

PATHOLOGISTS' ASSISTANT (M.S.)

Office: 338 Mort Sci; 313-577-2050

Program Director: Veralucia Mendes-Kramer

<http://cphs.wayne.edu/pathologists-assistant/>

The Pathologists' Assistant is academically and clinically prepared to assist pathologists in anatomic, surgical, autopsy and forensic pathology as well as ancillary services defined by the American Association of Pathologists' Assistants. The Wayne State University Pathologists' Assistant program trains individuals who will assist pathologists in the performance of postmortem examination and in the dissection, dictation, and evaluation of surgical specimens for microscopic diagnosis. The program also provides individuals with budgetary, supervisory, and teaching skills. Lastly, the program trains individuals to function as competent entry-level pathologists' assistants capable of performing, under the supervision of a pathologist, those professional responsibilities as defined by the American Association of Pathologists' Assistants (AAPA). The Pathologists' Assistant program is accredited by the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, 847-939-3597, 773-714-8880, Fax: 773-714-8886, <http://www.naacls.org> (<http://www.naacls.org/>).

Admission Requirements

Admission to this program is contingent upon admission to the Graduate School (<http://bulletins.wayne.edu/graduate/general-information/admission/>). Applicants must have a bachelor's degree (BA or BS) from an accredited college or university. In addition, students must:

1. have a minimum cumulative and prerequisite undergraduate grade point average of 3.0;
2. complete all prerequisite coursework with a minimum of a C or higher;
3. submit two letters of recommendation;
4. complete the TOEFL exam if English is not the first language;
5. submit a WES course-by-course evaluation of foreign transcripts;
6. provide documentation of 8 hours of shadowing experience in a pathology lab setting and 5 hours (or one autopsy) in a medical examiner/coroner setting;
7. attend one information meeting in the year of application.

Admission Interview

Interview is by invitation only to those candidates who have satisfied all requirements for admission. Interviews are extended only to the most competitive candidates owing to the limited number of seats in the program. Meeting the minimum requirements to the program does not ensure an offer for an interview.

General Information Meetings

The Eugene Applebaum College of Pharmacy and Health Sciences hosts general information meetings (<http://cphs.wayne.edu/meetings.php>) on the first Tuesday of each month at 6:00 p.m. Meetings are held through Zoom.

Prerequisite Study

In addition, the following course work must have been successfully completed with a grade of C or higher in order to be considered for admission. Prerequisites listed below must be completed within the six years prior to the date of applying to this degree program.

- Two Biology courses (higher than BIO 1050)
- Microbiology with or without lab
- Anatomy and Physiology with lab
- General Chemistry with lab
- Organic Chemistry with lab
- Mathematics (MAT 1000 or higher) or Statistics
- English Composition

Program Deadlines

The program admits students annually to begin the program's curriculum in the spring semester, which begins in May. All prerequisite coursework must be completed by December 30th for Spring/Summer admission consideration.

- Application due date for spring 2025: Jan. 15, 2025 (all prerequisite coursework complete by December 30th, 2024)
- Application due date for spring 2026: Jan. 15, 2026 (all prerequisite coursework complete by December 30th, 2025)
- Application due date for spring 2027: Jan. 15, 2027 (all prerequisite coursework complete by December 30th, 2026)

Program Requirements

The Master of Science in Pathologists' Assistant is offered under a Plan C option and requires completion of 80 credits of coursework as outlined below. All coursework must be completed in accordance with the academic procedures of the Graduate School (<http://bulletins.wayne.edu/graduate/general-information/academic-regulations/>) governing graduate scholarship and degrees and the College of Pharmacy and Health Sciences (<http://bulletins.wayne.edu/graduate/college-pharmacy-health-sciences/academic-regulations/>). A grade of 'C' in any graduate course is unacceptable.

