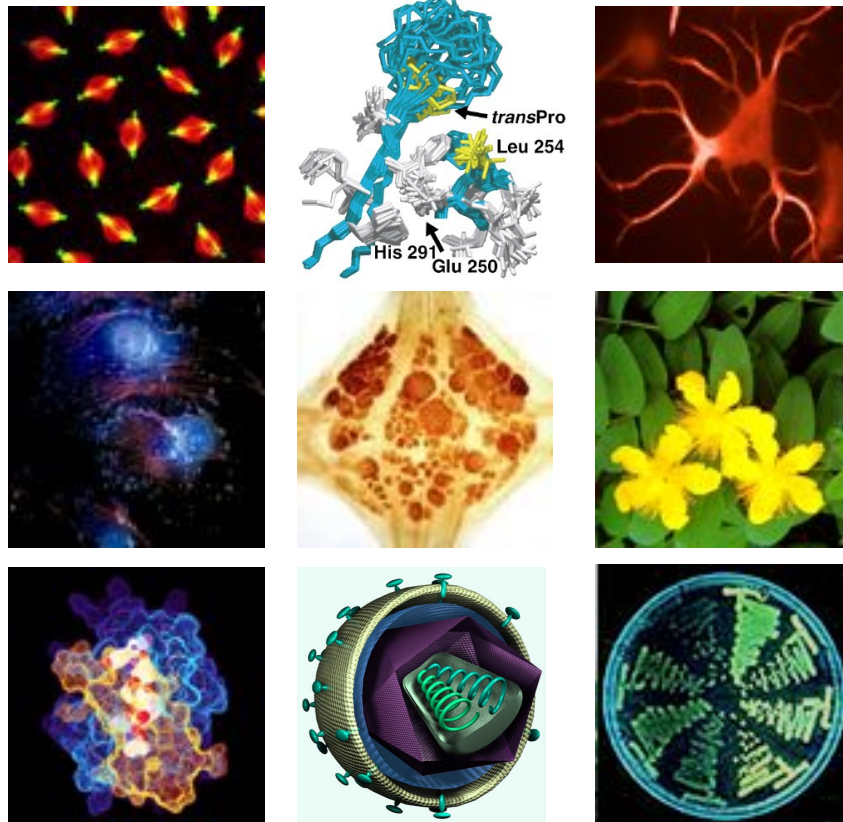


# IOWA STATE UNIVERSITY

## Molecular, Cellular & Developmental Biology

### Interdepartmental Graduate Program



Discovering the mechanisms of life  
2009-2010

<http://www.mcdb.iastate.edu/>

# The MCDB Student Handbook

2009-2010

Molecular, Cellular, and Developmental Biology  
Interdepartmental Graduate Major

Iowa State University

<b>MESSAGE FROM THE CHAIR .....</b>	<b>4</b>
<b>INTRODUCTION .....</b>	<b>5</b>
ADMINISTRATION .....	5
<b>ACADEMIC MATTERS .....</b>	<b>6</b>
DEGREES OFFERED .....	6
ADMISSION TO A DEGREE PROGRAM .....	6
REQUIRED COURSES .....	6
CURRICULUM REQUIREMENTS FOR MCDB STUDENTS .....	7
COURSE REQUIREMENTS FOR A MASTER’S DEGREE .....	10
MCDB 698 .....	10
GRADUATE ENGLISH REQUIREMENTS .....	10
<b>UPON ARRIVAL AT IOWA STATE .....</b>	<b>11</b>
<b>GETTING STARTED—YOUR FIRST YEAR .....</b>	<b>13</b>
GRADUATE STUDENT ORIENTATION .....	13
ASSIGNMENT OF A TEMPORARY ADVISOR .....	13
RESEARCH ROTATIONS—MCDB 697 .....	13
CHOOSING YOUR MAJOR PROFESSOR .....	14
<b>PROGRESSING THROUGH YOUR DEGREE PROGRAM .....</b>	<b>15</b>
COMMITTEE APPOINTMENT AND PROGRAM OF STUDY .....	15
EVALUATING YOUR PERFORMANCE .....	17
DISMISSAL POLICY .....	17
GRADUATE COLLEGE REQUIREMENTS FOR COMPOSITION OF PROGRAM OF STUDY COMMITTEES .....	19
DISSERTATION RESEARCH PROPOSAL .....	17
PRELIMINARY EXAMINATIONS .....	20
WRITING YOUR THESIS .....	21
PREPARING FOR GRADUATION .....	21
FINAL RESEARCH SEMINAR .....	21
FINAL EXAMINATION (DEFENSE) .....	21
SURVIVING IT ALL .....	22
CHECKLIST FOR COMPLETION OF GRADUATE REQUIREMENTS FOR MCDB MAJORS .....	23
<b>FINANCIAL MATTERS .....</b>	<b>25</b>
YOUR APPOINTMENT .....	25
GRANTS FOR RESEARCH .....	26
GRANTS FOR PROFESSIONAL TRAVEL .....	26
BENEFITS .....	27
<b>ADMINISTRATIVE MATTERS .....</b>	<b>29</b>
ADMINISTRATIVE ASSISTANCE .....	29
OFFICE AND HOME ADDRESSES .....	29
COMMUNICATIONS .....	29
TRANSPORTATION .....	30
HELP IN PREPARING MATERIAL FOR RESEARCH PRESENTATIONS .....	30
PROFESSIONAL ETHICS .....	31
DISCRIMINATION, AFFIRMATIVE ACTION, .....	32
.....	.....
<b>IMPORTANT FORMS .....</b>	<b>33</b>

