APPLIED HEALTH SCIENCES

Chairperson: Mark Evely

The mission of the Department of Applied Health Sciences is to provide students with highly effective and quality educational experiences that address contemporary challenges directly impacting public health, health care, environmental and workplace issues.

Medical Laboratory Science

CHOJNACKI, RONETTE: M.H.A., Colorado State University Global; B.S., Oakland University; Assistant Professor (Clinical), Director

FAUCETT, MEGAN: M.B.A., Johns Hopkins University; M.S.H.S., George Washington University; B.S. Michigan Technological University; Assistant Professor (Clinical)

Faucett, Megan: M.B.A., Johns Hopkins University; M.S.H.S., George Washington University; B.S. Michigan Technological University; Assistant Professor (Clinical)

STEWART, MARYANNE: Ed.D., Walden University; M.Ed., Wayne State University, M.B.A., University of Phoenix; B.S., University of Windsor; Assistant Professor (Clinical) and Clinical Coordinator

WOOD, CASSIDY: M.Ed., B.S., Wayne State University; Assistant Professor (Clinical)

Mortuary Science

EVELY, MARK T.: J.D., Thomas M. Cooley Law School; B.S., Wayne State University; Clinical Assistant Professor

Pathologists' Assistant Program

DONGPING, SHI: M.D., Beijing Medical University; Medical Director

LESKE, JENNIFER: M.S., Wayne State University; Assistant Professor (Clinical)

MENDES-KRAMER, VERALUCIA: Ph.D., Wayne State University, M.A., B.A., Madonna University; B.S., Wayne State University; Director

- Applied Health Sciences (B.S.) (http://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/applied-health-sciences-bs/)
- Medical Laboratory Science (B.S.) (http://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/medical-laboratory-science/medical-laboratory-science-bs/)
- Laboratory Science Concentration (B.H.S.) (http://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/medical-laboratory-science/laboratory-science-concentration-bhs/)
- Mortuary Science (B.S.) (http://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/mortuary-science-bs/)
- Law for Applied Health Sciences Minor (http://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/law-applied-health-sciences-minor/)

Applied Health Sciences

AHS 2010 Introduction to Applied Health Sciences Cr. 3
Introduction to Applied Health Sciences is designed to familiarize students with the various careers in the medical professions. Students will learn skills necessary for their healthcare career pathway including working with others, communication skills, legal and ethical responsibilities, cultural considerations in the healthcare industry, problem solving, decision making, accepting personal responsibility and self-management. Offered Fall.

AHS 2020 Applied Health Sciences Communication Cr. 3
The purpose of Applied Health Sciences Communication is to provide the student with an overview of health and science communication in research, industry, and practice. Each student will have an opportunity to explore and better understand the role communication plays in health care delivery, health promotion, disease prevention, environmental and risk communication, media and mass communication, and technology. Offered Fall.
Prerequisite: COM 1010 with a minimum grade of C and ENG 1020 with a minimum grade of C and MLS 3330 with a minimum grade of C

AHS 2030 Advanced Statistics for Applied Health Sciences Cr. 4
This advanced statistics course equips students pursuing healthcare professions with essential statistical tools widely applied in health sciences. The curriculum covers descriptive statistics, probability, inferential statistics, and linear regression, integrating human health examples to highlight the relevance of statistical methods to health and disease. Students will also explore experimental methods, measurement techniques, central tendency, variability, distribution, correlation, confidence intervals, and hypothesis testing. By the end of the course, students will be prepared to produce, evaluate, and interpret data within scientific discourse and apply scientific reasoning in problem-solving. Offered Fall.
Prerequisite: STA 1020 with a minimum grade of C

AHS 3000 Medical Terminology for Applied Health Sciences Cr. 1
The purpose of Medical terminology for Applied Health Sciences is to study medical terms in relation to healthcare professions. Emphasis will be placed on comprehension and composition of medical terms in a professional context. Offered Every Term.

