Pathologists Assistant

pa-info@hsc.wvu.edu

Michelle Costas, MHS, PA (ASCP), Program Director

Justin Falcon, MHS, PA (ASCP), Clinical Coordinator

Beth Ann McCormick, Program Specialist

Degree Offered
- Master of Health Science

The Profession
A pathologists’ assistant is a healthcare professional who is qualified through academic and practical training to provide services in anatomic pathology under the direction of a qualified pathologist. Pathologists’ assistants serve as physician-extenders in the same manner as physicians’ assistants. The addition of pathologists’ assistants to the pathology team can reduce cost, increase revenue, and improve workflow in the anatomic pathology lab. In practice, pathologists’ assistants (PAs) are responsible for the processing of the surgical pathology specimen from receipt to dissection and description to submission of tissue to histology. In autopsy practice, the PA is involved in reviewing the medical record of the decedent, evisceration, dissection, and selection of tissue for submission to histology as well as formulation of a preliminary anatomic diagnosis and autopsy report under the direction of a pathologist. Many PAs are involved in laboratory management, teaching at the university-level, training of residents and medical students, forensic investigation, or research.

Nature of Program
The graduate program for pathologists’ assistants began in January 2008 and is administered by the School of Medicine. Students are admitted into the Master of Health Science program after earning a baccalaureate degree from a regionally accredited college or university. Students with a cumulative grade point average of 3.25 or higher in the B.S. degree program in Medical Laboratory Science at West Virginia University may be provisionally admitted directly into the pathologists’ assistant program at the end of their junior year.

This program is a twenty-four month master’s-level program that prepares graduates as allied health professionals for careers as pathologists’ assistants. During the second year, the student receives both didactic instruction and practical experience. Students receive practical experience at several of the program’s affiliated medical laboratories including the following:

- West Virginia University Hospital - Ruby Memorial and Medical Examiner’s Office, Morgantown, WV
- WVU-East, Martinsburg, WV
- Allegheny General Hospital, Pittsburgh, PA
- UPMC Health System including Presbyterian, Shadyside and Children's Hospitals, Pittsburgh, PA
- Thomas Memorial Hospital, Charleston, WV
- St. Clair Hospital, Pittsburgh, PA
- Conemaugh Memorial Medical Center, Johnstown, PA
- Butler Health System, Butler, PA

The WVU pathologists’ assistant program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415, (773) 714-8880.

Graduates are eligible for certification by the Board of Certification of the American Society for Clinical Pathology (ASCP).

Pathologists’ Assistant Program Essential Functions
In accordance with Section 304 of the 1973 Vocational Rehabilitation Act, the West Virginia University Pathologists’ Assistant program has adopted minimum technical standards for assessment of all applicants.

Because the master’s degree in health science/pathologists’ assistant signifies that the holder has obtained minimum competencies in all areas of the anatomic pathology laboratories, it follows that graduates must have the knowledge and skills to function in a wide variety of laboratory situations and to perform a wide variety of procedures.

1. Candidates for the master’s degree in health science/pathologists’ assistant must have somatic sensation (sense of touch) and the functional use of the senses of vision and hearing.
2. Candidates’ diagnostic skills will also be lessened without the functional use of the sense of equilibrium, smell, and taste.
3. Additionally, they must have sufficient motor function to permit them to carry out the activities described in the sections that follow.
4. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize data.

5. A candidate for the master’s degree in health science/pathologists' assistant must have abilities and skills which include observation, communication, motor, conceptual, integrative, quantitative, behavioral, and social. Technological compensation can be made for some disabilities in certain areas, but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary means that a candidate’s judgment must be mediated by someone else’s power of selection and observation.

6. Observation: The candidate must be able to observe demonstrations, procedures, and instruments in the basic sciences and clinical courses. Observation necessitates the functional use of the sense of vision and somatic sensation. It is enhanced by the functional use of the sense of smell.