Code	Title	Credits
Academic Year 1 – 45 credits		
Spring/Summer Semester		
Total Semester Credits: 15 credits		
PAA 5020	Applied General Pathology	
PAA 5050	Clinical Terminology and Methodology I for the Pathologists' Assistant	
PAA 5100	Medical Photography and Techniques in Pathology	
PAA 6560	Human Histology and Clinical Correlations I (Spring only)	
PAA 7060	Human Anatomy and Physiology for Pathologists' Assistants	
PAA 7250	Clinical Pathology I	
PAA 6420	Laboratory Management and Quality Management in Anatomic Pathology (Summer only)	
Fall Semester		
Total Semester Credits: 15 credits		
PAA 5051	Clinical Terminology and Methodology II for the Pathologists' Assistant	
PAA 5200	Medical Microbiology for Technical Professionals: Pathologists' Assistant	
PAA 6060	Human Embryology and Pediatric Pathology	
PAA 6561	Human Histology and Clinical Correlations II	
PAA 7061	Human Anatomy and Physiology II for the Pathologists' Assistant	
PAA 7251	Clinical Pathology II	
Winter Semester		

Total Semester Credits: 15+ credits	
PAA 5052	Clinical Terminology and Methodology III for the Pathologists' Assistant
PAA 6150	Histochemistry for the Pathologists' Assistant
PAA 7062	Neuroanatomy for the Pathologists' Assistant
PAA 7063	Advanced Human Gross Anatomy (Elective)
PAA 7200	Introduction to Autopsy Techniques and Forensic Pathology
PAA 7210	Introduction to Autopsy Techniques and Forensic Pathology: Laboratory
PAA 7252	Clinical Pathology III
PAA 7420	Future Trends in Pathology Practice and Education Methodology

Clinical Year 2 – 35 credit

Spring/Summer Semester

Total Semester Credits: 8+ credits

PAA 7650 Surgical Pathology I

Fall Semester

Total Semester Credits: 11+ credits

PAA 7651 Surgical Pathology II

PAA 7890 Surgical and Forensic Pathology Seminar I

Winter Semester

Total Semester Credits: 11+ credits

PAA 7652 Surgical Pathology III

PAA 7891 Surgical and Forensic Pathology Seminar II

Open Enrollment Second Year Courses

PAA 7700 Forensic and Clinical Autopsy Pathology

PAA 7900 Elective Clinical in Surgical and/or Forensic Pathology

PAA 7901 Elective Independent Study in Surgical and/or Forensic Pathology

Background Screen

Admission into the program is conditional until which time all admitted candidates complete a Background Screen.

Physical Examination

All applicants are required to submit a complete physical examination form to the program, which must include a complete immunization record, showing evidence of: HBV antibody titre, TB status, MMR, Chickenpox/Varicella, COVID-19, and flu vaccination record.

Liability Insurance

Clinical Education is provided during both year I and II of the program, along with didactic and laboratory courses. Year II of the program is spent in clinical rotations through various selected clinical facilities throughout the metropolitan Detroit area, Michigan and other parts of the country, handling patient's specimens and decedent remains. Therefore, all students are required to maintain liability insurance, which will be purchased during both years of the program as a separate fee from those courses the student enrolls in. In addition, the student is responsible for the cost of health insurance and all other costs (such as travel, meals, and living expenses) associated with the clinical education of the program.

PAA 5020 Applied General Pathology Cr. 2

Fundamental principles and theories applied to general pathology with special emphasis on disease processes and mechanisms found in adult and pediatric pathology. Offered Spring/Summer.

Corequisite: PAA 7250

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

PAA 5050 Clinical Terminology and Methodology I for the Pathologists' Assistant Cr. 2

Clinical and medical terminology specific to the pathologists' assistant practice along with associated methodologies used in surgical and autopsy pathology in the second year of the program. Introduction to laboratory grossing methodologies of human organ system of simple pathologic and non-pathologic specimens. Offered Spring/Summer.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

Fees: \$100

PAA 5051 Clinical Terminology and Methodology II for the Pathologists' Assistant Cr. 2

Clinical and medical terminology specific to the pathologists' assistant practice along with associated methodologies used in surgical and autopsy pathology in the second year of the program. The laboratory component of the course is designed to familiarize students with surgical procedures, the most common surgical specimens received at the bench, and the manner in which such specimens are grossed, inked, sectioned, dictated, and submitted to histology. The use of simulation laboratory sessions for practice of grossing techniques and methodologies of simple to medium complexity specimen(s) will emphasize the step-wise grossing, safety, and dictation of given pathological specimens. Offered Fall.