AHS 3010 Advanced Applied Health Sciences Professions Cr. 3
The purpose of Advanced Applied Health Sciences Professions is to assist students who are considering a career in a graduate health sciences profession. Students will examine the roles of a health sciences professional in clinical, academic, and research settings, expectations of professional behavior within the profession, and professional development. The current practice of the health sciences profession in various settings will be explored. Students will need to select the appropriate course section for their preferred health sciences profession. Offered Winter.
Prerequisite: AHS 2010 with a minimum grade of C

AHS 3020 Multicultural Approaches to Health Care Cr. 3
The multicultural approaches to health care course aims to explore the complex social, cultural, and structural influences that shape health care access, equity, and patient experiences. Students will investigate how individual backgrounds, social identities, and lived experiences affect health beliefs and outcomes. Emphasis is placed on developing cultural awareness, examining variations in health perceptions, and understanding the value of culturally responsive care. Through discussions and skill-building activities, students will also strengthen their ability to communicate effectively and professionally in both oral and written formats within health care settings. Offered Fall.
Prerequisite: ENG 1020 with a minimum grade of C

AHS 3025 Human Anatomy and Physiology for Applied Health Sciences Cr. 5
The purpose of Human Anatomy and Physiology for Applied Health Sciences is to examine the structure and function of the human body. Emphasis will be placed on anatomical structures and landmarks and the clinical correlations important for health care providers. Prosected human cadavers, specimens, anatomical models, and computerized software/imaging will be used as instructional methods. Offered Winter.
Prerequisites: BIO 1510 with a minimum grade of C- and BIO 1511 with a minimum grade of C-

AHS 3030 Human Physiology for Applied Health Sciences Cr. 3
The purpose of Human Physiology for Applied Health Sciences is the study the functioning of human tissues and organ and organ systems. Emphasis will be given to the physical, chemical and mechanistic baes of normal physiology and the integrated functions of the human body. The course also introduces pathophysiological changes associated with some human diseases. Offered Winter.
Prerequisite: BIO 2870 with a minimum grade of C

AHS 4010 Interprofessional Education in Applied Health Sciences Cr. 3
The purpose of Interprofessional Education in Applied Health Sciences is to introduce students to interprofessional health care delivery in multiple practice settings. Best practices are emphasized for team formation, effective communication strategies, and patient care processes. Ethical issues related to team management in health care are discussed. Offered Winter.
Prerequisite: AHS 2010 with a minimum grade of C

AHS 4020 Pathophysiology for Applied Health Sciences Cr. 3
The course Pathophysiology for Applied Health Sciences will focus on advanced pathophysiologic concepts affecting the adult human using a research-based, system-focused approach, including etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states. Offered Fall.
Prerequisite: BIO 2870 with a minimum grade of C

AHS 4090 Capstone in Applied Health Sciences Cr. 3
The purpose of Capstone in Applied Health Sciences is to provide culminating curricular experiences for students enrolled in the Bachelor of Science degree with a major in applied health sciences. Students will participate in several projects which demonstrate a synthesis of learning accumulated in the major, including broadly comprehensive knowledge of the discipline and its methodologies. With faculty approval, students will complete a capstone project that aligns with their career goals. Offered Fall, Winter.
Prerequisites: AHS 2010 with a minimum grade of C, AHS 2020 with a minimum grade of C, AHS 2030 with a minimum grade of C, AHS 3010 with a minimum grade of C, AHS 3020 with a minimum grade of C, AHS 3030 with a minimum grade of C, AHS 4010 with a minimum grade of C (may be taken concurrently), and AHS 4020 with a minimum grade of C (may be taken concurrently)

Medical Laboratory Science

MLS 2080 Medical Laboratory Science Seminar Cr. 1
Introduction to the medical laboratory science profession, educational requirements, and opportunities. Offered Every Term.