# Message from the Chair

I am pleased to extend a heartfelt welcome to you on behalf of the Molecular, Cellular, and Developmental Biology (MCDB) Program at Iowa State University. You have been accepted into the MCDB program because your previous exemplary academic and scholarly records have prepared you well for success in graduate school and beyond. MCDB program staff and faculty are committed to assisting you in your pursuit of advanced graduate training here at ISU. Over the next few years you will develop into a world authority in your area of focused research even as you receive broad based instruction within the general area of MCDB. Enjoy, and good luck!

Jeffrey Beetham  
Departments of Veterinary Pathology and Entomology  
Chair: Molecular, Cellular, and Developmental Biology  
Email: [jbeetham@iastate.edu](mailto:jbeetham@iastate.edu)

# Introduction

## ***The MCDB Major***

The graduate major in Molecular, Cellular, and Developmental Biology is an interdepartmental and interdisciplinary training program at Iowa State University that offers the Master of Science and Doctor of Philosophy degrees. The MCDB training program offers a broad spectrum of MCDB research opportunities, ranging from the molecular to the cellular to the systemic level of analysis. The program includes over 60 faculty member from the following departments:

- Agronomy
- Animal Science
- Biochemistry, Biophysics and Molecular Biology
- Biomedical Sciences
- Entomology
- Food Science and Human Nutrition
- Genetics, Development, and Cell Biology
- Horticulture
- Physics & Astronomy
- Plant Pathology
- Veterinary Microbiology and Preventive Medicine
- Veterinary Pathology

The strength of the MCDB major lies in the combined expertise of its diverse faculty. This ensures a broad education while offering flexibility in choice of specialization. The large number of MCDB faculty in a variety of disciplines will provide you with a wide choice of research projects and major professors. Other activities and organizations in the program bring faculty and students together and provide opportunities for personal and professional interaction. These interactions are central to our goals, which are to provide broad and robust graduate student training while stimulating excellence in MCDB research.

## ***Administration***

A Chair and Executive Committee oversee the activities of MCDB. Feel free to contact them if you have any questions about the program. For the 2009-2010 academic year, the Chair and Executive Committee are:

### ***2009-2010 Executive Committee:***

#### ***Chair:***

Jeffrey K. Beetham  
Associate Professor, Veterinary Pathology  
2758A Veterinary Medicine College  
515-294-0873 [jbeetham@iastate.edu](mailto:jbeetham@iastate.edu)

#### ***Associate Chair:***

Chris Minion  
Professor, Veterinary Microbiology and  
Preventive Medicine  
1130 Veterinary Medicine College  
515-294-6347 [fcminion@iastate.edu](mailto:fcminion@iastate.edu)

#### ***Committee Members:***

W. Allen Miller  
Professor, Plant Pathology  
413 Bessey Hall  
515-294-2436 [wamiller@iastate.edu](mailto:wamiller@iastate.edu)

James Reecy  
Associate Professor, Animal Science  
2255 Kildee Hall  
515-294-9269 [jreecy@iastate.edu](mailto:jreecy@iastate.edu)

# Academic Matters

## ***Degrees Offered***

MCDB offers coursework and research experiences leading to the degrees of Master of Science and doctor of philosophy. Both Ph.D. and M.S. students must prepare a written thesis. Because MCDB is a research-based discipline, non-thesis Master of Science degrees are *not* available.

## ***Admission to a Degree Program***

The degree that a student may pursue in MCDB (that is, M.S. or Ph.D.) is normally determined and specified at the time of the student's admission to the program. Although a prior M.S. is not required for admission to the Ph.D. program, criteria for admission to the Ph.D. program are more stringent than to the M.S. program. Earning an M.S. in MCDB does not automatically qualify a student to pursue the Ph.D. degree in MCDB. Conversely, a student admitted to the Ph.D. program may need to change to an M.S. program in MCDB. This decision may impact the student's funding that was awarded based on pursuit of the Ph.D. degree. Students should confer with their major professor, the MCDB chair, and notify the MCDB office if they are contemplating making such changes.

