

CELL & DEVELOPMENTAL BIOLOGY, MS

for the Master of Science in Cell & Developmental Biology

The Department of Cell & Developmental Biology does not admit students to the Cell & Developmental Biology MS degree program. Admission to graduate study is only through the PhD degree program. Information about the Cell & Developmental degree PhD program can be found here (<http://catalog.illinois.edu/graduate/las/cell-developmental-biology-phd/>).

Graduate Degree Program in Cell & Developmental Biology

- Cell & Developmental Biology, PhD (<http://catalog.illinois.edu/graduate/las/cell-developmental-biology-phd/>)

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, developmental biology, and molecular genetics.

Admission

Applicants interested in the Cell & Developmental Biology, PhD program will need to apply directly to the School of Molecular and Cellular Biology (MCB) PhD program (<https://mcb.illinois.edu/academics/masters-program/>). The MCB PhD program is an umbrella program that requires admitted students to spend their first semester rotating among three different labs to explore their interests before joining one of our four departments.

MCB Admission requirements include a bachelor's degree in biological or physical sciences, a grade point average of a 3.0 or higher (A = 4.0), prior research experience and three letters of recommendation from individuals who can attest to the applicant's academic and research background. The Graduate Record Examination (GRE) is **not** required. Applicants interested in pursuing a PhD in Cell & Developmental Biology should have a strong background in biology, chemistry, and mathematics. In addition to these requirements, non-native English-speaking applicants must attain a minimum Test of English as a Foreign Language (TOEFL) overall score of 96, with at least a score of 22 on the speaking section. MCB does **not** accept the International English Language Testing System (IELTS) to show English proficiency. Graduate College requirements also apply.

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 PhD 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. The Roy J. Carver Biotechnology Center provides state-of-the-art facilities to support genomics, proteomics, metabolomics, bioinformatics, flow cytometry, and translational medical research. The University offers outstanding computer services and is home to the National Center for Supercomputing Applications. The Beckman Institute for Advanced Science and Technology and the Carl R. Woese Institute for Genomic Biology foster interdisciplinary research across the campus. 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, Chemical Sciences, the Cancer Center, College of Engineering, and the Carle Illinois College of Medicine.

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.

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For additional details and requirements refer to the department's Graduate Student Handbook (<https://mcb.illinois.edu/academics/masters-program/>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook/>).

| Code | Title | Hours |
|---|---|-----------|
| MCB 501 | Advanced Biochemistry | 4 |
| MCB 502 | Advanced Molecular and Cell Biology | 4 |
| MCB 529 | Special Topics in Cell and Developmental Biology (Section WRI) | 2 |
| MCB 580 | Res Ethics & Responsibilities | 1 |
| MCB 581 & MCB 582 & MCB 583 | Laboratory Rotation I and Laboratory Rotation II and Laboratory Rotation III | 9 |
| CDB 595 | Graduate Sem Cell Devel Biol (Sections A and C) <small>CDB 595 Section A and CDB 595 Section C must each be taken once for 1 credit hour each.</small> | 2 |
| Approved elective coursework hours to bring total course work hours to 32 | | 10 |
| Total Hours | | 32 |

Other Requirements

| Requirement | Description |
|--|-------------|
| 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 |

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Cell & Developmental Biology graduates will:

1. Have mastered the foundational knowledge that defines the fields of cell and developmental biology.
2. Be able to write clearly and effectively about cell and developmental biology at the graduate level as well as in layperson terms.
3. Be able to explain cell and developmental biology orally to professional scientists, students of the discipline, and to a lay audience.
4. Be prepared to teach foundational cell and developmental biology at the college level.
5. Be able to analyze scientific data and draw conclusions from it.
6. Be able to identify important unsolved problems in cell and developmental biology.
7. Be able to articulate a hypothesis of an unsolved problem and design a research plan to test the hypothesis.
8. Be able to perform controlled experiments to test hypotheses.
9. Be able to organize results from experiments into a clear narrative that advances the field.
10. Be able to articulate the significance of their research in the broader context of the field.

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Department of Cell & Developmental Biology

Head of Department: Supriya Prasanth

Director of Graduate Studies: Stephanie Ceman

Cell & Developmental Biology website (<https://mcb.illinois.edu/departments/cell-developmental-biology/>)

B107 Chem and Life Sciences Lab, 601 South Goodwin Avenue, Urbana, IL 61801

(217) 333-6118

MCB Graduate Admissions email: mcb-grad@illinois.edu

College of Liberal Arts & Sciences

College of Liberal Arts & Sciences website (<https://las.illinois.edu/>)

School of Molecular & Cellular Biology

School of Molecular & Cellular Biology website (<https://mcb.illinois.edu/>)

Admissions

Graduate College Admissions & Requirements (<https://grad.illinois.edu/admissions/apply/>)