MLS 3020 Hematology I Cr. 4
Basic study of blood-forming organs and components of blood; explanation of basic hematological procedures. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $75

MLS 3040 Immunohematology I Cr. 4
Introduction to principles of immunohematology and theory and practice of routine testing procedures employed in the clinical blood bank. Survey of the organization and operation of a blood bank. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $130

MLS 3080 Instrumentation Lecture and Laboratory Cr. 3
Introduction to fundamental laws of electronics, the theoretical basis of instrument design, and quality control in laboratory testing. Application of instrumental methods, including spectrophometric, flurometric, electroanalytical, and chromatographic methods to the clinical laboratory. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Medical Laboratory Science.
Fees: $85

MLS 3100 Urine and Body Fluid Analysis Cr. 4
Specimen collection, preparation, and examination of urine and other body fluids such as spinal fluid, semen, and synovial fluid. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

MLS 3280 Clinical Chemistry Lecture and Laboratory Cr. 3
Methodologies and interpretations of results of clinical chemistry diagnostic tests. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

MLS 3330 Medical Terminology Cr. 1
Study of medical terms in a body system approach. Review of anatomy and physiology. Offered Every Term.

MLS 4000 Clinical Hematology Cr. 5
This course takes place at one of the clinical laboratories affiliated with the MLS Program. The experiential training consists of performing assays on specimens, microscopic identification of cells and other formed elements, and correlating lab results with clinical findings in hematology, urinalysis, and coagulation. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4010 Clinical Chemistry Cr. 4
This course takes place at one of the clinical laboratories affiliated with the MLS Program. The experiential training consists of biochemical analysis of constituents of blood and other body fluids, operating and maintaining automated instruments and correlating lab results with clinical findings in clinical chemistry. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4020 Clinical Blood Bank Cr. 3
This course takes place at one of the clinical laboratories affiliated with the MLS Program. The experiential training consists of application of the theory and principles involving antigen-antibody reactions of blood. Students perform assays on specimens and obtain, store, and prepare whole blood and blood components for transfusion, and correlate lab results with clinical findings. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4030 Clinical Microbiology Cr. 4
This course takes place at one of the clinical laboratories affiliated with the program. The experiential training consists of obtaining, culturing, identification and determining antibiotic sensitivity of microorganisms causing infection or infestation. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4040 Laboratory Operations Cr. 2
Laboratory management issues and problems, with emphasis on the hospital setting. Includes professional conduct, management theory, interpersonal and technical skills, legal and regulatory issues, computers in laboratories, quality assessment and improvement, educational methodologies, and clinical study design. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Medical Laboratory Science.

MLS 4210 Hemostasis Lecture and Laboratory Cr. 2
Lecture and laboratory course covering principles of hemostasis and assessment of hemostasis status. Performance and interpretation of diagnostic tests, along with problem solving and correlation of laboratory findings with disease states. Offered Spring/Summer.
Fees: $75

MLS 4230 Hematology II Cr. 4
Continuation of Hematology I. Introduction to hematologic neoplasms. Application of laboratory methods for diagnosis and treatment. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

MLS 4240 Immunohematology II Cr. 4
Advanced immunohematology practices, including investigation and resolution of unusual serological conditions related to transfusion of blood and blood components, blood component processing and transfusion reaction investigation. Continuation of MLS 3040. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $65

MLS 4990 Professional Directed Study Cr. 1
Independent study under faculty supervision. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

MLS 5500 Immunology and Serology Cr. 3
Applications of immunology and serology in a clinical laboratory setting, including relevance to human medicine, performance and interpretation of diagnostic tests, along with problem solving and correlation of laboratory findings with disease states. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $90

MLS 5510 Diagnostic Microbiology I Cr. 4
Introduction to the fundamental principles of clinical microbiology with in-depth study of important human bacterial pathogens, and of principles and methods used in the diagnostic bacteriology laboratory. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $219

MLS 5520 Diagnostic Microbiology II Cr. 4
Lecture and laboratory course in diagnostic microbiology with a focus on clinical virology, mycology, and parasitology and the recognition of bacterial pathogens according to body site. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $140