7. Communication: A candidate should be able to speak, hear, and observe people in order to elicit information and perceive nonverbal communications. A candidate must be able to communicate effectively and efficiently in oral and written form with members of the health care team.

8. Motor: Candidates should have sufficient motor function to perform laboratory procedures. This action requires the coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

9. Intellectual—conceptual, integrative, and quantitative abilities: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem-solving requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand spatial relationships of structures.

10. Behavioral and Social Attributes: A candidate must possess the emotional health required for full utilization of his/her judgment, the prompt completion of all responsibilities, and the development of mature, sensitive relationships with patients and coworkers.

Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that should be assessed during admissions and education process. In its evaluation of applicants to the West Virginia University Pathologists’ Assistant program, the Admissions Committee will approach each applicant with the following questions in mind.

When an applicant does not meet a non-academic standard as defined above, and when this would, in the professional judgment of the committee, not satisfy the pathologists’ assistant objectives for the student in performing laboratory procedures, education, and research, such opinion will be documented by the Admissions Committee.

The questions are not designed to disqualify an applicant but rather to give the Admissions Committee more complete information about an applicant’s ability to meet the following nonacademic standards:

1. Is the candidate able to observe demonstrations and perform procedures in the basic sciences and clinical courses?
2. Is the candidate able to analyze, synthesize, solve problems, and make judgments about results obtained on patient specimens?
3. Does the candidate have sufficient use of the senses of vision, hearing, and somatic sensation necessary to perform the indicated laboratory procedures?
4. Can the candidate reasonably be expected to communicate the results of laboratory tests to other members of the healthcare team with accuracy, clarity, and efficiency?
5. Can the candidate reasonably be expected to learn and perform laboratory tests and operate instruments?
6. Can the candidate reasonably be expected to display good judgment in the analysis of procedure results?
7. Can the candidate reasonably be expected to accept criticism and respond by appropriate modification of behavior?
8. Can the candidate reasonably be expected to possess the perseverance, diligence, and consistency to complete the pathologists’ assistant program and to become a practicing pathologists’ assistant?

---

**FACULTY**

**PROGRAM DIRECTOR**
- Michelle M. Costas - MHS, PA(ASCP) - Quinnipiac University
  Assistant Professor

**CLINICAL COORDINATOR**
- Justin Falcon - MHS PA(ASCP) - West Virginia University
  Instructor

**MEDICAL DIRECTOR**
- Flavía Rosado - MD
  Assistant Professor

**CLINICAL INSTRUCTORS**
- Carie Boykin - MHS, PA(ASCP) - West Virginia University
  Assistant Professor
Admission to the Pathologists’ Assistant Program

All students seeking admission to the Master of Health Science, Pathologists’ Assistant program must meet the following admissions requirements:

- Hold an earned baccalaureate degree from a regionally accredited institution of higher education
- Successfully complete the specific prerequisite coursework in mathematics and sciences
- A GPA (cumulative and pre-requisite courses) of at least 3.0 on a 4.0 scale is preferred
- Submit two letters of recommendation (electronic submission only as part of the application process)
- Complete a shadowing experience with a certified PA in Pathology or have equivalent work experience
- Complete an interview with the Admissions Committee
- Submit an electronic admissions packet including the application form, personal statement, essential functions form, shadowing statement, and official transcripts from all colleges and universities attended (Paper admissions application forms are not accepted, except for Direct Admit candidates from the WVU MLS programs.)

