, labor and delivery; and, psychiatric department. Total of 120 hours of clinical experience. Must be taken concurrently with EMS 2600.
**Prereq.:** EMS 1515.

EMS 2604 Prehospital Field Experience 2 1 s.h.
Performance of advanced life support procedures under the direct supervision of a selected paramedic field preceptor. Total of 150 hours.
**Prereq.:** EMS 1516.

EMS 2605 Pulmonary Emergencies 3 s.h.
Intense study of the etiology, pathophysiology, symptomatology, and management principles of pulmonary emergencies. Must be taken concurrently with EMS 2601.
**Prereq.:** EMS 1507 and EMS 1512.

EMS 2606 EMS Special Certifications 1 s.h.
Provides the Paramedic with certifications beneficial to prehospital care. These certifications are nationally recognized and commonly sought after by paramedics, and desired by employers. Include PALS, PHTLS, NRP, and EMPACT. To be taken concurrently with EMS 2607.
**Prereq.:** Admission to EMS program or special permission of instructor.

EMS 2607 EMS Special Certifications Lab 1 s.h.
Focus on skills and competencies required for PALS, PHTLS, NRP. To be taken concurrently with EMS 2606.
**Prereq.:** Admission to the EMS program or special permission by the program director.

EMS 2609 EMS Prehospital Field Internship 3 s.h.
Capstone Field Internship experience requiring the paramedic student to perform successfully as a team leader on an advanced life support unit in the prehospital setting. A minimum of 30 team leads is required with an assigned field preceptor. Approximately 22 hours of field internship per week.
**Prereq.:** EMS 2604.

EMS 2613 Critical Care Paramedic 3 s.h.
In-depth study of the underlying abnormalities and physiologic disturbances resulting from traumatic injuries and medical illnesses as it relates to emergency medical care. Includes analysis of case studies. Must be taken concurrently with EMS 2614.
**Prereq.:** EMS 2609, or permission of instructor.

EMS 2614 Critical Care Paramedic Laboratory 1 s.h.
Designed to prepare the student as a competent care provider in the transport of critical patients by ground or air unit. Topics include 12-leads, IABPs, RSI, lab data, EIC02 monitoring, and advance pharmacology. Must be taken concurrently with EMS 2613.
**Prereq.:** NREMT and permission of instructor.

EMS 2631 Advanced Clinical and Field Internship Experience 2 s.h.
Field internship in a variety of advanced life-support units to expose the student to hospital-based, public third service, private, and fire service EMS. Includes a field component involving wilderness rescue and emergency medicine. Must be taken concurrently with EMS 2613.

Gerontology

GERO 1501 Introduction to Gerontology 3 s.h.
Basic introduction to the interdisciplinary study of aging. Includes social, psychological, economic, cultural, health, and policy issues. Discussion of normal vs. abnormal (disease-related) aspects of aging.
**Gen Ed:** Social Science.

GERO 3703 Aging and Society 3 s.h.
An interdisciplinary introduction to studies in aging. Examines the impact of population aging and its effect on society at large. Also examines individual aging processes and social significance of aging. Listed also as SOC 3703.
**Prereq.:** SOC 1500 or GERO 1501.
**Gen Ed:** Social Science, Well Being, Social and Personal Awareness.

GERO 3703H Honors Aging and Society 3 s.h.
An interdisciplinary introduction to studies in aging. Examines the impact of population aging and its effect on society at large. Also examines individual aging processes and social significance of aging. Listed also as SOC 3703.
**Prereq.:** SOC 1500 or GERO 1501.
**Gen Ed:** Social Science, Well Being, Social and Personal Awareness.

GERO 3745 Sociology of Health, Illness, and Healthcare 3 s.h.
Social attitudes toward illness. Cultural and social factors in disease definition of illness, and organization of the health professions and health facilities. Listed also as SOC 3745.
**Prereq.:** SOC 1500, GERO 1501, or admission to NEOMED-YSU program.
**Gen Ed:** Well Being, Social and Personal Awareness.

GERO 3755 Theories of Gerontology 3 s.h.
Review and critical analysis of current theories of the social aspects of aging and their use in research. Listed also as SOC 3755.
**Prereq.:** SOC 1500 or GERO 1501.

GERO 3756 Aging and Ethnicity 3 s.h.
Aging in American subcultures, noting differences in status/role systems, demographic distributions, life styles, methods of dealing with the elderly, and related problems. Listed also as SOC 3756.
**Prereq.:** SOC 1500 or GERO 1501.

GERO 3757 Aging and Social Policy 3 s.h.
Critical examination of social policies and social systems which affect aging and retirement. Listed also as SOC 3757 and POL 3757.
**Prereq.:** SOC 1500, GERO 1501, or POL 1560.

GERO 3758 Long-Term Care 3 s.h.
Examines critical issues in long-term care systems, services, and programs. Impacts of social demographic and economic changes on long-term care needs, demands, and supplies. Contemporary trends and future outlooks of long-term care. Listed also as SOC 3758.
**Prereq.:** SOC 1500 or GERO 1501.
GERO 3759 Physical Change and Aging 3 s.h.
Designed to provide knowledge about physical aspects of human aging and factors that affect physical aging. Students learn about physical changes that occur naturally with advancing age and changes associated with disease or disability (abnormal changes). Behavioral and inherent factors that influence physical aging are discussed with the goal to increase awareness of prevention strategies.
Prereq.: GERO 1501 or SOC 1500.

GERO 3761 Elder Crimes - Elder Justice 3 s.h.
Issues in gerontology and aging that affect law enforcement and the criminal justice system.
Prereq.: GERO 1501 or SOC 1500 or CJFS 1500.
Cross-listed: CJFS 3761 and SOC 3761.

GERO 3790 Aging in Cross-Cultural Perspective 3 s.h.
Examines the phenomenon of aging from cross-cultural perspectives with an emphasis on cultural evolution and its impact upon the status, roles and cultural values associated with aging and the aged. Listed also as SOC 3790 and ANTH 3790.
Prereq.: GERO 1501 or ANTH 1500, or SOC 1500.

GERO 4804 Family, Health, and Aging 3 s.h.
Examines family and health related aspects of aging. Positive and negative interactions among family members and caregivers, and their impact on mental and physical quality of life of the elderly. Listed also as SOC 4804.
Prereq.: GERO 3703 or SOC 3703.

GERO 4821 Internship in Gerontology 3-15 s.h.
Application of gerontological knowledge in settings such as social agencies, government offices, hospitals, nursing homes, or industry. May be repeated up to 15 s.h., but only a maximum of 6 semester hours can be applied to the gerontology major.
Prereq.: Junior standing. 9 s.h. of Gerontology, and permission of chairperson.

GERO 4850 Research Methods 3 s.h.
An introduction to methods employed in social research. Attention is given to (1) the logic of scientific inquiry and the relationship between theory and methods; (2) the various quantitative and qualitative methods; (3) research design, data collection, organization, analysis, interpretation and application; (4) the social, cultural, political, and ethical context of social research; and (5) computer skills employed in data analysis. Listed also as ANTH 4850 or SOC 4850.
Prereq.: SOC 3701, ANTH 3701.

GERO 4851 Capstone in Gerontology 3 s.h.
A capstone experience for the interdisciplinary study of aging. Students will complete a major research project.
Prereq.: Senior status in Gerontology and SOC 4850.
Gen Ed: Capstone.

GERO 4860 Senior Thesis 3 s.h.
A capstone experience for the major in gerontology. Designing, implementing, and completing an empirical research project and paper on a topic approved by the thesis advisor.
Prereq.: senior status in GERO; GERO 4850 or SOC 4850.
Cross-listed: SOC 4860.

GERO 6906 Perspectives in Gerontology 3 s.h.
Focus on the major theoretical perspectives of aging and aging related research with a focus on health. Theories from gerontology, epidemiology, sociology, and psychology will be covered.

GERO 6915 Service Delivery Aging Policy 3 s.h.
An interdisciplinary analysis of services for older adults including an examination of major policies, programs, and trends in aging.

GERO 6960 Epidemiology of Aging 3 s.h.
Integration and application of epidemiologic theories; major conceptual issues regarding epidemiology and aging; and contemporary interdisciplinary concepts and research. Primary focus will be on the disease distribution and leading causes of death among our aging population.