MLS 5530 Medical Laboratory Science Simulation Laboratory Cr. 2
Application of previously acquired theory and techniques in a simulated clinical laboratory, with emphasis on work organization, correlation of results, management, decision-making, and quality assurance. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $100

MLS 5550 Molecular Diagnostics Cr. 3
Review of molecular biology principles applicable to current testing systems. Laboratory techniques to elucidate molecular structure and disease states, including DNA hybridization, agarose gel electrophoresis, southern and western blot techniques, DNA sequencing, PCR. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $90

MLS 5590 MLS Honors Thesis Project Cr. 3
Independent study under faculty supervision for the purpose of developing and completing an MLS Honors thesis research project, writing a thesis paper, and producing a poster to be submitted to the College of Pharmacy and Health Sciences Research Day. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Medical Lab Science Honors.

MLS 5993 Writing Intensive Course in Medical Laboratory Science Cr. 0
Satisfies General Education Requirement: Writing Intensive Competency
Disciplinary writing assignments under the direction of a faculty member. Course must be elected in conjunction with designated corequisite; see Schedule of Classes for corequisites available each term. Satisfies University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

MLS 5996 MLS Clinical Pathology Review Cr. 2
A review of the Medical Laboratory Science Body of Knowledge. In-class discussions, case studies, and quizzes to prepare students for the certification examination. This course culminates in a comprehensive mock exam. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

Mortuary Science

MS 3100 Thanatochemistry Cr. 2
Discussion, problem solving, and application of general inorganic, organic and biochemistry to postmortem changes, biologic preservation, and embalming chemistry. Course includes a problem-based laboratory and case studies with correlations to embalming chemistry. Offered Winter.
Prerequisite: CHM 1000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3300 Religions, Values, and Death Cr. 2
Various religious, secular, and philosophical views regarding the value of life, the meaning of death, and life after death. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science, BS in Pathologist Assistant or PBC in Forensic Investigation programs.

MS 3400 Funeral Service Law and Ethics I Cr. 3
Business law and legal environment affecting funeral service. Introduction to American legal system, court structure, and civil & criminal procedure. Contract law, property law and UCC Articles 2, 3, and 9. Survey of tort law. Discussion and problems based on the ethical responsibilities of funeral practitioners Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3410 Funeral Service Law and Ethics II Cr. 3
Legal principles affecting funeral service including legal status of a deceased, rights and responsibilities affecting disposition, licensing laws, regulatory compliance, preneed and probate law. Funeral service torts and discussion and problems on due diligence, best practices, and ethical responsibilities of funeral practitioners. Offered Spring/Summer.
Prerequisite: MS 3400 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $60

MS 3500 Embalming I Cr. 2
Theories, practices, and techniques of biologic preservation and disinfection of human remains; case analyses; methods of application of embalming chemicals; use of instruments and equipment; special case embalming. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $200

MS 3510 Embalming II Cr. 2
Dynamics of decomposition; influence of disease and its treatment on the embalming process; public health considerations; anatomical embalming; disaster response. Offered Winter.
Prerequisite: MS 3500 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $200

MS 3600 Restorative Art I Cr. 3
Theories, methods, and techniques used in the restoration of superficial tissues and features. Color theory, cosmetology, facial proportions, skin tones correlated with reconstruction. Clay and wax modeling. Case studies in restorative art. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $50

MS 3610 Restorative Art II Cr. 2
Continuation of MS 3600. Offered Winter.
Prerequisite: MS 3600 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $35

MS 3620 Preparation for Disposition Cr. 2
Preparing the decedent for disposition, including handling of personal effects, refrigeration, container selection, identification viewing, dressing, transportation and special ceremonial preparation. Offered Spring/Summer.
Prerequisite: MS 3610 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $200

