

**Requirements, Procedures and Deadlines for  
Molecular and Cellular Biology Majors  
Interested in Graduation with Distinction  
2006-07 Academic Year**

Many undergraduate students in the Molecular and Cellular Biology major carry out undergraduate research. To provide recognition of senior students in the MCB major who have demonstrated excellence in research, the MCB Distinction Committee awards graduation honors of "Distinction in MCB" in three categories, based on academic performance and quality of research: Distinction, High Distinction and Highest Distinction. The final UIUC transcript and diploma will note if a student earned distinction and at what level.

**How to Get Involved in Undergraduate Research for Distinction in Molecular and Cellular Biology**

Since good research requires intensive effort, you should plan to get started in your junior year or before. Past experience indicates that one- or two-semester projects rarely succeed in producing substantial results adequate for a thesis. Three-to-four semester projects are the most common. First decide what your area of interest is, then talk to potential faculty advisors in that area to arrange a research project. A list of MCB faculty members and their research interests, as well as suggestions for how to get involved in research, is available on the UIUC MCB advising website (<http://www.life.uiuc.edu/advising/>) under Undergraduate Research. Individual departments have more detailed information about faculty research interests. When you have found an advisor and the two of you have agreed on a project, the professor will direct you to the appropriate office to enroll under an independent study rubric (**MCB 290 - letter graded**). You must be signed up for **MCB 290** prior to the semester you write your research thesis. For the semester when you plan to write your thesis, you must sign up for **MCB 492**.

**Specific Requirements**

To be considered for Distinction in Molecular and Cellular Biology, you must be enrolled as a Molecular and Cellular Biology Major and meet the following requirements:

1. You must be enrolled in **MCB 492** (not MCB 290). If you wish to pursue a research project in the laboratory of a professor at UIUC who is not affiliated with an MCB department, you must obtain prior approval by filling out an application form.
2. To graduate with distinction in MCB, a satisfactory senior thesis must be submitted to the MCB Distinction Committee by the posted deadline (see below), and your overall GPA must be at least 3.25. To graduate with high distinction, an outstanding senior thesis must be submitted, and your overall GPA must be at least 3.50. To graduate with highest distinction, a truly exceptional senior thesis must be submitted, and your overall GPA must be at least 3.75. The faculty advisor with whom you are working will provide a letter of evaluation and recommendation for distinction, and the MCB Distinction Committee determines if the senior thesis you submit is satisfactory for graduation with distinction and at what level. Not every student who conducts MCB 290 research writes and submits a thesis. Not every student who

writes and submits a thesis receives distinction. If you submit a thesis, but do not receive distinction, you may still receive credit for MCB 492.

3. If you are graduating in May 2007, you must submit the attached application form, along with a page that provides the tentative title of the research thesis and a brief summary of the research (i.e. one paragraph) to Ms. Donna Prah, B103 Chemical Life Science Lab, no later than 11:00 AM, February 28, 2007.

This information is needed by the MCB Distinction Committee to determine the number and disciplinary distribution of theses to be reviewed. If necessary, the committee may need to add appropriate faculty members.

If you are graduating in December 2006 or August 2007, you do not need to submit the application/title/summary, but you must meet the research thesis submission deadline given in the table in item 4.

4. You must present the original and 6 copies of your research thesis to Donna Prah (B103 CLSL) for the MCB Distinction Committee by the following deadlines:

**Graduation Date:**

Sunday, Dec. 17, 2006

**Sunday, May 13, 2007**

Monday, August 6, 2007

**Submission Deadline:**

11:00 AM, Tuesday, November 28, 2006

**11:00 AM, Tuesday, March 27, 2007**

11:00 AM, Tuesday, July 10, 2007

**No theses will be accepted after the listed submission deadline. If you miss the deadline, you will NOT be considered for graduation with distinction, but you may still receive credit for having completed a thesis.** If you miss the deadline, but wish to receive credit and a letter grade for MCB 492, you may still write and submit a thesis (original) by the last day of classes for the semester that you will be graduating, but only with prior approval of your research advisor and the Chair of the Distinction Committee.

5. Your faculty research advisor must submit the original and 6 copies of his/her letter of evaluation of your research to Dr. Brenda Wilson, Chair, MCB Distinction Committee, B103 Chemical Life Science Lab, no later than the appropriate submission deadline listed in item 4.

## **The Research Project**

The research project must consist of original research, which should attempt to answer a specific scientific question. Simply learning to master a technique is not sufficient. Because research often involves unanticipated technical problems, you should be prepared to accept delay and frustration when things do not go smoothly. The best approach to your project is to have a clear understanding of the questions you are asking and why you are asking those particular questions. This understanding is aided by a familiarity with the literature in your area.