GERO 6998 Anatomy and Physiology of Aging 3 s.h.
Using a systems approach, this course will examine the anatomical and physiological changes that occur with aging. It will discuss age-related disorders and evaluate the impact of these changes on activities and daily function.

GERO 6999 Research Methods 3 s.h.
This course serves as an introduction to major methodological issues and basic statistics in the social-scientific study of gerontology. Major topics include developmental perspective and conceptualization of change, basic developmental research design, conceptualization of research problems, research design, measurement, and data analysis. This course should enable students to formulate research questions, design studies, and determine measurement devices and methods of analysis from a developmental perspective.

GERO 7001 Long-Term Care 3 s.h.
This course will introduce students to the following topics: who needs long term care; population distribution of long-term care and its current trends; long-term care industry; human medicine and long-term care; social structures and social inequalities in long-term care; culture components of long-term care; family care and social care; government, laws, and social policies of long-term care; and long-term care in a global perspective.
Prereq.: GERO 6960.

GERO 7090 Field Practicum 1-9 s.h.
Students will complete a 200-hour placement in an aging-related workplace. Variable credit 1-6 s.h. May be repeated for up to 9 s.h.

GERO 7094 Selected Topics 3 s.h.
An examination of contemporary topics in the field of gerontology. Examples of subject areas that may be covered: Nutrition, Pharmacology, Legal, etc. variable credit 1-3 hours may be repeated for up to 6 credit hours.

GERO 7094I Selected Topics Gerontology Falls 1-3 s.h.
An examination of contemporary topics in the field of gerontology. Examples of subject areas that may be covered: Nutrition, Pharmacology, Legal, etc. variable credit 1-3 hours may be repeated for up to 6 credit hours.

GERO 7099 Thesis 1-3 s.h.
A substantive research project with approval of a committee chair and committee. Variable credit 1-3 s.h. May be repeated for up to 6 s.h.

Kinesiology and Sport Science

KSS 1500 Physical Activity Core Concepts 1 s.h.
Essential concepts that document the relationship between physical activity and maintaining optimal health. Personal and social implications of physical inactivity are also explored. Two KSS activity courses must be taken in addition to this course to satisfy the requirements for GER credit.

KSS 1502 Volleyball 1 s.h.
Basic rules and fundamental skills of volleyball including serves, bump, overhead pass, and block.

KSS 1503 Flight: 1st Year Student-Athlete Experience 2 s.h.
FLIGHT: 1st Year Student-Athlete Experience is an introduction to the student-athlete development model through development research, NCAA programming, and practical application to prepare student-athletes for life after athletics as they develop the necessary skills to be engaged citizens and prepared professionals.

KSS 1504 Life After Sports 2 s.h.
Life After Sports is a continuation of the student-athlete development model through development research, NCAA programming, and practical application to prepare student-athletes for life after athletics as they develop the necessary skills to be engaged citizens and prepared professionals.

KSS 1507 Volleyball 2 1 s.h.
Intermediate-to-advanced volleyball skills including diving, rolling, and various team offensive and defensive strategies.
Prereq.: KSS 1502.
KSS 1508  Group Cycling  1 s.h.
Introduction to improving fitness levels through group cycling. The emphasis in this class will be on improving cardiovascular fitness through indoor stationary cycling bicycles. All fitness levels are welcomed and will acquire fitness benefits.

KSS 1509  Meditation  1 s.h.
Overview of practical meditation theory, with diverse practices culled from the world's wisdom inheritance presented as guided meditation experiences. Historical perspective, along with relevant findings of current neuroscience research which support the efficacy of meditation are considered. The practices develop heightened awareness skills, whether practiced sitting, standing, walking, or supine.

KSS 1510  Archery  1 s.h.
Techniques of target archery. Selection, care, and repair of equipment.

KSS 1511  Badminton  1 s.h.
Skills, mechanics, and rules of badminton.

KSS 1512  Bowling  1 s.h.
Fundamentals of bowling the straight ball. Equipment selection, correction of errors, and scoring. For beginning bowlers. The bowling lanes are located off campus. Transportation to the lanes is not provided.

KSS 1513  Bowling 2  1 s.h.
Intermediate bowling. Refinement of bowling skills and use of the hook delivery. Tournament planning, team strategy, and competition.
Prereq.: KSS 1512.

KSS 1514  Fencing 1  1 s.h.
Fundamentals of foil fencing. Methods of attack and parry, and elementary bouts and judging.

KSS 1515  Fencing 2  1 s.h.
Intermediate strategies and techniques of foil fencing and bouting.
Prereq.: KSS 1514.

KSS 1516  Boxing for Beginners  2 s.h.
This course consists of learning how to properly workout like a boxer. Students will be trained to use the proper equipment, and how to stand, move, punch, and train like a boxer preparing to competitively box. Students will NOT be actually boxing another competitor.

KSS 1517  Horseback Riding 1  1 s.h.
Introductory course to the fundamentals of horsemanship, general knowledge of and safety around equines. This course provides students with a fun way to enjoy recreational horseback riding while learning important riding skills.
Prereq.: Must be taken with KSS 1517L.

KSS 1517L  Horseback Riding 1 Lab  1 s.h.
This course provides students with a fun way to enjoy recreational horseback riding while learning important riding skills. This course is off campus. Must be taken with KSS 1517.

KSS 1519  Racquetball  1 s.h.
Racquetball rules and techniques for singles and doubles play. Basic strategy and skill development.

KSS 1520  Golf 1  1 s.h.
Fundamental skills of golf. Includes grip, stance, swing patterns, and putting as well as rules of course play.

KSS 1521  Golf 2  1 s.h.
Intermediate golf. Refinement of swing patterns, methods of instruction, correction of errors. Emphasis on the use of various clubs and types of shots.
Prereq.: KSS 1520.

KSS 1522  Tennis 1  1 s.h.
Fundamental skills of tennis including forehand and backhand drives and service. Basic rules, strategy, and method.

KSS 1523  Tennis 2  1 s.h.
Theory and practice of intermediate-to-advanced tennis skills and play.
Prereq.: KSS 1522.

KSS 1524  Physical Fitness and Exercise Program  1 s.h.
Discussion and participation in activities designed to develop and improve the health-related aspects of physical fitness including weight and stress control.

KSS 1525  Marksmanship  1 s.h.
The safety and practice of handling firearms. Target shooting in prone, kneeling and standing positions.

KSS 1526  Advanced Physical Fitness and Exercise Programs  1 s.h.
Discussion of and participation in strenuous activities designed to develop and improve the health- and performance-related aspects of physical fitness.

KSS 1527  Aquatic Exercise  1 s.h.
Fitness through aquatic conditioning exercises tailored to the individual needs of the student. Open to swimmers and non-swimmers.

KSS 1528  Learn to Swim  1 s.h.
Introduction to swimming and survival skills, floating, drown-proofing, basic swim strokes (side, elementary back, and front crawl), beginning diving, and simple aquatic games. This course is designed for the student who cannot swim; it is not open to swimmers.

KSS 1529  Aquatics 2  1 s.h.
Intermediate swimming. Introduction to back crawl, breaststroke and butterfly. Techniques in underwater swimming; use of mask, snorkel and fins. Elementary lifesaving skills and refinement of basic springboard diving.
Prereq.: HPES 1530.

KSS 1530  Fitness Swimming  1 s.h.
Utilization of freestyle swimming stroke to improve/maintain fitness across the lifespan. Content includes stroke mechanics, turning technique, and swim training program design to meet individual fitness and health goals.
Prereq.: Ability to swim for 250 yards.

KSS 1531  Step Aerobics  1 s.h.
Rhythmic exercise and conditioning activities performed to music, utilizing a step platform as the foundation of the workout. Designed to improve cardio-respiratory endurance and flexibility. Emphasis on understanding the five basic components of fitness and basic principles and techniques involved in step training.

KSS 1532  Varsity Competition  1 s.h.
The safety and practice of handling firearms. Target shooting in prone, kneeling and standing positions.

KSS 1533  Varsity Competition 1  1 s.h.
Credit may be obtained through competition in varsity athletic programs.
Prereq.: Consent of coach.