MS 3760 Funeral Service History and Trends Cr. 2
Basic human need to memorialize the dead, examined throughout history. Funeralization as a process affected by social and religious change. The funeral service professional in a socio-temporal context. Possible future practices based on understanding of historical records and current trends. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3800 Funeral Directing Cr. 3
Funeral service operations. Practical applications including field trips. Funeral service process from first call to final disposition. Terminology, government regulations, ethics, professional conduct, vital statistics records, necessary forms. Religious, ethnic, fraternal and military variations. Computer technologies and applications. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $80

MS 3810 Funeral Service Marketing and Merchandising Cr. 3
Marketing, merchandising, public relations, pre-need planning, personnel management, job-seeking skills, licensing requirements; planning, building and establishing of funeral home. Government regulations. Offered Winter.
Prerequisite: MS 3800 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $80

MS 3830 Psychology of Death and Dying Cr. 3
Various social and cultural perspectives; psychosocial changes related to death, dying, and disposition; special cases: sudden, violent or unexpected death. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3840 Funeral Service Applications Cr. 3
Case studies involving discussion and analysis of National Board Examination (NBE) subject matter application to funeral service practice. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3970 Practicum I Cr. 3
Student placement in licensed funeral service facility to acquire practical experience in basic funeral service skills. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $30

MS 3980 Practicum II Cr. 3
Continuation of the Practicum I course. Students are placed in a licensed funeral service facility to acquire practical experience in advanced funeral service skills. Offered Winter.
Prerequisite: MS 3970 with a minimum grade of P
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $30

MS 4000 Practicum III Cr. 3
Continuation of the Practicum II course. Students are placed in a licensed funeral service facility to acquire practical experience in advanced funeral service skills and evaluation of clinical embalming competency. Offered Spring/Summer.
Prerequisite: MS 3970 with a minimum grade of P and MS 3980 with a minimum grade of P
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 4050 Anatomy for Mortuary Science Cr. 2
Detailed systemic study of human anatomy. Laboratory work consists of demonstrations and selected dissections; emphasis on vascular anatomy and adjacent structural relationships; anatomic guides. Material Fee As Indicated In The Schedule of Classes. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $30

MS 4250 Pathology and Microbiology for Mortuary Science Cr. 3
Discussion and application of pathogenic microbial agents; host-parasite relationships; disinfection-decontamination; immunology; epidemiology of infectious disease; and public health issues. Basic study of disease states and processes that may negatively impact restorative art efforts or the success of preservation through embalming. Lecture and problem-based laboratory/case studies. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 4450 Funeral Service Management and Accounting Cr. 3
Financial aspects of starting and operating a funeral business; basic accounting principles; dealings with fellow professionals and government agencies. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 5350 Funeral Service Communications Cr. 1
Survey of professional communication in funeral service, including: verbal and non-verbal communication strategies, email and written communication, principles of customer service, public relations, networking, conflict resolution, workplace and professional expectations. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 5550 Special Topics in Mortuary Science Cr. 1
Lectures and discussions; invited speakers on current topics in the profession. Topics to be announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science or PBC in Forensic Investigation programs.
Repeatable for 3 Credits

MS 5990 Directed Study Cr. 3
Library and/or laboratory study of current or pending professional development; study of an existing problem, study or development of new procedures or techniques. Assigned project under the guidance of departmental/program faculty member. Offered Every Term.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science or PBC in Forensic Investigation programs.
Repeatable for 9 Credits

MS 5996 Professional Review Cr. 3
A comprehensive review and assessment in preparation for the National Board Examination consisting of assigned questions and in-class discussion and assessment, culminating in the Practice National Board Examination. Students receive a grade of Y at the conclusion of the course and have 30 days to take the National Board Examination after completion of the Mortuary Science professional coursework. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $100

MS 5999 Funeral Service Residency Cr. 0
Experiential learning in focused and/or specialty funeral service settings through placement in a limited-duration residency, including combination operations, final disposition, ethnic funeral customs, and others. Enrollment subject to program selection. Zero credits. Offered Fall.
Prerequisite: MS 5996