

# PATHOLOGY, MS/MEDICINE, MD

**Degree:** Master of Science (MS)

**Field of Study:** Pathology

**Program Information:** [bulletin.case.edu/medicine/pathology/pathology-ms/](http://bulletin.case.edu/medicine/pathology/pathology-ms/)

**Degree:** Doctor of Medicine (MD)

**Program Information:** [bulletin.case.edu/medicine/medicine/](http://bulletin.case.edu/medicine/medicine/)

## Program Overview

The School of Medicine and School of Graduate Studies has partnered to offer a dual degree for the MS in Pathology and the Doctor of Medicine (MD) program.

## Program Requirements

Students are expected to complete at least two graduate courses (3 credits each or total 6 credits) before beginning the laboratory research period (year 3), and students should take three graduate courses before the research period if this is possible. For students to receive graduate credit for any medical coursework (as IBIS credit, e.g. IBIS 403), they must register at the beginning of the semester. Students in the MD/MS joint degree program must attain a cumulative GPA of 3.0 in the graduate courses. Students in this program may participate in any of the three tracks of the Department of Pathology Graduate Program.

**Students in the Pathology track must complete:**

Code	Title	Hours
PATH 601	Special Problems	18
PATH 511 or PATH 512	Experimental Pathology Seminar I Experimental Pathology Seminar II	1
IBIS 600	Exam in Biomedical Investigation	0

**And 9 credits from the Pathology courses listed below or other Approved courses.** Other department's graduate level course may be accepted provided it is appropriate to the student's project and is approved by his/her Thesis Committee or the Graduate Program Director in Pathology.

Code	Title	Hours
PATH 410	Aging and the Nervous System	1
PATH 416	Fundamental Immunology	4
PATH 430	Oxidative Stress and Disease Pathogenesis	1
PATH 444	Neurodegenerative Diseases: Pathological, Cell. & Molecular Perspectives	3
PATH 510	Basic Pathologic Mechanisms	4
PATH 525	Neurodegenerative Diseases of the Brain and the Eye: Molecular Basis of the Brain-Eye Connection	3

## Sample Plan of Study

**First Year**

Fall	Hours
MD Curriculum	
<b>Hours</b>	<b>0</b>

<b>Spring</b>		
Graduate Course *		3
MD Curriculum		
<b>Hours</b>		<b>3</b>
<b>Summer</b>		
PATH 601	Special Problems (optional)	1 - 3
<b>Hours</b>		<b>1-3</b>
<b>Second Year</b>		
<b>Fall</b>		
IBIS 403	Integrated Biological Sciences III	6
Graduate Course *		3
MD Curriculum		
<b>Hours</b>		<b>9</b>
<b>Spring</b>		
Graduate Course *		3
<b>Hours</b>		<b>3</b>
<b>Third Year</b>		
<b>Fall</b>		
PATH 601	Special Problems	8
<b>Hours</b>		<b>8</b>
<b>Spring</b>		
PATH 601	Special Problems	7
PATH 511 or PATH 512	Experimental Pathology Seminar I or Experimental Pathology Seminar II	1
IBIS 600	Exam in Biomedical Investigation	0
<b>Hours</b>		<b>8</b>
<b>Fourth Year</b>		
<b>Fall</b>		
MD Curriculum		
<b>Hours</b>		<b>0</b>
<b>Spring</b>		
MD Curriculum		
<b>Hours</b>		<b>0</b>
<b>Fifth Year</b>		
<b>Fall</b>		
MD Curriculum		
<b>Hours</b>		<b>0</b>
<b>Spring</b>		
MD Curriculum		
<b>Hours</b>		<b>0</b>
<b>Total Hours</b>		<b>32-34</b>

\* 15 graded credits of graduate school courses should be taken in the first 2 years, including IBIS 403 (6 credits) and three PATH graduate courses (3 credits each). Students may defer a maximum of one 3-credit hour course to Year 3.