KSS 1534  Aerobic Dance  1 s.h.
Rhythmic exercises and conditioning activities performed for music. Designed to improve cardiovascular fitness, flexibility, and general muscle tone.

KSS 1535  Fold and Square Dance  1 s.h.
European and Mediterranean folk dances, American Square dances, and mixers. Beginning materials and practice.

KSS 1536  Fold and Square Dance 1  1 s.h.
When performed properly, flexibility can reduce injuries, help recover from injuries, correct muscle imbalances, and recover from exercise. Stretching has also been shown to promote relaxation and stress reduction. This course will cover flexibility utilizing flexbands. In addition, core work and light resistance training will be explored.

KSS 1537  Personal Trainer  1 s.h.
Instruction in principles of body alignment and posture and participation as it pertains to fundamental Pilates techniques.

KSS 1538  Personal Trainer 1  1 s.h.
This course will provide an orientation to student athletes on understanding the demands related to life as a student athlete. This course will focus on various topics related to life-skills such as time management and study skills, campus and community leadership, sports nutrition, professionalism and etiquette, Title IX and sexual harassment, personal financial management and budgeting, and career building and interview skills.
KSS 1552  Yoga  1 s.h.
Instruction in principles of meditation, body alignment and posture, and participation as it pertains to fundamental yoga techniques.

KSS 1553  Yoga 2  1 s.h.
Builds on the groundwork of fundamental postures, breathing, present moment awareness practices, and various methods for removal of mental and physical tensions introduced in KSS 1552. Practices are drawn from the inheritance of Yoga (Hatha and Raja), for further skill development for managing health and vitality of mind and body.
Prereq.: KSS 1552 or consent of instructor.

KSS 1554  Fitness Walking  1 s.h.
Information on the benefits of walking for fitness. Health advantages, appropriate conditioning, pace, warm-up and cool-down. Practical experience in the skills needed to achieve success in developing and adhering to a walking program.

KSS 1555  Jogging  1 s.h.
Holistic approach to the theory and practice of jogging with emphasis on the physiological benefits.

KSS 1556  Racquetball 2  1 s.h.
Advanced racquetball techniques, strategy, conditioning, and mental preparation for singles, doubles, and tournament play. Emphasis on the use of various advanced shots, positioning, and officiating.
Prereq.: KSS 1519.

KSS 1557  Weight Training  1 s.h.
Introduction to progressive resistive exercise for men and women. Topics include strength training, types of equipment, exercise techniques, circuit training, competitive weightlifting, body building, and injury prevention.

KSS 1558  Physical Fitness for Life  2 s.h.
Participation in exercise and physical activities, and identification of resources and assessment instruments utilized in developing an individualized, well-rounded, effective, lifelong physical fitness program. One hour lecture, two hours lab.

KSS 1559  Aerobic Conditioning Activities 2  s.h.
Analyses and practices in activities designed to develop and improve cardiovascular endurance. Such activities include, but are not limited to: aquatics, fitness walking and jogging. One hour lecture, two hours lab.
Prereq.: Exercise science major, or Physical education major.

KSS 1560  Resistance Training 2  s.h.
Concepts and applications of progressive resistance exercise. Emphasis on advanced principles and techniques for developing muscular strength and endurance for fitness and athletic performance. Two hours lab.
Prereq.: major in exercise science or permission of instructor.

KSS 1563  Rock Climbing  1 s.h.
Instruction and participation in fundamental rock climbing techniques that include safely constructing anchor systems, employing belay methods, equipment selection, and beginning climbing skills.

KSS 1564  Bicycling  1 s.h.
Instruction and practice in bicycling skills, techniques, and procedures necessary for intermediate or long trips. Students must provide their own three-, five-, or ten-speed bicycle.

KSS 1565  Self Defense  1 s.h.
The defensive techniques of Judo and Aikido designed to counter attacks with a knife, club, gun or bare fist. Balance, control, safety, falling.

KSS 1566  Judo  1 s.h.
Introduction to the history, philosophy and techniques of Judo. Fundamental techniques include falls, hand and leg throws, grappling, various holds and joint locks.

KSS 1568  Taekwondo/Karate  1 s.h.
An introduction to the history, philosophy and techniques of taekwondo/karate. Fundamental techniques include: stances, kicks, punches, and forms.

KSS 1569  Taekwondo Karate 2  1 s.h.
This course consists of an advanced refinement of taekwondo/karate forms and techniques as well as the enhancement and application of their techniques. Students will be presented with advanced skills to further their knowledge of the history and traditions of this martial art. This course builds upon the basic knowledge learned from KSS 1568 (taekwondo/karate I).
Prereq.: KSS 1568.

KSS 1588  Selected Activities in Kinesiology and Sport Science  1 s.h.
Knowledge of and practice in a particular area of dance, fitness, or sport. Activity is announced each time the course is offered. May be repeated up to 4 s.h. with change in topic.

KSS 1588G  Selected Activities in Kinesiology and Sport Science Officiating  1 -2 s.h.
Knowledge of and practice in a particular area of dance, fitness, or sport. Activity is announced each time the course is offered. May be repeated up to 4 s.h. with change in topic.

KSS 1589  Scientific Basis of Fitness  2 s.h.
Introduction to components of physical fitness and their physiological basis. Role of exercise in prevention of cardiovascular and other hypokinetic diseases. Participation and application of training principles in a variety of fitness activities. Selection and proper use of exercise equipment. One hour lecture, two hours lab.
Prereq.: Physical education major.

KSS 1590  Foundations of Fitness  3 s.h.
Students will learn the fundamentals of fitness as it relates to lifestyle choices and health. Discussion and participation in activities designed to develop and improve the health-related aspects of physical fitness including weight and stress control will be used to develop a personal fitness program through personal goals.

KSS 1595  Introduction to Kinesiology and Sport Science  2 s.h.
Introduction to physical education, exercise science and related professions. Includes exploration of the general concepts, goals, aims, objectives, professional organizations, scholarly literature, sub-disciplines within the field, and career employment opportunities.

KSS 2605  Sports First Aid and Injury Prevention  3 s.h.
Basic injury prevention, evaluation, and emergency care. Certification in ARC Standard First Aid and Adult CPR. Basic wrapping and strapping techniques used with common sports injuries. Two hours lecture, two hours lab.
Prereq.: Exercise science major, Wellness minor, or consent of instructor.

KSS 2615  Methods of Teaching Rhythmic Aerobic Activity  2 s.h.
Rhythm and movement fundamentals related to aerobic dance and step aerobics. Methods and materials of teaching rhythmic aerobic activity culminating in practical teaching experience in the classroom. One hour lecture, two hours lab.
Prereq.: KSS 1559.

KSS 2620  Exercise Equipment Management  1 s.h.
Factors to consider when purchasing new or used exercise equipment, equipment repair and preventive maintenance procedures, and equipment-related risk management.
Prereq.: Permission of instructor.

KSS 2625  Pedagogical Aspects of Exercise Science  3 s.h.
Effective instructional practices and development of organizational skills and characteristics required for teaching in exercise programs. Two hours lecture, two hours lab.
Prereq.: KSS 1559 or KSS 1559.

KSS 2630  Lifeguard Training  1 s.h.
Water rescue, preventive lifeguarding techniques, emergency procedures. Red Cross certificate granted upon satisfactory completion of all requirements.
Prereq.: Ability to swim 300 yards continuously; tread water for 2 minutes.
KSS 2631  Water Safety Methods for Instructors  2 s.h.
Techniques for teaching and supervising swimming, emergency water safety, and basic water safety. Introduction to infant and preschool aquatic programs. A water safety instructor’s certificate granted upon satisfactory completion of all requirements.
Prereq.: Current lifeguard training certificate or emergency water safety certificate.

KSS 2632  Skin and Scuba Diving  2 s.h.
Basic skin-diving with the use of mask, fins, and snorkel. Scuba diving skills with the use of tank and regulator. Emphasis on diving physics, physiology, lifesaving, first aid, and safety skills related to skin and scuba diving. Two hours lecture, two hours lab. Student must furnish mask, fins, and snorkel.