## **The Research Thesis**

The research thesis should be a formal report of your results, and therefore should follow accepted professional standards for such reports. An acceptable thesis should describe research discoveries of sufficient quantity and quality to constitute a body of work that presents a problem, addresses that problem through specific and well-defined experimental approaches, and interprets the results in the context of the relevant research field. Your thesis should contain a title page, abstract, introduction, experimental approach & methods, results, discussion, acknowledgements, and references.

The title page should include the title of your thesis, your name and affiliation, your research advisor's name and affiliation, and the date. The Introduction should discuss the scientific background leading to the project, including a review of previous literature related to the topic and what questions are need to be addressed and how the thesis project addresses these questions. The Experimental Approach and Methods section should clearly describe how the thesis project addressed the problem, what the experimental design was and details on how the experiments were conducted, including sources of materials. The Results section should summarize the results of the experiments, showing the experimental data in graph and figure format with adequate statistics. Be sure to label and caption all Tables and Figures. The Conclusions should evaluate the results obtained and the figures, tables or graphs presented and should succinctly put the work in the context of the appropriate field(s). Adequate references should be cited, and a bibliography with complete reference information (all authors, complete title of article, journal name, volume, date, etc) should be given.

You should recognize that communication of your results is the final step in scientific research. Therefore, your thesis should be as clear as you can make it. A well-written, concise thesis should be understandable to researchers in allied fields as well as to specialists in your own field. The senior thesis is *NOT* a "paper", so there are no hard-fast page limitations. Do not get bogged down in detail. Since this is an undergraduate senior thesis, it is not expected that students will have the same depth and level of accomplishment that might be found for a master's thesis or a doctoral thesis, but the format is similar. An unduly long thesis is discouraged. The goal is to have a thorough, clearly written, yet concise presentation of your research project. Formatting should include 1" margins, double-spaced, and 10-12 point font size. Complex figures, color illustrations or other materials that do not Xerox well must be reproduced clearly in each copy.

**IMPORTANT NOTE:** You must fully credit any data, analyses, illustrations, etc., that are produced or obtained by or through collaboration with other individuals. This credit must include the names of those with whom you collaborated and an explanation of the nature of their assistance and/or collaboration. This information should be included within the experimental sections as well as the acknowledgements section of the document. Failure to give proper credit may disqualify you from consideration for graduation with distinction.

## **Evaluation Procedures**

Your research thesis will be read and evaluated by members of the MCB Distinction Committee, which consists of MCB faculty members. Committee members may ask other faculty for additional evaluation of theses that fall outside their range of expertise. Remember that committee members will consider clarity of expression as they read your thesis. In addition, the committee members will also take into account the letter of evaluation submitted by your faculty research advisor.

The MCB Distinction Committee will decide which theses, if any, are worthy of Distinction, High Distinction, or Highest Distinction. As a part of this evaluation process, the committee may interview some students. All students being considered for High or Highest Distinction will be interviewed, so it is important that the student be available for an interview during the week after the submission deadline. If you are interviewed, you will be asked to provide a brief (~10 minute) presentation summarizing your work. You will be expected to be able to discuss your work, and you will be questioned on its technical aspects, the interpretation of results and the significance of the research. The objective of this interview is to find out how well you understand what you did, why you did it (the scientific reason), and what the results mean in relation to other knowledge in the field.

Questions for the 2006-07 academic year should be referred to:  
Dr. Brenda Wilson, Chair, MCB Distinction Committee  
c/o Ms. Donna Prah, B103 CLSL, [drprahl@life.uiuc.edu](mailto:drprahl@life.uiuc.edu)

**Application to Graduate with Distinction  
for Molecular and Cellular Biology Majors in May 2007**

To register with the School of Molecular and Cellular Distinction Committee, you must complete this form and submit it to Ms. Donna Prah, B103 Chemical Life Sciences Lab, **no later than 11:00 AM, Wednesday, February 28, 2007**. (Please type or print clearly.) You must attach a typed page that provides the tentative title of your research thesis, your name, your advisor's name, your advisor's department, and a **brief** description of the research (i.e. one paragraph).

\_\_\_\_\_

Name

\_\_\_\_\_

UIN Number

\_\_\_\_\_

Curriculum

\_\_\_\_\_

Anticipated Date of Graduation

\_\_\_\_\_

Local Address

\_\_\_\_\_

Local Phone Number

\_\_\_\_\_

City, State, Zip Code

\_\_\_\_\_

Research Advisor's Name

\_\_\_\_\_

Advisor's Office Address

\_\_\_\_\_

Research Advisor's Department

\_\_\_\_\_

Advisor's Office Phone Number

I am aware of the requirements to be considered for graduation with distinction in Molecular and Cellular Biology and understand that **the deadline for submission of an original and 6 copies of my research thesis and a letter of evaluation from my research advisor to Ms. Donna Prah, B103 CLSL, is 11:00 AM, Tuesday, March 27, 2007.**

\_\_\_\_\_

Signature

\_\_\_\_\_

Date