REQUIREMENT

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Prep</td>
<td>Baccalaureate Degree</td>
</tr>
<tr>
<td>Pre-requisite Courses</td>
<td>8 hours of Biology with laboratory</td>
</tr>
<tr>
<td>Pre-requisite Courses</td>
<td>8 hours of College Chemistry with lab</td>
</tr>
<tr>
<td>Pre-requisite Courses</td>
<td>3-4 hours of Organic Chemistry (CHEM 231 at WVU) or 3-4 hours of Biochemistry</td>
</tr>
<tr>
<td>Pre-requisite Courses</td>
<td>3-4 hours of Microbiology, Immunology, Parasitology, or equivalent</td>
</tr>
<tr>
<td>Pre-requisite Courses</td>
<td>3 hours of college Algebra or higher</td>
</tr>
<tr>
<td>Grade Point Average preferred</td>
<td>3.0 cumulative</td>
</tr>
<tr>
<td>Grade Point Average preferred</td>
<td>3.0 in the pre-requisite courses</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Two letters of recommendation</td>
</tr>
<tr>
<td>Interview</td>
<td>A personal interview with the Pathologists’ Assistant Program Admission Committee</td>
</tr>
</tbody>
</table>

Shadowing or Work Experience

Applicants must complete a shadowing experience with a practicing pathologists’ assistant or have applicable work experience in surgical or autopsy pathology. A statement regarding this experience is required in the application packet. Please contact the program director for assistance if necessary.

Admissions Classifications

Students must have a baccalaureate degree prior to beginning the professional sequence. However, the program has established the following admissions classifications:

- Direct Admit: a limited number of students completing the bachelor of science program in medical laboratory science with an emphasis in either clinical laboratory science or histotechnology who have a cumulative GPA of 3.25 may apply to the Master of Health Science, Pathologists’ Assistant Program at the end of their junior year. These students will be admitted into the program after completing the B.S. in Medical Laboratory Science at West Virginia University.
- Regular Decision: a student applies in the admission cycle during their senior year.

Typically, applications will be submitted in the application period which extends from January 1 to May 31 of the senior year. Admission is contingent upon satisfactory completion of the baccalaureate degree.

Performance Standards

Students are required to maintain a semester GPA of 3.0 to progress in the first and second year of the professional program.
Application Procedure

Each year, the pathologists' assistant program selects a limited number of students from the applications received for admission. Applications for admission to the program are available between January 1 and May 31 for the class beginning the following January. The application fee is sixty dollars. Each applicant must arrange for transcripts to be sent directly from all undergraduate institutions attended to the Office of Admissions. When the application is complete, the file is sent to the Pathologists’ Assistant Admissions Committee. A complete admissions packet contains the following: completed application form and personal statement, official transcripts, two references, and the essential functions form. Please note that the Office of Admissions does not handle reference letters. Each application requires two letters of reference (one from a professor and one from a laboratory professional with whom you have worked). An interview will be granted to qualified applicants after a review of the application packets.

Degree Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICB 702</td>
<td>Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>PATH 465</td>
<td>Medical Laboratory Management</td>
<td>2</td>
</tr>
<tr>
<td>PATH 603</td>
<td>Pathology and Anatomy</td>
<td>6</td>
</tr>
<tr>
<td>PATH 605</td>
<td>Advanced Microanatomy</td>
<td>2</td>
</tr>
<tr>
<td>PATH 610</td>
<td>Pathology Assistant Education Methods</td>
<td>1</td>
</tr>
<tr>
<td>PATH 620</td>
<td>Clinical Pathology Seminar</td>
<td>2</td>
</tr>
<tr>
<td>PATH 625</td>
<td>Anatomical Pathology Techniques</td>
<td>4</td>
</tr>
<tr>
<td>PATH 627</td>
<td>Pathology Assistant Practicum 1</td>
<td>9</td>
</tr>
<tr>
<td>PATH 628</td>
<td>Pathology Assistant Practicum 2</td>
<td>9</td>
</tr>
<tr>
<td>PATH 629</td>
<td>Pathologists' Assistant Practicum 3</td>
<td>7</td>
</tr>
<tr>
<td>PATH 630</td>
<td>Pathology Review 1</td>
<td>2</td>
</tr>
<tr>
<td>PATH 631</td>
<td>Pathology Review 2</td>
<td>2</td>
</tr>
<tr>
<td>PSIO 743</td>
<td>Fundamentals of Physiology</td>
<td>5</td>
</tr>
<tr>
<td>PATH 648</td>
<td>Surgical and Autopsy Pathology Procedures</td>
<td>3</td>
</tr>
<tr>
<td>PATH 750</td>
<td>Systemic Pathology for Pathologists’ Assistant Students</td>
<td>8</td>
</tr>
<tr>
<td>PATH 650</td>
<td>Introduction to Disease Mechanisms</td>
<td>4</td>
</tr>
<tr>
<td>PATH 652</td>
<td>Histology for Pathologists' Assistants</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hours</strong></td>
<td><strong>74</strong></td>
</tr>
</tbody>
</table>