KSS 2635  Open Water Scuba Diving  1 s.h.
Practical experiences in physiological and psychological stress, underwater navigation, effects of hypothermia, decompression, repetitive diving, and rescue techniques. Students completing this course receive basic scuba certification. Five hours lecture, ten hours lab per semester.
Prereq.: KSS 2632.

KSS 2637  Skin, Scuba and Openwater Diving  3 s.h.
Basic scuba and skin-diving skills with use of tank and regulator. Practical experiences in physiological and psychological stress, effects of hypothermia, decompression, and rescue techniques related to repetitive diving. Students completing course receive basic openwater certification. Students must furnish mask, fins, and snorkel. Two days openwater field experience. Two hours lecture, two hours lab.

KSS 2672  Biomechanics  3 s.h.
Knowledge and methods of mechanics as they apply to the structure and function of the living human system. Muscular structure and function in relation to physical movement, analysis of fundamental movements. Includes the physical characteristics of the human body and principles of mechanical physics. Two hours lecture. Two hours lab.
Prereq.: BIOL 1552, BIOL 1552L or BIOL 1545, BIOL 1545L.

KSS 2697  Camping  2 s.h.
The specific skills and problems encountered in camping: shelter, clothing, food, transportation, and site selection. Two hours lab.

KSS 2699  Sport in American Culture  3 s.h.
Sport in American culture from the colonial period to the present as it relates to such areas as education, literature, film and drama, minorities, politics, professional sport, religion and urbanization.

KSS 3700  Exercise Testing and Prescription 1  4 s.h.
Introductory exercise leadership skills including exercise testing and prescription, and design of safe and effective programs. Includes a minimum of 30 hours of field experience in exercise testing, leadership, observation, and career exploration. Content based on American College of Sports Medicine objectives.
Prereq.: KSS 1559 and KSS 1595.

KSS 3705  Statistics Research in Exercise Science  3 s.h.
Scientific methods in exercise science including research design and statistical analyses. Experience with statistical software and understanding published research. Two hours lecture, two hours lab.
Prereq.: MATH 1510 or Level 45 on Math Placement Test.

KSS 3710  Physiology of Exercise  4 s.h.
Acute responses and chronic adaptations of the body to physiological demands of physical activity. Topics related to the optimization of performance in sport and exercise include neuromuscular and cardiorespiratory function, energy production and utilization, and environmental influences.
Prereq.: Exercise science major and CHEM 1515, and BIOL 1552 or BIOL 2601. Concurrent with: KSS 3710L.

KSS 3710L  Physiology of Exercise Laboratory  1 s.h.
Experiments and basic laboratory procedures in the field of exercise physiology.
Concurrent with: KSS 3710.

KSS 3720  Kinesiology and Applied Anatomy  4 s.h.
Muscular structure and function in relation to physical movement; analysis of fundamental movements.
Prereq.: PHYS 1501 or PHYS 1506.

KSS 3725  Mindfulness  2 s.h.
Mindfulness is a state of active, open attention on the present and the practice of being aware moment-to-moment. Students will learn techniques of mindfulness. Topics include breath awareness, sitting meditation, body scanning, walking meditation, eating meditation, yoga, loving kindness and yoga nidra.
Prereq.: PSYC 1560 or KSS 1590.

KSS 3730  Exercise Testing and Prescription 2  4 s.h.
Intermediate exercise testing, exercise prescription based on metabolic calculations and program development for special populations. Supervised field experience in exercise leadership involving 5-8 hours per week. Content based on American College of Sports Medicine objectives. KSS 3710 may be taken concurrently with KSS 3730.
Prereq.: KSS 3700, KSS 3720 and KSS 3710.

KSS 3750  Principles of Coaching  2 s.h.
The scientific, psychological, and management aspects of coaching. Includes ethics and management responsibilities, personnel management, community relations, conditioning, and other related topics.
Prereq.: Junior standing.

KSS 3760  Strength Training and Conditioning  3 s.h.
Scientific principles, concepts, and adaptations to resistance exercise. Practical application of lifting and spotting technique, testing procedures, program design, and organization and administration of the strength and conditioning facility. Two hours lecture, two hours lab.
Prereq.: KSS 1560 and KSS 3710.

KSS 3765  Athletic Training 1  2 s.h.
Practical and theoretical aspects of the prevention of athletic injuries. Includes supplies, wrapping and strapping, protective equipment. Emphasizes prevention, evaluation, and emergency care. One hour lecture, two hours lab.
Prereq.: KSS 1595 and KSS 2605.

KSS 4803  Issues and Trends in Exercise Science  1 s.h.
Current issues and trends and their impact on exercise science and the general public as they relate to the American College of Sports Medicine’s behavioral objectives for various professional certificates.
Prereq.: 64 s.h. or permission of instructor.

KSS 4805  Administration of Exercise Programs  3 s.h.
Provides an overview of legal, management, and marketing skills necessary to implement exercise related wellness programs. Requires development of business plan including facility design and equipment selection.
Prereq.: KSS 3700.

KSS 4810  Exercise Testing and Prescription 3  4 s.h.
Clinical exercise tests (electrocardiography, pulmonary function, submaximal/maximal cardiorespiratory tests) and exercise prescription (cardiovascular, pulmonary, diabetes, stress, cancer, PVD and hypertension). Supervised experience in clinical exercise facilities nine hours during the semester. Content based on American College of Sports Medicine objectives. 4 s.h.
Prereq.: KSS 3705, KSS 3730, and KSS 3710.

KSS 4855  Organization and Administration of Kinesiology and Sport Science Programs  3 s.h.
Organizational patterns and administrative methods in activities, including instructional programs, intramurals and recreation.
Prereq.: 20 s.h. in major.

KSS 4865  Athletic Training 2  2 s.h.
Advanced techniques of athletic training with emphasis on evaluation, treatment and rehabilitation of athletic injuries. Topics include application of therapeutic modalities, reconditioning programs, and the role of the athletic trainer in sports medicine. One hour lecture, two hours lab.
Prereq.: KSS 3765.
Concurrent with: chemistry or CHEM 1501, high school biology or BIOL 1505.

Overview of the medical laboratory profession, ethics, responsibilities and clinical relevance of laboratory procedures.

KSS 4870  Exercise and Aging for Health Professions  3 s.h.
For majors in Gerontology/Health Professions who work with older adults in exercise/physical activity programs. Emphasis on physical aspects/limitations of aging, exercise testing, prescription, and programs for the elderly. Not applicable to the major in Exercise Science.

Prereq.: Senior standing or permission of instructor.

KSS 4875  Exercise Counseling and Behavioral Strategies  4 s.h.
Exercise Counseling and Behavioral Strategies Evidence-based theories and domains geared toward fostering change, growth, and self-actualization in exercise. The scientific foundations of basic exercise counseling and behavioral strategies that enable effective wellness coaching are explored.

Prereq.: Junior standing.

KSS 4880  Internship  8 s.h.
A culminating experience in an approved fitness or sports-related setting under the direct supervision of a qualified individual and coordinated by a supervising faculty member. Requires 400 hours to obtain 8 s.h. May be taken concurrently with KSS 4875.

Prereq.: Completion of Exercise Science core requirements through KSS 4810.

KSS 4888  Selected Topics in Kinesiology and Sport Science  1-3 s.h.
In-depth study of special subject matter within the field of physical education. Topic announced each time course is offered. May be repeated for a maximum of 6 s.h. with change in topic.

Prereq.: 72 s.h. or consent of instructor.

KSS 4888J  Selected Topics in Kinesiology and Sport Science Field Experience in ExRx with Special Populations  1-3 s.h.
In-depth study of special subject matter within the field of physical education. Topic announced each time course is offered. May be repeated for a maximum of 6 s.h. with change in topic.

Prereq.: 72 s.h. or consent of instructor.

KSS 4890  Undergraduate Research  1-3 s.h.
Research participation under the direction and guidance of a full-time faculty member. Provides the advanced student with research experience in HPES. May be repeated to a maximum of six s.h. Junior standing or permission of instructor.

KSS 4898  Seminar KSS  1 s.h.
Special and current problems in KSS.

Prereq.: 72 semester hours.