## ***Required Courses***

It is expected that all graduate students entering the MCDB program will have a strong background in the biological sciences, including work in general biology, genetics and biochemistry. Your temporary advisor or major professor will help you determine if you have deficiencies in any of these areas and decide if you need to take additional background courses. If it is desirable to take such courses, you should take them as soon as possible.

To assure that all our students are trained in the major areas of MCDB, all students should include in their program of study a core of courses that will provide a broad coverage of the basic program in MCDB. Formal courses include biochemistry, cell biology, molecular biology and developmental biology. All students will take the MCDB seminar course each year.

A summary of the requirements follows and also can be found on the form "Checklist for Completion of Graduate Requirements for MCDB Majors", page 20.

## Curriculum Requirements for MCDB Students

**Ph.D.:** 72 graduate credits of which 36 credits, including all dissertation research credits, must be earned under the supervision of the POS committee.

Graduate credits of B or better in a relevant discipline but earned at another institution may be transferred at the discretion of the POS committee and the approval of MCDB, the department and the Graduate College. Ph.D. students take the complete core requirements.

Additional coursework for both the Ph.D. and M.S. degrees is selected by the student in consultation with his/her POS Committee to meet departmental requirements and to satisfactorily prepare the student for their research project.

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### ***MCDB PhD Curriculum***

#### **A. Core Course Requirements**

- 1. Two semester sequence of Biochemistry (404/405 or 501/502)**
- 2. One Course from each of the following areas (dates of course offerings are subject to change, see ISU course catalog for details.):**
  - a. Cellular Biology:**
    - GDCB 529: Plant Cell Biology***  
2 credits Alternate Fall
    - GDCB 528: Cellular Growth and Regulation***  
3 credits Fall
    - GDCB 640: Signal Transduction***  
3 credits Alternate Spring
    - BBMB 645: Molecular Signaling***  
2 credits Alternate Spring
    - BM.S. 575x: Cell Biology***  
3 credits Fall
  - b. Developmental Biology:**
    - GDCB 512: Plant Growth and Development***  
2 credits Spring
    - GDCB 533: Principles of Developmental Biology***  
3 credits Alternate Fall
  - c. Molecular Biology:**
    - GDCB 545: Plant Molecular Biology***  
3 credits Fall
    - GDCB 511: Molecular Genetics***  
3 credits Spring only
    - BBMB 676: Biochemistry of Gene Expression in Eucaryotes***  
2 credits Alternate Spring
    - Microbiology 502: Microbial Genetics***  
3 credits Fall only – offered Fall 2006

**GDCB 520: Genetics Engineering**

3 credits

**VMPM/PLP 608: Molecular Virology**

3 credits Alternate Spring

- d. **Research seminars: two semesters every year with at least one of those seminars being MCDB 698. Subject to approval by the POS committee, acceptable alternatives to fulfill the second seminar requirement include (i) a “for credit” research seminar series offered by your home department (eg BBMB682, Imbio602, PIP698) (ii) a 1 credit special topics course comprised of a series of research seminars, (iii) a workshop comprised of a research seminar series (e.g., GENET 591), or (iv) another ISU research seminar series.**

i. **BBMB 682.** Departmental Seminar. Cr. R. F.S.  
*Prereq: Permission of instructor.* Staff and visitor research.

ii. **Genet 591.** Workshop in Genetics. (1-0) Cr. 1.  
Repeatable. *S. Prereq: Permission of instructor.* Current topics in genetics research. Lectures by off-campus experts. Students read background literature, attend preparatory seminars, attend all lectures, meet with lecturers.

iii. **Imbio 602.** Current Topics Workshop in Immunology. (1-0) Cr. 1. Repeatable. Lectures provided by offcampus experts. Students are required to participate in discussion sessions with lecturers.

iv. **PI P 698.** Seminar. Cr. 1. Repeatable. F.S.

- e. **Highly Recommended:**

**BCB 544x: Intro to Bioinformatics**

3 credits Fall only

3. International students must pass the **English Requirements test** and subsequent courses as needed to be able to fulfill their teaching responsibility.

B. All graduate students are required **to teach one semester** as part of their training for an advanced degree. Students whose first language is not English must take and pass the SPEAK/TEACH tests at a level of II or III that allows them to receive TA support.

C. In addition, your eventual home department will have additional requirements. The student is responsible for learning of and fulfilling those additional departmental requirements.

