Cancer Biology, M.S.

Requirements

Minimum Graduate School Requirements
Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

Major Requirements

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students are able to complete a program with minimal disruptions to careers and other commitments.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

Curricular Requirements

Requirements Detail

Minimum Credit Requirement

Minimum Residence Credit Requirement

Minimum Graduate Coursework Requirement

Half of degree coursework (15 credits out of 30 total credits) must be completed graduate-level coursework. Details can be found in the Graduate School's Minimum Graduate Coursework (50%) policy (https://policy.wisc.edu/library/UW-1244/).

Overall Graduate GPA Requirement

3.00 GPA required.

Other Grade Requirements

Students must earn a B or above in all required Core Requirements. Courses, otherwise the course must be repeated.

Assessments and Examinations


Language Requirements

No language requirements.

Required Courses

The curriculum for Cancer Biology is designed to introduce you to research related to the induction, properties, and therapy of cancer and to ensure that you have the necessary background in one or more areas of related, fundamental science to enable you to do original research. Courses are drawn from the Department of Oncology as well as various related departments, including Bacteriology, Biochemistry, Biomolecular Chemistry, Chemistry, Genetics, Human Oncology, Medical Microbiology and Immunology, Pathology and Laboratory Medicine, and Pharmacology.

The Graduate School at UW-Madison requires PhD students to complete a minimum of 51 credits in order to obtain a PhD Degree. These credits are fulfilled via core curriculum courses, 990 research, and electives. Courses numbered below 300, audit, and pass/fail do not satisfy the minimum requirement. It is suggested that you take approximately 2 courses per semester with the remaining credits being 990 research. All courses must be completed by the end of your second year, before completing the Preliminary Exam.

Code

Title

Credits

Core Courses:

ONCOLOGY/PL PATH 640 General Virology-Multiplication of Viruses 3

ONCOLOGY 703 Carcinogenesis and Tumor Cell Biology 3

ONCOLOGY 715 Ethics in Science 1

ONCOLOGY 725 Readings in Cancer Biology 2

ONCOLOGY 735 Current Problems in Cancer Biology 2

ONCOLOGY 901 Seminar (presentation) 1 1

Research Credits

ONCOLOGY 990 Research 2

Quantitative Requirement

B M I/STAT 541 Introduction to Biostatistics or ONCOLOGY 778 Bioinformatics for Biologists 3

Electives (two courses) 3

1

Beginning in your second year, you will be required to give an annual, formal presentation in the Cancer Biology Student/Postdoc Seminar Series. You will register for ONCOLOGY 901 Seminar during the semester in which you present. Your seminars will be recorded and you will receive feedback from the seminar course instructor to help improve your public speaking and presentation skills. Attendance at this seminar series is required.

In addition, you are expected to attend the Cancer Biology Seminar throughout your graduate career (no registration required). The Cancer Biology Seminar, which features local and outside faculty speakers, is held on Wednesdays at 10:30 a.m. in 1345 HSLC. The schedule is posted on the McArdle website (http://www.mcardle.wisc.edu/events/cancerbiology_seminar.htm).
Students will enroll in up to 12 credits per semester as pre-dissertators (only 2 credits during the summer term).

Students may select electives from the list below in consultation with their advisor.

### Elective Coursework

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOCHEM 601</td>
<td>Protein and Enzyme Structure and Function</td>
<td>2</td>
</tr>
<tr>
<td>BIOCHEM/GENETICS/MICROBIO 612</td>
<td>Prokaryotic Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOCHEM/PHMCOL/M/ZOOLOGY 630</td>
<td>Cellular Signal Transduction</td>
<td>3</td>
</tr>
<tr>
<td>PATH-BIO/M M &amp; I 528</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>MICROBIO 607</td>
<td>Advanced Microbial Genetics</td>
<td>3</td>
</tr>
<tr>
<td>M M &amp; I 740</td>
<td>Mechanisms of Microbial Pathogenesis</td>
<td>3</td>
</tr>
<tr>
<td>PATH 803</td>
<td>Pathogenesis of Major Human Diseases</td>
<td>3</td>
</tr>
<tr>
<td>BIOCHEM/GENETICS/MD GENET 620</td>
<td>Eukaryotic Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOCHEM 625</td>
<td>Mechanisms of Action of Vitamins and Minerals</td>
<td>2</td>
</tr>
<tr>
<td>CRB 640</td>
<td>Fundamentals of Stem Cell and Regenerative Biology</td>
<td>3</td>
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<tr>
<td>CRB 650</td>
<td>Molecular and Cellular Organogenesis</td>
<td>3</td>
</tr>
<tr>
<td>CRB/MEDICINE 701</td>
<td>Cell Signaling and Human Disease</td>
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<tr>
<td>B M E 520</td>
<td>Stem Cell Bioengineering</td>
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<tr>
<td>CBE/B M E 783</td>
<td>Design of Biological Molecules</td>
<td>3</td>
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<tr>
<td>PATH 750</td>
<td>Cellular and Molecular Biology/Pathology</td>
<td>2-3</td>
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<tr>
<td>M M &amp; I/PATH-BIO 750</td>
<td>Host-Parasite Relationships in Vertebrate Viral Disease</td>
<td>3</td>
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