KSS 6935  Biodynamics and Human Performance  2 s.h.
The physiology of human exercise responses to various stress conditions such as environmental, psychosocial, disease, and maximal performance.

Prereq.: HEPE 4899 or equivalent.

KSS 6940  Exercise Program Administration  3 s.h.
General guidelines for managing, developing, delivering and evaluating exercise programs with specific behavioral objectives for program directors, exercise leaders, and exercise technicians as established by the American College of Sports Medicine.

Prereq.: KSS 3710 or permission of instructor.

KSS 6990  Independent Study  1-3 s.h.
Individual study and projects under faculty supervision. May be repeated to a maximum of three semester hours.

Prereq.: Permission of instructor and department chair.

Medical Laboratory Science

MLS 1501  Introduction to the Medical Laboratory Profession Laboratory  1 s.h.
Phlebotomy, specimen collection and processing; basic medical laboratory exercises. Three hours lab per week.

Prereq.: MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.

Concurrent with: MLS 1501L.

MLT 1501L  Introduction to the Medical Laboratory Profession Laboratory  1 s.h.
Phlebotomy, specimen collection and processing; basic medical laboratory exercises. Three hours lab per week.

Prereq.: MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.

Concurrent with: MLS 1501.

MLS 3700  Clinical Chemistry  2  3 s.h.
Instrumentation and clinical relevance of applied chemical techniques including immunoassays, therapeutic drug monitoring, enzymes, trace elements, and point-of-care technology; quality control and assurance, case studies, and problem solving in clinical chemistry.

Prereq.: MLT 2601 or CHEM 1515.

Concurrent with: MLS 3700L.

MLS 3700L  Clinical Chemistry  2 Laboratory  1 s.h.
Thyroid, digoxin, B12, folic acid, antinuclear antibodies and T and B cell receptor procedures utilized in a clinical laboratory. Three hours lab per week.

Prereq.: MLT 2601, MLT 2601L or CHEM 1515.

Concurrent with: MLS 3700.

MLS 3701  Clinical Hematology  1  2 s.h.
Hematopoiesis; theory and laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Two hours of lecture per week.

Prereq.: MLS 1501, MLS 1501L, BIOL 2601 with a minimal grade of 'C'.

MLS 3701L  Clinical Hematology  1 Laboratory  1 s.h.
Laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Three hours of laboratory per week.

Prereq.: MLT 1501, MLT 1501L, BIOL 2601 with a minimal grade of 'C'.

MLS 3702  Clinical Hematology  2  2 s.h.
Advanced theory and laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Two hours of lecture per week.

Prereq.: MLS 3701, MLS 3701L with a minimal grade of 'C'.

MLS 3702L  Clinical Hematology  2 Laboratory  1 s.h.
Laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Three hours of laboratory per week.

Prereq.: MLS 3701, MLS 3701L with a minimal grade of 'C'.

MLS 3703  Clinical Immunology  3 s.h.
Fundamentals of immunology, including both humoral and cellular immunological responses. Applications of immunological methods in medical research and patient treatment. Recommended BIOL 3702.

Prereq.: BIOL 2601.

MLS 3703L  Clinical Immunology Laboratory  1 s.h.
VDRL, ASO, febrile, latex, pregnancy, and viral tests; flocculation, precipitation, complement fixation, and titration procedures for various diseases. Three hours lab per week. Identical with MLT 3703L and BIOL 3703L.

Prereq.: MLS 1501, MLS 1501L, BIOL 2602.

Concurrent with: MLS 3703.

MLS 3787  Diagnostic Microbiology  3 s.h.
Clinical applications of human pathogenic microorganisms; infections, frequency, isolation, identification, and treatment of bacteria, fungi, viruses, and parasites. Case studies, problem solving, and quality assurance in clinical microbiology. Three hours lecture per week.

Prereq.: BIOL 2602.

Concurrent with: MLS 3787L.
MLS 3787L  Diagnostic Microbiology Laboratory  2 s.h.
A clinical approach to the study of bacteria, fungi, viruses, and parasites.
Methods to isolate and identify clinically significant pathogens from clinical specimens; case studies in clinical microbiology. Six hours lab per week.
Identical with MLT 3787L.
Prereq.: BIOL 2602.
Concurrent with: MLS 3787.

MLS 4800  Advanced Clinical Chemistry  4 s.h.
Didactics and critical analysis of chemical laboratory. Four hours of lecture.
Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4800L  Advanced Clinical Chemistry Clinical Experience  2 s.h.
Clinical experience and critical analysis of chemical laboratory; Competency based clinical practice. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4801  Advanced Hematology  4 s.h.
Didactics and critical analysis of clinical hematology. Four hours of lecture.
Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4801L  Advanced Hematology Clinical Practice  3 s.h.
Clinical practice of clinical hematology. Competency based clinical practice.
Grading is Traditional PR.
Prereq.: Acceptance into a clinical internship.

MLS 4802  Advanced Immunohematology  4 s.h.
Didactics and critical analysis of blood banking, Immunohematology, and Transfusion Medicine. Four hours of lecture. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4802L  Advanced Immunohematology Clinical Practice  3 s.h.
Clinical practice and critical analysis of blood banking, Immunohematology, and Transfusion Medicine. Competency based clinical practice. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4803  Advanced Microbiology  5 s.h.
Didactics and critical analysis of bacteriology, mycology, virology and Parasitology. Five hours of lecture. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4803L  Advanced Microbiology Clinical Practice  3 s.h.
Clinical practice and critical analysis of bacteriology, mycology, virology, and parasitology. Competency based clinical practice. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4804  Miscellaneous Clinical Experience  4 s.h.
Didactic and clinical analysis of specimen collection and processing. Management, education, molecular diagnostics, hemostasis, clinical immunology, and urinalysis and body fluids. Four hours of lecture. Capstone course requiring laboratory research project. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

MLS 4804L  Miscellaneous Clinical Practice  2 s.h.
Clinical practice and critical analysis of specimen collection and processing, management, education, molecular diagnostics, hemostasis, clinical immunology, and urinalysis and body fluids. Competency based clinical practice. Capstone course requiring laboratory research project. Grading is Traditional or PR.
Prereq.: Acceptance into a clinical internship.

Medical Laboratory Technology

MLT 1501  Introduction to the Medical Laboratory Profession  2 s.h.
Overview of the medical laboratory profession, ethics, responsibilities and clinical relevance of laboratory procedures.
Prereq.: MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.
Concurrent with: MLT 1501L.

MLT 1501L  Introduction to the Medical Laboratory Profession Laboratory  1 s.h.
Phlebotomy specimen collection and processing; basic medical laboratory exercises. Three hours lab per week.
Prereq.: MATH 1504 or level 20 on Math Placement Test, high school chemistry or CHEM 1501, high school biology or BIOL 1505.
Concurrent with: MLT 1501.

MLT 1502  Urinalysis and Body Fluids  2 s.h.
Theory and techniques in the analysis of urine and body fluids.
Prereq.: MLT 1501, MLT 1501L, BIOL 2601.
Concurrent with: MLT 1502L.

MLT 1502L  Urinalysis and Body Fluids Laboratory  1 s.h.
Chemical and microscopic analysis of urine. Three hours lab per week.
Prereq.: MLT 1501, MLT 1501L, BIOL 2601.
Concurrent with: MLT 1502.

MLT 1503  Immunohematology  3 s.h.
Fundamental theories and techniques of immunohematology and blood banking; genetic theories, problem solving, and case studies.
Prereq.: BIOL 2601 and MLT 1501.

MLT 1503L  Immunohematology Laboratory  1 s.h.
ABO and RH typing, direct and indirect antiglobulin testing, compatibility testing. Three hours lab per week.
Prereq.: MLT 1501, MLT 1501L, BIOL 2601.

MLT 2601  Clinical Chemistry  1 2 s.h.
Medicallaboratory applications of clinical chemistry.
Prereq.: MLT 1501, MLT 1501L, CHEM 1515.

MLT 2601L  Clinical Chemistry 1 Laboratory  1 s.h.
Spectrophotometric, semi-automated, and automated analysis of glucose, electrolytes, enzymes, and other chemical constituents of serum. Three hours lab per week.
Prereq.: MLT 1501, MLT 1501L, CHEM 1515.