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D. **MCDB Minor Curriculum at the Ph.D. Level**

1. **One year of Biochemistry (BB 404/405 or BB 501/502)**
2. **One course in each of two of the following three areas:**

a. **Cellular Biology:**

*GDCB 529: Plant Cell Biology*, 2 credits  
*GDCB 528: Cellular Growth and Regulation*, 3 credits  
*GDCB 640: Signal Transduction*, 3 credits  
*BBMB 645: Molecular Signaling*, 2 credits  
*BM.S. 575x: Cell Biology*, 3 credits

b. **Developmental Biology:**

*GDCB 512: Plant Growth and Development*, 2 credits  
*GDCB 533: Principles of Developmental Biology*, 3 credits

c. **Molecular Biology:**

*GDCB 545: Plant Molecular Biology*, 3 credits  
*GDCB 511: Molecular Genetics*, 3 credits  
*BBMB 676: Biochemistry of Gene Expression in Eucaryotes*, 2 credits  
*Microbiology 502: Microbial Genetics*, 3 credits  
*GDCB 520: Genetics Engineering*, 3 credits  
*VMPM/PLP 608: Molecular Virology*, 3 credits

3. **One Enrollment in MCDB 698 (Seminar in MCDB)**
- 

E. **Co-major in Neuroscience**

1. For MCDB students who wish to co-major in Neuroscience: NEURO 556 is acceptable to fulfill one of the courses in MCDB category 2 (above), either in the area of Cellular Biology, Developmental Biology, or Molecular Biology.
2. Alternate between MCDB 698 and NEURO 690: Research/Journal Club seminars two semesters every year with one of those semesters being MCDB 698 and the other NEURO 690.

Thus, as an example, a typical MCDB/Neuroscience co-major may take the following courses to fulfill the dual requirements:

1. BBMB 404/405

2. NEURO 556, GDCB 540 or 528, BBMB 676 or Genetics 511, and NEURO 557
3. Statistics 401
4. Seminar courses MCDB 698/NEURO 690 and NEURO 660 as indicated.

### ***Course Requirements for a Master's Degree***

Students seeking an M.S. degree must take a total of 30 credits, with not less than 22 credits earned at ISU. M.S. students have the same core course requirements, including seminar courses, as Ph.D. students, but may remove either the cellular, developmental or molecular biology requirement (however a course in each of these three categories is recommended.) M.S. students are not required to teach, but may apply for teaching assistantships if needed and if they have passed appropriate SPEAK/TEACH requirements.

### ***MCDB 698***

#### *Journal Discussion/Student Presentations*

MCDB 698 is a student seminar series. Students present their research to the other students in the class. The purpose of MCDB 698 is to help you develop formal oral and visual communication skills that you will use at scientific conferences, for teaching, and for job interviews after you graduate from the program. In addition, other members of the class are expected to participate and gain experience in thoughtfully critiquing the presentation and asking questions. Students in the audience are encouraged to ask questions to foster thought-provoking discussion on the speakers' research. The audience consists only of other students and the instructor so that students will not be intimidated by senior faculty or other scientists. Students can feel free to ask "dumb" questions, which almost always are not so dumb.

First or second year students may present a journal paper or other research that is not their own, if they do not have enough of their own data to present. If a journal paper is used, the other students in the class will read the paper before participating in discussion. The presenter is expected to present a brief review of the background material and then discuss the material presented in the paper.

### ***Graduate English Requirements***

#### *Nonnative Speakers of English*

#### **English Placement Test**

This test is for non-native English speakers who DO NOT have a prior Bachelor's or Master's or Ph.D. degree from a U.S. college or university. If you have a Bachelor's, Master's, or Ph.D. degree from a U.S. college or university, where the language of

instruction was English, you need to fill out a form to certify that you have met your English requirement.

This test should be taken at the beginning of your first semester of enrollment. It must be taken in addition to TOEFL (Test of English as a Foreign Language), which is taken as part of the admissions process. A student who does not pass this examination is assigned to one or more courses in the English 101 series. This course work must be completed during the first year of study.

**Certification of English Requirement:**

Graduate College SPEAK/TEACH Program, 1116 Pearson Hall  
515-294-1958

**Testing of Nonnative Speaking Students Who Teach**

You may read the details regarding the SPEAK/TEACH testing on the SPEAK/TEACH web site. SPEAK/TEACH testing is required of graduate students who fit both of the following categories:

- those who are not native speakers of American English (i.e., learned another language first), and
- those who are to be appointed to or considered for teaching assistantships or who will have some teaching responsibilities even if they are not teaching assistants (TAs).

The SPEAK/TEACH tests of oral proficiency are given before the beginning of fall and spring semesters. Registration for the test is held in 1116 Pearson Hall the day before the test is administered. TAs and faculty with questions about SPEAK/TEACH testing should call 515-294-1958 or 515-294-7996.

A prospective teaching assistant who does not pass these tests is required to successfully complete course work and be retested. Sections of the courses University Studies 180 and 511 are designed to help new teaching assistants. These courses focus upon pronunciation, listening, question handling, teaching and lecturing skills, and an introduction to the culture of U.S. university life. Because enrollment is restricted in University Studies 180, TAs cannot register for the courses through Access Plus registration. TAs must appear at the SPEAK/TEACH Office, 1116 Pearson Hall, on the first or second day of classes for fall or spring semester to obtain permission to enter the course by completing a course add slip. The SPEAK/TEACH website is [www.grad-college.iastate.edu/speakteach/](http://www.grad-college.iastate.edu/speakteach/).