Prerequisite: PAA 7060 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

Fees: \$100

PAA 5052 Clinical Terminology and Methodology III for the Pathologists' Assistant Cr. 2

Clinical and medical terminology specific to the pathologists' assistant practice along with associated methodologies used in surgical and autopsy pathology in the second year of the program. The laboratory component continues to familiarize students with surgical procedures, grossing methodologies, and procedural inking, sectioning, and sampling of medium to high complexity of human organ tissues in a simulation gross room laboratory environment, emphasizing the step-wise grossing, safety, and dictation of given pathological specimens. Offered Winter.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

Fees: \$100

PAA 5100 Medical Photography and Techniques in Pathology Cr. 2

Theory of the behavior of light and selection of appropriate lenses; principles of exposure, color, and filters; macro- and microphotography. Adjustment of clinical photographs and student photographs corrected by Adobe Photoshop Professional resulting in a student Eportfolio. Offered Spring/Summer.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

Fees: \$100

PAA 5200 Medical Microbiology for Technical Professionals: Pathologists' Assistant Cr. 2

Infectious diseases affecting major organ systems of the body encountered by the pathologists' assistant. Clinical case study analysis with student presentations. Offered Fall.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

PAA 6060 Human Embryology and Pediatric Pathology Cr. 2

Embryological basis of pediatric and childhood diseases along with adult presentations. Human embryological correlations to clinical settings: case study analysis specific to the pathologists' assistant and clinical evaluation of pediatric pathology. Recognition of anatomical presentations with embryological development in normal and diseased states. Offered Fall.

Prerequisite: PAA 7060 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Pathologists'Assistant Program.

PAA 6150 Histochemistry for the Pathologists' Assistant Cr. 4

Study of techniques specific to the Pathologists' Assistant involved in the preparation of tissues prior to microscopic examination and processing inclusive of embedding, sectioning, preparing frozen sections and performing routine and special stain on a variety of tissues. Offered Winter.

Prerequisites: PAA 6560 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

Fees: \$200

PAA 6420 Laboratory Management and Quality Management in Anatomic Pathology Cr. 2

Interpersonal and technical management techniques for the clinical and anatomic pathology laboratory settings. Quality management techniques, policies, protocols and best practices for the pathologists' assistant. Safety mandates and protocols as applied to anatomic and surgical pathology. Discussion and analysis of governmental mandates covering laboratory improvement (CLIA). Offered Spring/Summer.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

PAA 6560 Human Histology and Clinical Correlations I Cr. 2

Characteristics and identification of human tissue microanatomy. Functional interpretation of human microstructure. Introduction to tissue classification and frozen sections, as well as the examination of normal and abnormal stained tissue sections prepared from a variety of organ systems allowing for clinical correlations in patient case presentations. Offered Spring/Summer.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

Fees: \$100

PAA 6561 Human Histology and Clinical Correlations II Cr. 3

Characteristics and identification of human tissue microanatomy. Continued appreciation and differentiation of normal and abnormal tissue microscopy in stained tissue sections prepared from a variety of organ systems, with application of clinical correlations in patient case presentations. Offered Fall.

Restriction(s): Enrollment is limited to Graduate level students.

Fees: \$100

PAA 7060 Human Anatomy and Physiology for Pathologists' Assistants Cr. 3

Detailed comprehensive review of human anatomy and physiology as it pertains to the pathologists' assistant practice. Offered Spring/Summer.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

Fees: \$350

PAA 7061 Human Anatomy and Physiology II for the Pathologists' Assistant Cr. 3

Part two of a detailed comprehensive review of human anatomy and physiology as it pertains to the pathologists' assistant practice with comprehensive examination of anatomical organs and organ systems through the use of human cadaveric prosections, 3D models, computer software applications, medical imaging, and clinical correlations as it pertains to the pathologists' assistant scope of practice. Offered Fall.

Prerequisite: PAA 7060 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

Fees: \$100

PAA 7062 Neuroanatomy for the Pathologists' Assistant Cr. 2

Comprehensive review of human central nervous system anatomy linking structure to function at the clinical and neurobiological level. Integration of neurocranium and viscerocranium structures with clinical presentations as it pertains to the Pathologists' Assistant practice will be reviewed in detail in the cadaver laboratory. Offered Winter.