MLT 2603  Topics in Medical Laboratory Technology  4 s.h.
Clinical laboratory applications to molecular diagnostics, serology, virology and parasitology. Regulations, information processing, education, ethical, professional issues. Critical analysis of clinical laboratory information. Two hours lecture and six hours laboratory per week.
Prereq.: MLT 1502 and MLT 1503 with a minimal grade of ‘C’.

MLT 2687L  Microbiology for Health Care Laboratory  1 s.h.
Medical microbiology laboratory for health care professionals. Laboratory methods in the transmission, identification, prevention, and treatment of common bacterial, viral, fungal, and parasitic pathogens with a focus on nosocomial infections. Three hours lab per week.
Prereq.: BIOL 1545, BIOL 1551, BIOL 2601, or permission of instructor.

MLT 3700  Clinical Chemistry  2 3 s.h.
Instrumentation and clinical relevance of applied chemical techniques including immunoassays, therapeutic drug monitoring, enzymes, trace elements, and point-of-care technology; quality control and assurance, case studies, and problem solving in clinical chemistry.
Prereq.: MLT 2601 or CHEM 1515.

MLT 3700L  Clinical Chemistry 2 Laboratory  1 s.h.
Thyroid, digoxin, B12, folic acid, antinuclear antibodies and T and B cell receptor procedures utilized in a clinical laboratory. Three hours lab per week.
Prereq.: MLT 2601, MLT 2601L or CHEM 1515.
Concurrent with: MLT 3700L.
**MLT 3701 Clinical Hematology 1 2 s.h.**
Hematopoiesis; theory and laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Two hours of lecture per week.
*Prereq.:* MLT 1501, MLT 1501L, BIOL 2601 with a minimal grade of 'C'.

**MLT 3701L Clinical Hematology 1 Laboratory 1 s.h.**
Laboratory application of manual procedures in hematology including cell counts, hemoglobin, hematocrit, and differentials; introductory hemostasis and laboratory applications. Three hours of laboratory per week. Co-requisite MLT 3701.
*Prereq.:* MLT 1501, MLT 1501L, BIOL 2601 with a minimal grade of 'C'.

**MLT 3702 Clinical Hematology 2 2 s.h.**
Advanced theory and laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Two hours of lecture per week.
*Prereq.:* MLT 3701, MLT 3701L with a minimal grade of 'C'.

**MLT 3702L Clinical Hematology 2 Laboratory 1 s.h.**
Laboratory procedures in hematology and hemostasis, including leukemia, anemia, hematopathology and coagulation disorders; abnormal differentials and automated methods. Three hours of laboratory per week. Co-requisite MLT 3702.
*Prereq.:* MLT 3701, MLT 3701L with a minimal grade of 'C'.

**MLT 3703L Clinical Immunology Laboratory 1 s.h.**
VDRL, ASO, febrile, latex, pregnancy, and viral tests; flocculation, precipitation, complement fixation, and titration procedures for various diseases. Three hours lab per week. Identical with MLS 3703L and BIOL 3703L.
*Prereq.:* MLS 1501, MLS 1501L, BIOL 2602.
*Concurrent with:* MLS 3703.

**MLT 3706 Medical Laboratory Seminar 2 s.h.**
Internship evaluation, special topics in the clinical laboratory. Case studies in the clinical laboratory.
*Prereq.:* MLT 2603.
*Concurrent with:* MLT 3716.

**MLT 3710 Interpretation of Clinical Laboratory Results 1 s.h.**
The significance of laboratory results and how they relate to gender and age.
*Prereq.:* MLT 2601, MLT 2601L or permission of instructor.

**MLT 3716 Clinical Internship 8 s.h.**
Thirty-six hours per week of practical application of skills in affiliate hospitals and private laboratories.
*Prereq.:* completion of 30 s.h. of MLT curriculum with a grade of 'C' or better and a minimum 2.5 GPA.
*Concurrent with:* MLT 3706.

**MLT 3778 Diagnostic Microbiology 3 s.h.**
Clinical applications of human pathogenic microorganisms; infections, frequency, isolation, identification, and treatment of bacteria, fungi, viruses, and parasites. Case studies, problem solving, and quality assurance in clinical microbiology. Three hours lecture per week.
*Prereq.:* BIOL 2602.
*Concurrent with:* MLT 3787L.

**MLT 3787L Diagnostic Microbiology Laboratory 2 s.h.**
A clinical approach to the study of bacteria, fungi, viruses, and parasites. Methods to isolate and identify clinically significant pathogens from clinical specimens; case studies in clinical microbiology. Six hours lab per week. Identical with BIOL 3787L, MLS 3787L. 2 s.h.
*Prereq.:* BIOL 2602.
*Concurrent with:* MLT 3787.

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**Public Health**

**PHLT 1500 Introduction to Online Learning in Health Professions 3 s.h.**
Prepare students to take online courses including the use of the Blackboard learning environment and orient students to YSU and YSU's Health Professions programs. Help students acquire basic skills to be successful in online learning and emphasize skills and resources necessary to be successful in their personal, academic and career-related pursuits. In addition, this course will introduce students to topics such as career assessment and how to become a successful health professional in the 21st Century. Should be taken during a student's first 30 hours at YSU. Listed also as AHLT 1500 and RESC 1500.
*Prereq.:* PHLT, AHLT or RESC major.

**PHLT 1513 Introduction to Environmental Health and Safety 3 s.h.**
Provides an introduction to and overview of the key areas of environmental health, one of the core areas of public health. Using the perspectives of the population and community, the course will cover factors associated with the development of environmental health problems.
*Gen Ed:* Environmental Sustainability, Social and Personal Awareness.

**PHLT 1531 Fundamentals of Public Health 3 s.h.**
Provides an introduction to public health concepts and practice by examining the philosophy, purpose, history, organization, functions, tools, activities, and results of public health at the national, state, and community levels. Introduces the core disciplines of public health, and current events and issues in the field.
*Gen Ed:* Social Science, Well Being, Social and Personal Awareness.

**PHLT 1568 Healthy Lifestyles 3 s.h.**
Personal and consumer health issues and prevention of premature death analyzed from physical, emotional, social and spiritual perspectives. Plans for disease prevention and healthful living. Importance of health promotion to the individual, region, nation and world.
*Gen Ed:* Well Being, Social and Personal Awareness.

**PHLT 2607 Ethical Issues in Public Health 3 s.h.**
Examines practical aspects of ethics and public health. This course will help students develop the analytical skills necessary for evaluating ethical issues related to public health policy and public health prevention, treatment, and research.
*Prereq.:* PHLT 1531 or PHLT 1568.

**PHLT 2692 Human Sexuality 3 s.h.**
An interdisciplinary approach to the study of human sexuality.
*Prereq.:* PHLT 1568.
*Cross listed with:* PSYC 2692.

**PHLT 3702 Health Education Theory and Methods 3 s.h.**
Overview of health education theory, history, ethics, and methods for the community, school, workplace and health care setting. Provides a foundation in teaching methods. Also listed as HEPE 3702.
*Prereq.:* PHLT 1568.

**PHLT 3709 Elements of Urban Environmental Health Practices 3 s.h.**
Focus on development and implementation issues of environmental and public health programs necessary for urban and rural communities to meet acceptable public health standards at the local health department level with emphasis on resources and staffing. AHLT 3708, or permission of instructor. Also listed as AHLT 3709.

**PHLT 3715 Health Education for Grades PreK-6 3 s.h.**
Comprehensive School Health Education curricula, methods and materials for teaching pre-kindergarten through sixth grade students. Also listed as HEPE 3715.
*Prereq.:* PHLT 1568, PHLT 3702 and BIOL 1545 or AHLT 1500 and AHLT 1501.

**PHLT 3716 Health Education for Grades 7-12 3 s.h.**
Comprehensive School Health Education curricula, methods and materials for teaching seventh through twelfth grade students.
*Prereq.:* PHLT 1568, PHLT 3702 and BIOL 1545 or AHLT 1500 and AHLT 1501.
PHLT 3725  Topics in Public Health  3 s.h.
Examines topics of relevance to public health. Specific topics include current issues and emerging research findings, with a focus on health behavior and health promotion, epidemiology, public health administration, environmental health, biostatistics, through analysis of public health problems, and application of principles and practices of public health.
Prereq.: PHLT 1531.