## Upon Arrival at Iowa State

When you first arrive, you may find yourself overwhelmed by the number of things you must do. Here is a list of some of the most important.

1. Visit the Interdepartmental Programs office in 2018 Molecular Biology. Introduce yourself to the Chair, Jeff Beetham, and Amy Ahrens the Program Coordinator. Dr. Beetham can answer many questions you have about your academic program; Amy can help you find your way around the University administrative offices and answer your questions regarding MCDB and/or the University.
2. ***Read this Handbook.*** It is especially important to read the section on Administrative Matters during your first few days.
3. Register for e-mail and plan to check it regularly (at least daily). E-mail is the most common means of communication at Iowa State University.
4. Obtain the following references and examine them carefully. These documents contain all the University regulations and requirements for graduation. All items from the Graduate College and Registrar's Office are free and can be found online within the ISU website and printed off for your personal use.
  - Graduate College Handbook (<http://www.grad-college.iastate.edu/>)
  - Graduate College Thesis Resource  
(<http://www.grad-college.iastate.edu/thesis/resources.html/>)
  - General Catalog (<http://www.iastate.edu/~catalog>)
  - Schedule of Classes (<http://classes.iastate.edu/>)
  - Iowa State University Calendar  
(<http://www.public.iastate.edu/~registrar/calendar/>)
  - Iowa State University phone/e-mail directory  
(<http://www.iastate.edu/>)

# Getting Started—Your First Year

## ***Graduate Student Orientation***

For new graduate students, the academic year begins with an orientation period which is designed to ease the transition to graduate study at Iowa State. It is a time to become acquainted with the MCDB program and its members and to prepare for registration and the start of classes. Along with this handbook, you should have received a schedule of important orientation activities from MCDB, as well as the Graduate College. Please refer to them for information about your responsibilities during Orientation.

Which of the following sections you need to read is determined by how you are being funded. Students may enter MCDB by either of two routes: direct admission into MCDB or admission after acceptance into a department. Students entering MCDB directly are usually supported for their first year on an MCDB Research Assistantship and spend their first year doing rotations and choosing a major professor. They should read the entire handbook. Students entering after acceptance into a department arrange for a major professor and financial support through their home department. The latter students may skip sections dealing with temporary advisors, research rotations, and choosing a major professor.

## ***Assignment of an Academic Advisor***

If you have entered the MCDB program directly, by the time of your arrival for the orientation program you will have been assigned a faculty member who will act as your first-year academic advisor. Your first-year advisor is acquainted with the MCDB laboratories at Iowa State and can guide you in selecting courses during your first year, discuss with you the research opportunities in MCDB, and suggest laboratories for visits and rotations. The chair of the program usually serves as a first-year academic advisor.

During the orientation week before classes start, you can meet with your advisor if you need assistance or have questions about preparation of your schedule for the fall semester. If it is necessary to add or drop a course, or change sections of a course or the number of credits, you may do so on AccessPlus.

## ***Research Rotations—MCDB 697***

First year students who enter MCDB directly as Research Assistants are required to complete laboratory rotations (MCDB 697) to help them choose their major professor. First-year students who have already entered a department and do not receive financial support from MCDB are not required to take MCDB 697 or do

MCDB rotations. The research rotations, in addition to helping you choose your major professor, provide you with an interdisciplinary research experience, give you an opportunity to actively participate in the research program of the laboratories in which you are interested, and promote interaction and exchange of information among research groups.

MCDB Research Assistants must do three laboratory rotations during their first year (MCDB 697). Each rotation should be about 8 weeks long, with the exact length determined by agreement between the student and the professor hosting the rotation. A good schedule is two rotations during the first semester and a third during the first part of the second semester. If desired, a fourth rotation can be added in the spring semester. Total credits of MCDB 697 per semester should be 2 to 6, to bring the total number of semester credits up to 12.

### ***Choosing Your Major Professor***

If you have entered MCDB directly, much of your first year will be devoted to the important process of selecting a major professor, the person who will guide you in your graduate studies and whose research group you will join. Activities during orientation week provide you an opportunity to meet individual faculty members and discuss their research. You should also make appointments for additional conferences with the professors whose work interests you. The initial rotation arrangements (consent of faculty and start date) should be made by the second week of classes.

First-year graduate students in MCDB must choose a major professor by the end of their first year at Iowa State. However, it is highly recommended that the student choose a major professor by mid-March.

You should make use of the following information to help you decide on a research group and a professor with whom to rotate:

- The MCDB website, which has brief descriptions of the research programs of each faculty member
- Curriculum vitae and references to recent publications of MCDB faculty, available on professors' homepages. (All faculty web pages are accessible from the MCDB website: [www.mcdb.iastate.edu](http://www.mcdb.iastate.edu).)
- Attend the session of short talks during orientation week, by faculty seeking rotation students.
- Discussions with individual faculty members. (This is very important!)
- Potential that the faculty member will have space and funding for a new student, and what the level of financial support will be.