SUGGESTED PLAN OF STUDY

First Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours Fall</th>
<th>Hours Spring</th>
<th>Hours Summer</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICB 702</td>
<td></td>
<td></td>
<td>5 PATH 603</td>
<td>6 PATH 620</td>
<td>2</td>
</tr>
<tr>
<td>PSIO 743</td>
<td></td>
<td></td>
<td>5 PATH 625</td>
<td>4 PATH 750</td>
<td>8</td>
</tr>
<tr>
<td>PATH 465</td>
<td></td>
<td></td>
<td>2 PATH 610</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PATH 605</td>
<td></td>
<td></td>
<td>2 PATH 650</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PATH 648</td>
<td></td>
<td></td>
<td>3 PATH 652</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

|         | **Total Hours**                      | **17**     | **18**       | **10**       |       |

Second Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours Fall</th>
<th>Hours Spring</th>
<th>Hours Summer</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATH 629</td>
<td></td>
<td></td>
<td>7 PATH 627</td>
<td>9 PATH 628</td>
<td>9</td>
</tr>
<tr>
<td>PATH 631</td>
<td></td>
<td></td>
<td>2 PATH 630</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

|         | **Total Hours**                      | **9**      | **11**       | **9**        |       |

GRADUATION REQUIREMENTS

Students are required to maintain an overall GPA of at least 3.0 as a graduate student while enrolled in the pathologists' assistant program. A minimum 3.0 GPA is required to graduate from the program.
Major Learning Goals

PATHOLOGIST’S ASSISTANT

The mission of the program for the Pathologists’ Assistant at West Virginia University is to provide a high quality educational experience leading to a Master’s Degree in Health Science as a Pathologists’ Assistant. This degree prepares Pathologists’ Assistants for their integral role as a member of a healthcare team.

Program Goals:

- Provide a program for Pathologists’ Assistants which meets the academic standards of West Virginia University.
- Offer high quality, skilled graduates for a variety of health care settings in both surgical pathology and autopsy services.
- Provide an educational background which enables graduates to assume teaching and supervisory roles in pathology and medical laboratories.

COURSES

PATH 601. Special Studies in Oral Pathology. 1-3 Hours.
PR: PATH 738 and PATH 753. Advanced study of local or systemic disease processes affecting oral structures through seminars, assignment of specific topics, or research activities.

PATH 603. Pathology and Anatomy. 6 Hours.
This course will cover gross and microscopic human anatomy including embryology, histology and microanatomy lab.

PATH 605. Advanced Microanatomy. 2 Hours.
Microanatomy of disease states including clinical correlations for students in the pathologists assistant program.

PATH 610. Pathology Assistant Education Methods. 1 Hour.
Techniques in educational methodology for pathologist’s assistants.

PATH 620. Clinical Pathology Seminar. 2 Hours.
This course presents a review of clinical pathology, including pertinent forensic molecular, toxicologic and radiologic diagnostics.

PATH 625. Anatomical Pathology Techniques. 4 Hours.
This course will cover standard techniques in surgical and autopsy dissection, preparation of reports, basic forensic, investigation techniques, and basic histological and immunological staining techniques.

PATH 627. Pathology Assistant Practicum 1. 9 Hours.
Rotations in surgical and autopsy pathology to include forensics and pediatrics.

PATH 628. Pathology Assistant Practicum 2. 9 Hours.
Rotations in surgical and autopsy pathology to include forensics and pediatrics.