PHLT 3731  Drug Use and Abuse  3 s.h.
Alcohol, tobacco, and other drug use and their relationship to behavior and society. Emphasis on prevention, early intervention, and treatment in the behavioral medicine, health care, educational and criminal justice systems.
Prereq.: PHLT 1568.

PHLT 3757  Health and Disease  4 s.h.
Study of the major chronic and communicable diseases affecting humans. Emphasis on etiology, prevention through health education and health promotion methods, and materials.
Prereq.: PHLT 1568, BIOL 1545 or AHLT 1500 and AHLT 1501.

PHLT 3791  Community Health  3 s.h.
Study of the need for organized community health efforts: problems of chronic and communicable diseases, environmental health, world health, and the public and private agencies involved in their solutions.
Prereq.: PHLT 1568.

PHLT 4801  Field Work in Health Education  1-3 s.h.
Provides the public health major with a supervised teaching or agency experience. Three to twelve hours per week.
Prereq.: PHLT 3701L and PHLT 3791.

PHLT 4826  Community Health Planning and Promotion  4 s.h.
Fundamental techniques for assessing needs, planning, marketing and implementing health promotion programs in the workplace and community.
Prereq.: PHLT 3791 and AHLT 5807.

PHLT 4827  Evaluation of Health Promotion Programs  3 s.h.
Theories and methods of program evaluation for assessing the quality of health promotion programs.
Prereq.: PHLT 4826.

PHLT 4828  Grant Writing  3 s.h.
Methods and techniques for writing grant proposals related to health. Emphasis on competence in development of narrative, program plan, evaluation design, time line, identifying grant sources and managing funded projects.
Prereq.: PHLT 4826 and PHLT 4827.

PHLT 4891  Public Health Internship  8 s.h.
Supervised experience designed to provide an opportunity to enable students to apply entry-level competencies acquired in the classroom setting to public health practice through experiential activities. The student will be required to be at the internship approximately 23-24 hours per week in a 15 week semester, for a total of 350 hours.
Prereq.: senior standing and consent of instructor.

PHLT 4892  Environmental Health and Safety Internship  8 s.h.
Supervised experience designed to provide an opportunity to enable students to apply entry-level competencies acquired in the classroom setting to environmental health practice through experiential activities. The student will be required to be at the internship approximately 23-24 hours per week in a 15 week semester, for a total of 350 hours.
Prereq.: senior standing and consent of instructor.

PHLT 4898  Environmental Health and Safety Senior Seminar  3 s.h.
Synthesis of professional course work. Development of resume and professional portfolio; preparation for internship; administration of outcome assessment instruments for public health majors.
Prereq.: senior standing and consent of instructor.

PHLT 4899  Public Health Senior Seminar  3 s.h.
Synthesis of professional course work. Development of resume and professional portfolio; preparation for internship; administration of outcome assessment instruments for public health majors; preparation for the CHES certification exam.
Prereq.: Senior standing and consent of instructor.

Gen Ed: Capstone.

PHLT 5804  Multicultural Health  3 s.h.
Explore multicultural models of health, illness, and treatments or therapies to increase understanding of various approaches to prevention, health promotion, healing, and maintenance of health and well-being.
Prereq.: PHLT 1568 or PHLT 1531 and junior standing.

PHLT 5810  Agents of Mass Casualty  3 s.h.
Explorations of biological agents, chemical agents or radiological and nuclear devices, terrorism, security, emergency planning, and community and public health roles in the event of a deployment of these agents. Increase understanding through case analysis of how to apply course concepts to real world scenarios.
Prereq.: PHLT 1531 or PHLT 1568 and junior standing.

PHLT 5810X  Agents of Mass Casualty XR  3 s.h.
Explorations of biological agents, chemical agents or radiological and nuclear devices, terrorism, security, emergency planning, and community and public health roles in the event of a deployment of these agents. Increase understanding through case analysis of how to apply course concepts to real world scenarios.
Prereq.: PHLT 1531 or PHLT 1568 and junior standing.

PHLT 5812  Crisis Management in Public Health  3 s.h.
Exploration of roles, thought processes and actions of public health professionals during crisis situations, by understanding the anatomy of crises. Increase knowledge through case analysis of how to apply course concepts to real world scenarios.
Prereq.: PHLT 1531 or PHLT 1568 and junior standing.

PHLT 5893  Workshop in Health Education  1-3 s.h.
Concentrated study of a selected topic related to health education. The department will select and announce the topic and determine the credit hours based on the frequency and duration of workshop meetings. May be repeated for a maximum of 6 s.h. with change in topic.
Prereq.: PHLT 3701, PHLT 3791 or permission of instructor.

Respiratory Care

RESC 1500  Introduction to Online Learning in Health Professions  3 s.h.
Prepare students to take online courses including the use of the Blackboard learning environment and orient students to YSU and YSU's Health Professions programs. Help students acquire basic skills to be successful in online learning and emphasize skills and resources necessary to be successful in their personal, academic and career-related pursuits. In addition, this course will introduce students to topics such as career assessment and how to become a successful health professional in the 21st Century. Should be taken during a student's first 30 hours at YSU. Listed also as PHLT 1500 and AHLT 1500.
Prereq.: PHLT, AHLT or RESC major.

RESC 1503  Respiratory Procedures  1 3 s.h.
Appropriate use of selected respiratory care procedures. Three hours lecture to be taken concurrently with 1503L.

RESC 1503L  Respiratory Procedures  1 Lab  1 s.h.
Appropriate use of selected respiratory care procedures. Three hours lab to be taken concurrently with 1503L.

RESC 1520  Respiratory Care Assessment  2 s.h.
Diagnostic techniques used in evaluating patients with cardiopulmonary disorders. Two hour lecture to be taken concurrently with RESC 1520L.
Prereq.: RESC 1531.
RESC 1520L Respiratory Assessment 1 Lab 1 s.h.
Diagnostic techniques used in evaluating patients with cardiopulmonary disorders. Two hour lab. Must be taken concurrently with RESC 1520.

RESC 1529 Respiratory Care Orientation 2 s.h.
Scope of profession including key organizations, role within health-care system and career options. Includes applied anatomy and physiology of respiratory system and basic assessment and therapeutic procedures. Hospital experiences included. One hour lecture and two hours lab.

RESC 1531 Respiratory Care Essentials 2 s.h.
Application of basic scientific principles to the respiratory-care profession. Includes coverage of basic equipment, assessment techniques, and therapeutic procedures. Two hours lecture. Must be taken concurrently with RESC 1531L.

RESC 1531L Respiratory Care Essentials Lab 1 s.h.
Application of basic scientific principles to the respiratory-care profession. Includes coverage of basic equipment, assessment techniques, and therapeutic procedures. Two hours lab. Must be taken concurrently with RESC 1531L.

RESC 2620 Respiratory Assessment 2 2 s.h.
Advanced techniques in the assessment of cardiopulmonary disorders. Two hours lecture to be taken concurrently with 2620L.

RESC 2620L Respiratory Assessment 2 Lab 1 s.h.
Advanced techniques in the assessment of cardiopulmonary disorders. Two hours lab to be taken concurrently with RESC 2620.

RESC 2621 Cardiopulmonary Disease 4 s.h.
Comprehensive overview of cardiopulmonary disorders encountered by respiratory therapists. Includes applications to clinical protocols.
Prereq.: RESC 2620.

RESC 2699 Clinical Practice 1 1 s.h.
Orientation to hospital and department policies, including exposure to and practice with basic respiratory care procedures. Five hours a week in clinics.
Prereq.: RESC 2621.

RESC 3706 Respiratory Procedures 2 2 s.h.
Airway management techniques and other critical care procedures. Two hours lecture to be taken concurrently with RESC 3706L.
Prereq.: Acceptance into the respiratory care program.

RESC 3706L Respiratory Procedures 2 Lab 1 s.h.
Airway management techniques and other critical care procedures. Three hours lab to be taken concurrently with RESC 3706.
Prereq.: Acceptance into the respiratory therapy program.