When you have decided with whom you would like to rotate, you need to personally ask the faculty member whether you can rotate in his or her laboratory. If you are interested in joining that faculty member's group, you should tell him or her

of your interest and determine whether there might be space and funding for you after you finish your rotations. Also, discuss the project you might have for your research. Although research will be conducted during these rotations, the completion of a project is not required.

After you finish your laboratory rotations, ask the faculty member with whom you would like to work whether he or she can accept you into his or her laboratory and arrange for your future financial support. Once a mutual agreement has been reached, please inform the MCDB program chair and the MCDB office. A “Request to Establish a Home Department for Students Admitted to Interdepartmental Majors” form will be initiated by the office (available online at <http://www.grad-college.iastate.edu/forms/forms.html>)

**NOTE:** You should wait to choose a major professor until *after* your rotations. If a faculty member attempts to get a commitment from you before the end of your rotations, don’t do it unless you are absolutely certain it is what you want. It is best to reserve your decision until you are fully informed about the opportunities available to you.

## Progressing Through Your Degree Program

### *Committee Appointment and Program of Study*

After you have chosen a major professor and home department, you will, in consultation with your major professor, decide on a suitable program for completion of your graduate course work. As soon as you have chosen a major professor, it is then necessary to appoint a graduate Program of Study (POS) committee. The composition and responsibilities of the POS committee will be in accordance with the Graduate College guidelines. Current minimum requirements for the composition of Program of Study Committees are summarized on page 19 of this Handbook and online in the *Graduate College Handbook*.

The POS committee should include faculty whose research interests can aid and complement your research interests, as well as faculty whose expertise will ensure that you graduate with a breadth of knowledge. The POS committee for a **doctoral** program must consist of at least five members of the Graduate Faculty. The Graduate Faculty is listed in the back of the *Graduate College Handbook*. The committee must include at least three faculty members, including the major professor, from within the MCDB major. At least one faculty member must be either outside the MCDB major *or* outside of your home department.

The POS committee for a **master's** student must consist of at least three members of the Graduate Faculty. It must include two members, including the major professor, from inside the MCDB major. One member of the committee must be either outside the major or outside of your home department.

Once the chosen members of the POS committee have agreed to serve, you should complete the Graduate College form "Recommendation for Committee Appointment" (available online). Have the committee sign it, and submit it to the MCDB program chair for approval. A copy of this form and instructions for its completion are available at <http://www.grad-college.iastate.edu/forms/forms.html>. On the committee form, under major, print or type: MCDB. After official appointment of the committee, copies of the form will be returned to you and your major professor. A third copy is placed in your file in the MCDB program office.

Changes to your committee made after the completion of the "Recommendation for Committee Appointment" form has been approved should be made on a "Request to Change Committee Appointment" form. A copy of this form is available at <http://www.grad-college.iastate.edu/forms/forms.html>

The next step is to call your committee together, inform them of your research plans, and ask for their evaluation of your plans. This is also the time to complete your "Program of Study" (POS) form. This should be done by the first semester of your second year. (i.e. within six months of choosing your major professor.) A copy of this form and instructions are available at <http://www.grad-college.iastate.edu/forms/forms.html>. The Graduate College Program of Study is one of the more important documents you will encounter while in graduate school. In essence, it is a contract between you and the Graduate College indicating the minimum course work that must be taken to complete a Ph.D. or M.S.. No changes can be made in it without the mutual approval of yourself, your committee, and the Graduate College. The item requesting "Major" on the POS form should read: MCDB.

Changes that occur in a student's program of study because of changed objectives, courses not available at any appropriate time, or because courses themselves are changed should be approved by the student's committee and DOGE (MCDB Chair) for the major. Such changes need not be sent to Graduate Dean for approval until the student is ready to file for graduation. When the student is preparing to graduate, the student should prepare a memo listing any changes to the originally filed program of study that were approved previously by the committee and the DOGE, the major professor should also sign the memo, and it should be sent to the Graduate College.

Other changes to the student's program of study should be submitted to the Graduate College on a completed "Request to Change Program of Study" form. A

copy of this form is available at <http://www.grad-college.iastate.edu/forms/forms.html>.