Prerequisite: PAA 7061 with a minimum grade of B

Restriction(s): Enrollment is limited to Graduate level students.

Fees: \$100

PAA 7063 Advanced Human Gross Anatomy Cr. 3

Laboratory based course with hands-on dissection of the human body organized around a regional approach to anatomy for the current, or prospective, applied and/or health science student. Students should have completed a previous Anatomy lecture and laboratory course. Offered Winter.

Restriction(s): Enrollment is limited to Graduate level students.

Fees: \$400

PAA 7200 Introduction to Autopsy Techniques and Forensic Pathology Cr. 2

Comprehensive review of general and specialized techniques for performing postmortem examinations in both the hospital and medical examiner settings, with emphasis on the external examination, evisceration, and block dissection of the adult, perinatal, and pediatric decedent as it pertains to specific forensic pathology cases and presentations. Offered Winter.

Prerequisites: PAA 7060 with a minimum grade of B and PAA 7061 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

Fees: \$350

Equivalent: MS 4200

PAA 7210 Introduction to Autopsy Techniques and Forensic Pathology: Laboratory Cr. 1

Comprehensive review of general and specialized techniques for performing postmortem examinations in both the hospital and medical examiner settings with emphasis on the external examination, evisceration, and block dissection of the adult, perinatal, and pediatric decedent. Focus on developing techniques for the external examination of adult and pediatric cadaveric specimens, toxicology retrieval, evisceration techniques, and appropriate block dissection methodology and procedures. Offered Winter.

Prerequisites: PAA 7060 with a minimum grade of B, PAA 7061 with a minimum grade of B, and PAA 7251 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7250 Clinical Pathology I Cr. 2

Systemic pathologies affecting the following organ and organ systems: white blood cells, lymph nodes, spleen and thymus, red blood cells and bleeding disorders, peripheral nerve and skeletal muscles, CNS, the skin, and the bones, joints and soft tissue tumors. Concepts of molecular diagnostics are integrated when appropriate. Offered Spring/Summer.

Corequisite: PAA 5020

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7251 Clinical Pathology II Cr. 3

Continuation of PAA 5020 and PAA 7250. Systemic pathologies affecting the following organ and organ systems: the blood vessels and heart, the lung, head, and neck, the gastrointestinal tract, liver and gallbladder, and the eye. Concepts of molecular diagnostics are integrated when appropriate. Offered Fall.

Prerequisite: PAA 7060 with a minimum grade of B and PAA 7250 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7252 Clinical Pathology III Cr. 3

Continuation PAA 7250 and 7251. Systemic pathologies affecting the following organ and organ systems: the kidney, the lower urinary tract and male genital system, the female genital tract, the breast, the endocrine system and the pancreas. Concepts of molecular diagnostics are integrated when appropriate. Offered Winter.

Prerequisite: PAA 7060 with a minimum grade of B and PAA 7061 with a minimum grade of B and PAA 7251 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7300 Elective Independent Study in Clinical, Core and Forensic Pathology Cr. 1-4

Remedial independent study in a core subject area involving clinical pathology and/or forensic autopsy pathology that fulfills cognitive assessments, content specific assignments or projects, indicative of pre-clinical entry-level expectations of the program. Offered Every Term.

Restriction(s): Enrollment is limited to Graduate level students.

PAA 7420 Future Trends in Pathology Practice and Education Methodology Cr. 1

Group discussion of trends associated with healthcare, patient care, technology, legal issues, education methodology, licensure and accreditation issues; medical ethics, safety, medicolegal, and quality management in anatomic, surgical and autopsy pathology are covered. Presentations lead to recommendations for future best practices in a variety of pathology settings. Students present research findings via PowerPoint and in a seminar format. Offered Winter.

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7650 Surgical Pathology I Cr. 8

Application of principles, theories, and clinical practices related to grossing (simple) surgical dissections that address NAACLS competency levels associated with adult and pediatric surgical pathology techniques, specimen photomicrography, as well as develop techniques in the proper handling of specimens for histological processing through varied techniques within a modern instrumental histology laboratory by following quality management techniques, safety mandates, and protocols as applied to anatomic and surgical pathology. Offered Spring/Summer.

