CELL AND DEVELOPMENTAL BIOLOGY

http://mcb.illinois.edu/departments/cdb/

Head of the Department: Jie Chen
B107 Chemical and Life Sciences Laboratory
601 South Goodwin Avenue
Urbana, IL 61801
(217) 333-6118
E-mail: mcbinfo@life.uiuc.edu (biochadm@scs.uiuc.edu)

Major: Cell and Developmental Biology
Degrees Offered: M.S., Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Cell and Developmental Biology and Doctor of Medicine (M.D.) through the Medical Scholars Program (http://www.med.illinois.edu/mdphd)

Graduate Degree Program

The graduate curriculum in Cell and Developmental Biology is designed to educate students for careers in research and teaching in the biological sciences. Departmental faculty are concerned with the structural and functional relationships of cells and organisms, with research emphases upon eukaryotic cell and molecular biology, neurobiology, developmental biology, and molecular genetics. The department has embarked on a major program to develop research strengths in molecular aspects of developmental, neural, structural, and eukaryotic cell biology to complement existing faculty interests. Students are not admitted to the M.S. program; M.S. requirements are completed as part of the Ph.D. program.

Admission

Students interested in this program must apply directly to the School of Molecular and Cellular Biology (www.mcb.illinois.edu/graduate/gradprospect.html). During the first semester, students perform three laboratory rotations, choosing from any laboratory in the School. Students select a laboratory for their thesis research in December and formally join the appropriate graduate program/department at that time.

Important factors in the evaluation of applications are general academic performance, background in the biological and chemical sciences and mathematics, Graduate Record Examination (GRE) scores, and letters of recommendation from college professors. The department does not admit students to the M.S. program.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Cell and Developmental Biology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (http://www.med.illinois.edu/msp).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program.

Facilities and Resources

Facilities include modern, well-equipped laboratories for cellular, developmental, genetic, molecular, and structural studies. The University offers exceptional and broadly based research support services. These include the Center for Electron Microscopy, with state-of-the-art instrumentation; the Center for Biotechnology, which includes facilities for molecular cloning, DNA and protein synthesis and sequencing, and transgenic animals; the Cell Science Center, which houses and staffs a hybridoma facility and flow cytometry unit; School of Molecular and Cellular Biology-subsidized shops; and a superb university library system, the third largest in the nation. The University offers outstanding computer services and is home to the National Center for Supercomputing Applications. The Beckman Institute for Advanced Science and Technology combines research in the physical and biological sciences. Opportunities for interaction in the cellular and molecular sciences are also available in many other units within the Schools of Molecular and Cellular Biology, Integrative Biology, and Chemical Sciences and the Colleges of Medicine, Agricultural, Consumer and Environmental Sciences, and Engineering.

Financial Aid

Financial aid is available to qualified applicants in the form of university fellowships (awarded on a competitive basis), teaching assistantships (awarded by the department), research assistantships, and tuition and fee waivers. Outstanding applicants are nominated for support from the Cell and Molecular Biology, Molecular Biophysics.

Master of Science in Cell and Developmental Biology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCB 501</td>
<td>Advanced Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>MCB 502</td>
<td>Advanced Molecular Genetics</td>
<td>4</td>
</tr>
<tr>
<td>MCB 529</td>
<td>Special Topics Cell Devel Biol (Section WRI)</td>
<td>2</td>
</tr>
<tr>
<td>MCB 580</td>
<td>Res Ethics &amp; Responsibilities</td>
<td>1</td>
</tr>
<tr>
<td>MCB 581</td>
<td>Laboratory Rotation I</td>
<td>9</td>
</tr>
<tr>
<td>&amp; MCB 582 &amp; MCB 583</td>
<td>and Laboratory Rotation II &amp; Laboratory Rotation III</td>
<td>9</td>
</tr>
<tr>
<td>CDB 595</td>
<td>Graduate Sem Cell Devel Biol (Sections A and C)</td>
<td>2</td>
</tr>
</tbody>
</table>

Approved elective coursework hours to bring total course work hours to 32

Total Hours 32

Information listed in this catalog is current as of 03/2018
Other Requirements

Other requirements may overlap

Completion of one of the following:
Pass the Preliminary Exam, or
approval of the graduate program committee (chaired by a tenured
CDB faculty member and comprised
of at least 5 CDB faculty members),
or by approval of the research
advisor and department head.

Minimum GPA: 3.00

1 For additional details and requirements refer to the department’s
Graduate Student Handbook (http://mcb.illinois.edu/departments/
cdb/gradcurrent.html) and the Graduate College Handbook (http://
www.grad.illinois.edu/gradhandbook).

Doctor of Philosophy in Cell and
Developmental Biology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCB 501</td>
<td>Advanced Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>MCB 502</td>
<td>Advanced Molecular Genetics</td>
<td>4</td>
</tr>
<tr>
<td>MCB 529</td>
<td>Special Topics Cell Devel Biol (Section WRI)</td>
<td>2</td>
</tr>
<tr>
<td>MCB 580</td>
<td>Res Ethics &amp; Responsibilities</td>
<td>1</td>
</tr>
<tr>
<td>MCB 581</td>
<td>Laboratory Rotation I</td>
<td>9</td>
</tr>
<tr>
<td>&amp; MCB 582</td>
<td>Laboratory Rotation II</td>
<td></td>
</tr>
<tr>
<td>&amp; MCB 583</td>
<td>Laboratory Rotation III</td>
<td></td>
</tr>
<tr>
<td>CDB 595</td>
<td>Graduate Sem Cell Devel Biol (Sections A and</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>C) CDB 595 Section A and CDB 595 Section C must each</td>
<td></td>
</tr>
<tr>
<td></td>
<td>be taken once for 1 credit hour each.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved elective coursework hours to bring total course</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>work hours to 32</td>
<td></td>
</tr>
<tr>
<td>CDB 599</td>
<td>Thesis Research (min/max applied toward degree)</td>
<td>64</td>
</tr>
</tbody>
</table>

Total Hours 96

Other Requirements

Other requirements may overlap

The department requires each
graduate student to teach the
equivalent of 50% for one semester.

Masters Degree Required for Admission to PhD? No
Preliminary Exam Required Yes
Dissertation Deposit Required Yes
Minimum GPA: 3.0

1 For additional details and requirements refer to the department’s
Graduate Student Handbook (http://mcb.illinois.edu/departments/
cdb/gradcurrent.html) and the Graduate College Handbook (http://
www.grad.illinois.edu/gradhandbook).