PATH 629. Pathologists’ Assistant Practicum 3. 7 Hours.
PR: PATH 628. This course is a continuation of PATH 628 and advanced procedures and application of advanced techniques in surgical and autopsy pathology.

PATH 630. Pathology Review 1. 2 Hours.
This course includes an intense review of clinical and anatomical pathology theory and techniques, and presentation of scientific journal articles and clinical cases.

PATH 631. Pathology Review 2. 2 Hours.
PR: PATH 630. This course is a continuation of PATH 630 and includes an intense review of clinical and anatomical pathology theory and techniques, and presentation of journal articles and clinical cases.

PATH 648. Surgical and Autopsy Pathology Procedures. 3 Hours.
PR: PATH 625 and PATH 752. This course is specifically designed for Pathologists’ Assistant students as a comprehensive review course covering both surgical and autopsy pathology techniques to correlate with clinical rotations.

PATH 650. Introduction to Disease Mechanisms. 4 Hours.
This course is specifically designed for the pathologists’ assistant students to study the general pathology concepts associated with disease mechanisms.

PATH 652. Histology for Pathologists’ Assistants. 3 Hours.
This course presents students with histology content requisite to their field of study. It includes both lecture and web-based instruction.

PATH 693A-B. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

PATH 728. General Pathology. 5 Hours.
PR: Consent. A study of the pathophysiological changes associated with human disease and a study of disease of major organ systems.
PATH 738. Oral Pathology 1. 3 Hours.

PATH 750. Systemic Pathology for Pathologists' Assistant Students. 8 Hours.
Pathologists' Assistant students study the different disease processes and neoplasms they will encounter while in surgical pathology and autopsy. This course provides the background necessary to properly gross surgical pathology specimens or select tissue at autopsy in order to assist the pathologist in diagnosing patients.

PATH 753. Oral Pathology 2. 2 Hours.
PR: PATH 738 or consent. Continuation of PATH 738.

PATH 782. Advanced Oral Histopathology. 1,2 Hour.
PR: PATH 738 and PATH 753 or consent. An elective seminar stressing the significant microscopic features and diagnosis of various oral lesions.

PATH 790. Teaching Practicum. 1-3 Hours.
PR: (PATH 301 and PATH 302) or (PATH 728 and PATH 738 and PATH 753.) Supervised practice in college teaching of pathology. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It will also present a mechanism for students not on assistantships to gain teaching experience. (Grading will be P/F.).

PATH 791. Advanced Study. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PATH 792. Directed Study. 1-6 Hours.
Directed study, reading, and/or research.

PATH 793A-B. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

PATH 794. Seminar. 1-6 Hours.
Special seminars arranged for advanced graduate students.

PATH 795. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

PATH 796. Graduate Seminar. 1 Hour.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

PATH 797. Research. 1-15 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.).

PATH 798. Thesis or Dissertation. 1-6 Hours.
PR: Consent. This is an optional course for programs that wish to provide formal supervision during the writing of student reports (698), or dissertations (798). Grading is normal.

PATH 799. Graduate Colloquium. 1-6 Hours.
PR: Consent. For graduate students not seeking coursework credit but who wish to meet residency requirements, use the University's facilities, and participate in its academic and cultural programs. Note: Graduate students who are not actively involved in coursework or research are entitled, through enrollment in their department's 699/799 Graduate Colloquium to consult with graduate faculty, participate in both formal and informal academic activities sponsored by their program, and retain all of the rights and privileges of duly enrolled students. Grading is P/F; colloquium credit may not be counted against credit requirements for masters programs. Registration for one credit of 699/799 graduate colloquium satisfies the University requirement of registration in the semester in which graduation occurs.

PATH 801. Mechanisms of Human Disease. 11 Hours.
Integrated study of disease using structure-function relationships. This course includes the structural, biochemical, and functional changes in cells, tissues, and organs that underlie disease.