The graduate program in cellular and molecular pathology (CMP) is a joint venture of the UW–Madison Department of Pathology and the School of Medicine and Public Health (SMPH). This interdisciplinary training environment, embedded in an exciting and challenging basic and clinical translational research context, offers a high level of intellectual stimulation for predoctoral training. The CMP curriculum is novel at the university, providing integrated training in fundamental concepts of modern pathobiology with an emphasis on biochemical, cellular and molecular approaches, and providing rigorous in-depth bench-level research training in understanding the fundamental bases of diseases. Trainees and trainers participate in rigorous pathobiology courses and activities, and are offered in-depth research training in the pathobiology of cancer, nervous and immune system diseases, and signal transduction in basic disease mechanisms.

**REQUIREMENTS**

**MINIMUM DEGREE REQUIREMENTS AND SATISFACTORY PROGRESS**

To make progress toward a graduate degree, students must meet the Graduate School Minimum Degree Requirements and Satisfactory Progress (http://guide.wisc.edu/graduate/#policiesandrequirementstext) in addition to the requirements of the program.

**MASTER’S DEGREES**

M.S.

**MINIMUM GRADUATE DEGREE CREDIT REQUIREMENT**

30 credits

**MINIMUM GRADUATE RESIDENCE CREDIT REQUIREMENT**

16 credits

**MINIMUM GRADUATE COURSEWORK (50%) REQUIREMENT**

Half of degree coursework (16 out of 30 total credits) must be completed in graduate-level coursework; courses with the Graduate Level Attribute are identified and searchable in the university's Course Guide (http://my.wisc.edu/CourseGuideRedirect/BrowseByTitle).

**PRIOR COURSEWORK REQUIREMENTS: GRADUATE WORK FROM OTHER INSTITUTIONS**

With program approval, students are allowed to count no more than 7 credits of graduate coursework from other institutions. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

**PRIOR COURSEWORK REQUIREMENTS: UW–MADISON UNDERGRADUATE**

Up to 7 credits numbered 300 or above from a UW–Madison undergraduate career are allowed to count toward the degree with committee approval. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

**PRIOR COURSEWORK REQUIREMENTS: UW–MADISON UNIVERSITY SPECIAL**

With program approval, students are allowed to count no more than 7 credits of coursework numbered 300 or above taken as a UW–Madison University Special students. coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

**CREDITS PER TERM ALLOWED**

15 credits

**PROGRAM-SPECIFIC COURSES REQUIRED**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATH 900</td>
<td>Seminar (every semester enrolled)</td>
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<tr>
<td>PATH 901</td>
<td>Student Seminar / Journal Club (every semester enrolled)</td>
<td>1</td>
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<tr>
<td>PATH 990</td>
<td>Research (every semester enrolled)</td>
<td>1-8</td>
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<tr>
<td>PATH 750</td>
<td>Cellular and Molecular Biology/Pathology (spring semester, first year in program)</td>
<td>3</td>
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<tr>
<td>PATH 802</td>
<td>Histopathology for Translational Scientists (fall semester, first year in program)</td>
<td>3</td>
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<tr>
<td>PATH 803</td>
<td>Pathogenesis of Major Human Diseases (fall semester, second year in program)</td>
<td>3</td>
</tr>
<tr>
<td>PATH 809</td>
<td>Molecular Mechanisms of Disease (spring semester, second year in program)</td>
<td>2</td>
</tr>
</tbody>
</table>

**MASTERS BREADTH REQUIREMENTS**

Statistics course (2–4 cr); ethics course (1–2 cr); elective (minimum of one, 2–3 cr); recommended electives—PATH 807 Immunopathology. The Immune System in Health and Disease (2 cr), PATH 751 Cell and Molecular Biology of Aging (3 cr)

**OVERALL GRADUATE GPA REQUIREMENT**

3.00 GPA required.

**OTHER GRADE REQUIREMENTS**

Students must maintain a B average or better in all graduate courses.

**PROBATION POLICY**

The status of a student can be one of three options:

1. Good standing (progressing according to standards; any funding guarantee remains in place).
2. Probation (not progressing according to standards but permitted to enroll; loss of funding guarantee; specific plan with dates and deadlines in place in regard to removal of probationary status).
3. Unsatisfactory progress (not progressing according to standards; not permitted to enroll, dismissal, leave of absence or change of advisor or program).

**ADVISOR / COMMITTEE**

All students are required to conduct a yearly progress report meeting with their advisor, scheduled by December 17 and completed by April
30. Failure to do so will result in a hold being placed on the student’s registration.

ASSESSMENTS AND EXAMINATIONS

Students must complete all required courses including PATH 809. Students must write a master thesis and defend it in front of their Advisory Committee. The MS thesis does not need to be published.

TIME CONSTRAINTS

Master’s degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.

LANGUAGE REQUIREMENTS

No language requirements.

ADMISSIONS

This master’s program is offered for work leading to the Ph.D. Students may not apply directly for the master’s, and should instead see the admissions information for the Ph.D. (http://guide.wisc.edu/graduate/pathology/cellular-molecular-pathology-phd)

LEARNING OUTCOMES

KNOWLEDGE AND SKILLS

- Students will gain a better understanding of the basic mechanisms of disease at the level of cell, organ, and body, as well as the morphologic expression patterns of selected common specific disease processes.
- Articulates, critiques, or elaborates the theories, research methods, and approaches to inquiry or schools of practice in the field of study.
- Identifies sources and assembles evidence pertaining to questions or challenges in the field of study.
- Demonstrates understanding of the primary field of study in a historical, social, or global context.
- Selects and/or utilizes the most appropriate methodologies and practices.
- Evaluates or synthesizes information pertaining to questions or challenges in the field of study.
- Communicates clearly in ways appropriate to the field of study.

PROFESSIONAL CONDUCT

- Commit to increase professional growth and knowledge, to attend educational programs and to personally contribute expertise to meetings and journals.
- Recognizes and applies principles of ethical and professional conduct.

PEOPLE