Prerequisite: PAA 5050 with a minimum grade of B and PAA 7060 with a minimum grade of B and PAA 7250 with a minimum grade of B and PAA 7251 with a minimum grade of B and PAA 7252 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

Fees: \$250

PAA 7651 Surgical Pathology II Cr. 10

Application of principles, theories, and clinical practices related to grossing (simple to complex) surgical dissections that address NAACLS competency levels associated with adult and pediatric surgical pathology techniques, specimen photomicrography and photomicrography, as well as develop techniques in the proper handling of specimens for frozen sectioning and histological processing through varied techniques within a modern instrumental histology laboratory, by following quality management techniques, safety mandates, and protocols as applied to anatomic and surgical pathology. Offered Winter.

Prerequisite: PAA 5050 with a minimum grade of B and PAA 7060 with a minimum grade of B and PAA 7250 with a minimum grade of B and PAA 7251 with a minimum grade of B and PAA 7252 with a minimum grade of B and PAA 7650 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

Fees: \$250

PAA 7652 Surgical Pathology III Cr. 9

Application of principles, theories, and clinical practices related to grossing (medium to high complexity) surgical dissections that address NAACLS competency levels associated with adult and pediatric surgical pathology techniques, specimen photomicrography and photomicrography, as well as develop techniques in the proper handling of specimens for frozen sectioning and histological processing through varied techniques within a modern instrumental histology laboratory, by following quality management techniques, safety mandates, and protocols as applied to anatomic and surgical pathology. Offered Winter.

Prerequisite: PAA 7651 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

Fees: \$250

PAA 7700 Forensic and Clinical Autopsy Pathology Cr. 5

Application of principles and technical procedures that address NAACLS competency levels associated with adult and pediatric autopsy as it relates to postmortem examination, dissection and evisceration techniques, toxicology specimen collection and processing, photomicrography of the body and of pertinent findings during the external and internal examination, as well as approaches associated with determining, and reporting, the cause, manner, and mechanism of death. Offered Every Term.

Prerequisite: PAA 6060 with a minimum grade of B and PAA 7060 with a minimum grade of B and PAA 7200 with a minimum grade of B

Restriction(s): Enrollment is limited to students with a major in Pathologists' Assistant Program; enrollment is limited to Graduate level students.

Fees: \$150

PAA 7890 Surgical and Forensic Pathology Seminar I Cr. 1

Clinically based seminar course that integrates principles, theories, clinical practices and techniques relevant to grossing simple to mid-complexity surgical specimens. The course integrates evidence of ethical considerations to the pathologists' assistant practice, interprofessional activity, professional development and activism attained in the course of the program. Offered Fall.

Restriction(s): Enrollment is limited to students with a major in Pathologists' Assistant Program; enrollment is limited to Graduate level students.

PAA 7891 Surgical and Forensic Pathology Seminar II Cr. 2

Clinically based capstone seminar course reviewing clinical and anatomical pathology and the application of principles, theories, clinical practices as it relates to surgical and forensic pathology, and in the research project of a clinical-based surgical specimen that highlights the complexity of the specimen and addresses contemporary issues to the pathologists' assistant practice as a result of said research. The course culminates with portfolio evidence of entry-level skills in the grossing of simple to complex surgical specimens, in the performance of clinical and forensic autopsies and with a board-style competency examination. Offered Winter.

Restriction(s): Enrollment is limited to students with a major in Pathologists' Assistant Program; enrollment is limited to Graduate level students.

PAA 7900 Elective Clinical in Surgical and/or Forensic Pathology Cr. 1-5

Remedial clinical rotation in surgical pathology or forensic autopsy pathology that fulfills cognitive assessments, content specific assignments or projects, and entry-level expectations of the program. Offered Every Term.

Restriction(s): Enrollment is limited to Graduate level students.

PAA 7901 Elective Independent Study in Surgical and/or Forensic Pathology Cr. 1-5

Remedial independent study in surgical pathology and/or forensic autopsy pathology that fulfills cognitive assessments, content specific assignments or projects, indicative of entry-level expectations of the program. Offered Every Term.

Restriction(s): Enrollment is limited to Graduate level students.

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

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

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