### ***Evaluating Your Performance***

Continued membership in the MCDB program and financial support from the major professor or home department are contingent upon satisfactory progress towards your degree. Students are required to meet with their POS committee at least once each calendar year. At the end of the first year, and thereafter, students will document their own progress by preparing a brief annual report of their coursework, research, exams, POS meetings, and other professional activities. This report will be due at the end of the Summer session. The “Annual Report of Academic and Professional Activities” is available at the MCDB Office, 2018 Molecular Biology Building. It will be evaluated by the MCDB Chair or Graduate Affairs Committee on the following basis:

- Grades: A cumulative GPA of at least 3.0 is required by the Graduate College for continued appointment to an assistantship
- Performance in laboratory rotations and progress in selection of a major professor (if applicable)
- Progress in initiation of your research project
- Progress in forming POS committee and completion of preliminary exam
- Progress in presenting research results

A notation of progress and recommendations for continuance in the major or corrections of deficiencies are deposited in the student’s file, and if necessary, sent to the major professor.

### ***Dismissal Policy***

Students may be dismissed from the MCDB program, that is, removed from the degree program and not permitted to register as MCDB graduate students. Dismissal may occur for any of the following reasons:

- a) Failure to progress in his/her degree program

This may be evidenced by a lack of research progress, a lack of aptitude or a failure to maintain satisfactory academic standing, as defined by the Iowa State University *Graduate College Handbook*.

- b) Lack of a major professor

Because graduate degrees in MCDB at ISU are centered about a mentored research project, it is impossible to complete a degree without a research mentor (major professor). To maintain membership in MCDB, a student must have an

MCDB faculty member serving as his or her major professor. A student admitted to MCDB on rotation has up to 12 months to find a major professor. It is the responsibility of the student to find a faculty member willing to serve; faculty members have the right to refuse. Faculty members who have agreed to serve may choose to terminate their service by notifying and explaining to the MCDB Chair this intent, in writing. A student who has lost his or her major professor has up to 3 months after the date the MCDB Chair is notified by the faculty member to identify another MCDB faculty member willing to serve as his or her major professor. If the student desires assistance, the MCDB Chair will help the student search for a major professor; however, final responsibility for finding a major professor rests with the student.

### c) Academic Dishonesty

The proper conduct of science requires the highest standards of personal integrity. Because of this, the University and MCDB consider dishonesty in the classroom or in the conduct of research to be a serious offense. Students accused of academic dishonesty will be dealt with according to the procedures outlined in the *University Catalog* and the Faculty Handbook. Possible punishments can include dismissal from the program and expulsion from the University, depending on the severity of the offense.

#### Dismissal Procedures:

A student's POS committee, or if the student has no POS committee, the student's major professor, temporary advisor, or a member of the MCDB Supervisory Committee has the right to recommend dismissal of any student for any of the reasons listed above. Recommendations for dismissal are made by sending a memo to the MCDB Chair.

Procedures for dismissal are as described in the Iowa State University *Graduate College Handbook*. Before a dismissal is decided, the MCDB Chair must give the student a written notice explaining why dismissal is being considered. It is the responsibility of the MCDB Chair to discuss the situation with the student, as well as their POS committee, major professor, temporary advisor, and/or Executive Committee, in an attempt to find a satisfactory resolution. This discussion constitutes the informal conference as described in the *Graduate College Handbook*. If a satisfactory resolution can not be reached, and the Executive Committee votes to dismiss the student, either party may bring the issue to the attention of the Associate Dean of the Graduate College for a decision. The student may appeal the decision of the Associate Dean, as described in the *Graduate College Handbook*.

#### Responsibilities of MCDB and the Major Professor

It is the responsibility of MCDB to counsel students who are having academic difficulties, to help students search for an acceptable major professor or, if students are unable to overcome these difficulties, to help the students

identify and apply to other appropriate degree programs. It is the responsibility of the major professor and his/her department to seek funds for a student's assistantship and for the conduct of research.

*Relationship between Status in MCDB and Termination of Financial Support:*

Although students in MCDB are normally supported on graduate assistantships, this is not a requirement for continued participation in MCDB. Students not on assistantship will continue to have regular status in the major so long as they remain in good standing and are registered.

However, because assistantship support at Iowa State requires that a student be a member of a graduate program, dismissal from MCDB requires that assistantship support be terminated unless the student is able to transfer to another graduate program at ISU.

In addition, termination of financial support by a major professor does not necessarily imply that the faculty member is no longer willing to serve as the student's major professor or that the student's membership in MCDB will change. **Decisions regarding termination and renewal of assistantships are made by the department or program offering the assistantships, which in most cases is not MCDB.** Students with any doubt about their status should discuss their situation with their major professor, the MCDB chair, and/or the department or program providing their assistantship support. For further information on termination of assistantship appointments, see the *Graduate College Handbook*.

*Appeal Process*

The University has established appeal processes for student grievances. These vary depending on the nature of the grievance, and are described in the *Graduate College Handbook*. Generally, these procedures begin with the program chair or the appropriate DEO. It is usually best for all parties if a satisfactory resolution can be reached without initiating a formal appeal process. The Associate Dean of the Graduate College is available to informally consult with students and faculty.