RESC 3708 Respiratory Clinical Specialties 2 s.h.
Fundamentals of hemodynamic monitoring, management of burn patients, and assessment of neurotrauma. Two hours lecture to be taken concurrently with RESC 3708L.
Prereq.: RESC 3706.

RESC 3708L Respiratory Clinical Specialties Lab 1 s.h.
Fundamentals of hemodynamic monitoring, management of burn patients, and assessment of neurotrauma. Three hours lab to be taken concurrently with RESC 3708.
Prereq.: Acceptance into the respiratory care program and completion of RESC 3706.

RESC 3709 Neonatal/Pediatric Respiratory Care 3 s.h.
Respiratory care applications in neonatal/pediatric settings. Three hours lecture to be taken concurrently with RESC 3709L.
Prereq.: Acceptance into the Respiratory Care Program.

RESC 3709L Neonatal/Pediatric Respiratory Care Lab 1 s.h.
Respiratory care applications in neonatal/pediatric settings. Three hours lab to be taken concurrently with RESC 3709.
Prereq.: Acceptance into the Respiratory Care program.

RESC 3720 Mechanical Ventilation 1 2 s.h.
Basic theory and application of mechanical ventilation in critical care areas. Two hours lecture to be taken concurrently with RESC 3720L.
Prereq.: Acceptance into the respiratory care program.

RESC 3720L Mechanical Ventilation 1 Lab 1 s.h.
Basic theory and application of mechanical ventilation in critical care areas. Three hours lab to be taken concurrently with RESC 3720.
Prereq.: Acceptance into the Respiratory Care Program.

RESC 3725 Mechanical Ventilation 2 2 s.h.
Advanced theory and application of mechanical ventilation. Includes home care ventilators. Two hours lecture to be taken concurrently with RESC 3720L.
Prereq.: RESC 3720.

RESC 3725L Mechanical Ventilation 2 Lab 1 s.h.
Advanced theory and application of mechanical ventilation. Includes home care ventilators. Three hours lab to be taken concurrently with RESC 3725.
Prereq.: RESC 3720.

RESC 3731 Respiratory Care Management 3 s.h.
A study of the basic managerial process, organizational concepts, budgeting, quantitative planning, decision-making, and issues of control as they relate to the manager of a hospital-based respiratory care department.
Prereq.: RESC 3725.

RESC 3740 Clinical Practice 2 2 s.h.
Application of basic and advanced respiratory care modalities. Twenty clinical hours per week to be taken concurrently with RESC 3740L.
Prereq.: RESC 2699.

RESC 3740L Clinical Practice 2 Lab 1 s.h.
Application of basic and advanced respiratory care modalities. Three hour lab to be taken concurrently with RESC 3740.
Prereq.: RESC 2699.

RESC 3741 Clinical Practice 3 3 s.h.
Application of basic and advanced respiratory care modalities for pediatric and adult patients. Twenty hours a week.
Prereq.: RESC 3740.

RESC 3750 Pulmonary Rehabilitation 2 s.h.
Demonstration of the multidisciplinary nature of a pulmonary rehabilitation program. The role of the respiratory care practitioner in preventive care activities.
Prereq.: RESC 3706.

RESC 3765 Advanced Respiratory Care Diagnostics 3 s.h.
The study of the fundamentals of advanced respiratory care diagnostics. Three hour lecture.
Prereq.: RESC 3708 or permission of instructor.

RESC 4801 Special Topics in Respiratory Care 1-3 s.h.
Focused research of a special problem/issue related to respiratory care. The topic of interest allows the student to participate in focused investigation of aspects of administration, clinical specialization, or research. May be repeated up to a total of 3 s.h.
Prereq.: Acceptance in BSRC completion program, junior standing, or permission of instructor.

RESC 4801A Special Topics in Respiratory Care Clinical Sleep 1 1-3 s.h.
Focused research of a special problem/issue related to respiratory care. The topic of interest allows the student to participate in focused investigation of aspects of administration, clinical specialization, or research. May be repeated up to a total of 3 s.h.
Prereq.: Acceptance in BSRC completion program, junior standing, or permission of instructor.

RESC 4801B Special Topics in Respiratory Care Sleep Clinical 2 1-3 s.h.
Focused research of a special problem/issue related to respiratory care. The topic of interest allows the student to participate in focused investigation of aspects of administration, clinical specialization, or research. May be repeated up to a total of 3 s.h.
Prereq.: Acceptance in BSRC completion program, junior standing, or permission of instructor.
RESC 4810 Advanced Neonatal and Pediatric Case Management 3 s.h.
This course is designed to strengthen the student's knowledge of Neonatal/Pediatric disorders by incorporating evidence-based practices into case management. Current protocols will also be discussed.
Prereq.: acceptance in BSRC completion program, junior standing, or permission of instructor.

RESC 4831 Pulmonary Care Management 3 s.h.
Pathology as it relates to care of patients with pulmonary-related disorders.
Prereq.: RESC 3725.

RESC 4835 Clinical Practice 4 3 s.h.
Application of advanced respiratory modalities and diagnostics for pediatric and adult patients. Capstone course for RC program. Fifteen hours a week.
Prereq.: RESC 3741.

RESC 4838 Respiratory Seminar 1 1 s.h.
Review of current aspects of clinical respiratory care. A content analysis of the updated NBRC Entry-Level exam will be included.
Prereq.: RESC 3741.

RESC 4842 Respiratory Seminar 2 1 s.h.
Review of current aspects of clinical respiratory care. A content analysis of the updated NBRC Advanced Practitioner exam will be included.
Prereq.: RESC 4838.

RESC 4846 Sleep Diagnostics 1 3 s.h.
Scientific theory and clinical techniques needed to perform polysomnography. Three hours lecture.
Prereq.: Respiratory therapy major or by special permit.

RESC 4847 Sleep Clinics 1 1 s.h.
Polysomnographic techniques in the clinical setting. Approximately 80 contact hours for each course.
Prereq.: Senior standing and RESC 4846.

RESC 4848 Sleep Diagnostics 2 3 s.h.
Scientific theory and clinical techniques needed to perform polysomnography. Three hours lecture.
Prereq.: Respiratory major and by special permit and prior completion of RESC 4846.

RESC 4849 Sleep Clinics 2 1 s.h.
Polysomnographic techniques in the clinical setting. Approximately 80 contact hours for each course.
Prereq.: Senior standing and RESC 4848 and RESC 4847.

RESC 4860 Advanced Management of the Ventilator Patient 3 s.h.
Course will present current classifications, evidence-based research and application of mechanical ventilator concepts in critical care areas. Technical capabilities of modes will be described along with optimal settings. Current protocols in RC will also be discussed.
Prereq.: acceptance in BSRC completion program, junior standing, or permission of instructor.

RESC 4862 Professional Pathways for Respiratory Care Practitioners 3 s.h.
This course will explore select professional pathways available to the RCP. The foundations and role of the RCP are examined in four key areas: the sleep center, home care, PFT lab and HBO centers. The RCP will be introduced to the standards of care and practical application for each area.
Prereq.: acceptance in BSRC completion program, junior standing, or permission of instructor.

RESC 4867 Fundamentals of Leader Development 3 s.h.
This course will form the necessary core of self-awareness in relation to leader development. Through introducing concepts and examples of leadership and awareness of how one leads as an expression of self, RCPs will enhance leadership awareness and personal expression within their discipline.
Prereq.: acceptance in BSRC completion program, junior standing, or permission of the instructor.

RESC 4870 Advanced Cardiopulmonary Case Management 3 s.h.
This course is designed to strengthen the student's knowledge of C-P disorders by incorporating evidence-based practices into C-P case management. The student will learn to apply these strategies in acute care, transitional and long-term care settings. Current protocols will also be discussed.
Prereq.: acceptance in BSRC completion program, junior standing, or permission of instructor.

RESC 4872 Technology Applications for RCPs 3 s.h.
Exploration of technology applications for education, presentations, communications and management. Creation of digital media such as audio and/or video files, e-portfolios and web-based application of various technologies will be required. Application of technology to education or management will be evaluated through completions of a technology-enhanced project.
Prereq.: acceptance in BSRC completion program, junior standing, or permission of instructor.