***Graduate College Requirements for Composition of Program of Study Committees***

Below is listed the current minimum requirements for the composition of Program of Study Committees. The rules are established by the Graduate College, but are listed below in terms of a student majoring in MCDB. All individuals listed below must be members of the Graduate Faculty. See the *Graduate College Handbook* for a complete explanation and instructions on how to have co-major professors, additional members, etc.

		Ph.D.	M.S
Major Professor <sup>1,2</sup>	Inside MCDB	X	X
Committee Member	Inside MCDB	2X	X
Committee Member	Outside <b>either</b> MCDB <b>or</b> home department	X	X
Committee Member	Any Member of Graduate Faculty	X	
Minimum Total		5	3

<sup>1</sup>The major professor, or one of the co-major professors, must hold graduate faculty status. The list of graduate faculty can be found in the Appendix of the *Graduate College Handbook*.

<sup>2</sup>If the major professor holds a Collaborator appointment, there must be a co-major professor who holds regular faculty status.

### ***Dissertation Research Proposal***

Ph.D. candidates majoring in MCDB must present a description of their proposed dissertation research to their POS committees at or before the time they submit their proposed Program of Study to their POS committee for approval. The proposal may include a written component submitted to the POS committee prior to an oral presentation. The POS committee will determine the length and formality of the written and oral components. Research proposal requirements, if any, for master's degree candidates are determined by their home departments.

Note: some departments or POS committees may require their students to present formal, detailed research proposals later in their degree program, for example, in conjunction with a formal departmental seminar, or as a part of the preliminary exam. If a POS committee so desires, they can require an MCDB student to fulfill such additional proposal requirements.

### ***Preliminary Examinations***

All graduate students must pass certain examinations before obtaining their advanced degrees. A preliminary oral examination is required of Ph.D. degree students by the Graduate College. This examination should be completed by the end of your third year. The "Request for Preliminary Examination" form is available online at <http://www.grad-college.iastate.edu/forms/forms.html>. Preliminary exams for students majoring in MCDB must include a written component as well as an oral component. The POS committee and home department rules for MCDB majors determine the nature of the written component. Master's degree candidates are not required to take a Preliminary Examination.

### ***Writing Your Thesis***

MCDB accepts theses written for M.S. or Ph.D. degrees in either the traditional format or the so-called “alternative format”, which includes one or more papers designed for submission to a journal. Writing in “alternative format” will help you learn to write papers and, at the same time, shorten the time it takes for your thesis research to be published. The “alternative format” is more commonly used and is strongly encouraged. It is usual that some chapters of your dissertation will already have been published in peer-reviewed journals.

### ***Preparing for Graduation***

Each semester, the Graduate College publishes the deadline dates for submission of appropriate forms and paperwork. Early in the semester in which you expect to graduate, you must submit to the Graduate College an Application for Graduation, (the “Diploma Slip” form is available online at <http://www.grad-college.iastate.edu/forms/forms.html>) which shows the expected date of graduation, exact thesis or dissertation title and other data. If you do not graduate at the expected time, a new diploma slip must be submitted at a later time.

After the dissertation or thesis has been completed and all the other requirements have been met, except for the Final Research Seminar and Final Examination, you should consult with your major professor and POS committee to arrange a time for the Final Research Seminar and Final Examination. You must also request permission from the Graduate College to schedule the Final Examination using the Request for Final Examination form. The “Request for Final Examination” form is available at the MCDB Office, 2018 Molecular Biology Building, and also in the administrative office of your home department.

### ***Final Research Seminar***

All students are required to present a formal, public seminar describing their completed research. The seminar must be announced at least two weeks in advance to the MCDB faculty and students and other members of the Iowa State academic community. Please notify the MCDB office staff of the time and place of the seminar; they will see that the appropriate individuals are notified.

### ***Final Examination (Defense)***

The Final Examination for the Ph.D. and M.S. degrees is an oral defense of your dissertation or thesis given by you to your POS Committee and any other faculty who wish to attend. This examination reviews the dissertation or thesis and your knowledge of relevant subjects. In many departments, the oral defense follows immediately after the Final Research Seminar. Talk to your major professor to determine the best way to schedule your Final Research Seminar in relation to your Defense. It is best to schedule the final defense and research seminar well in advance.

The results of the examination are reported on the "Report of Final Examination" form that will be sent by the Graduate College directly to your major professor after receiving the Request for Final Examination form.

### ***Surviving It All***

One of the first genuine shocks for many students in graduate school is how hard they need to work to keep up with all their classes, research, and other responsibilities. The pressures on individual students vary with their departments, professors and projects. However, most students find that they need to work harder as graduate students than at any time before in their lives. The number of hours per week can be staggering. If you are like most students and discover there simply aren't enough hours in the day, the best way to survive is to learn how to select your priorities and focus on them. Your professor, your student mentor, or more experienced students can give you advice. You are also encouraged to seek advice from the MCDB Chair or members of the MCDB Executive Committee. If you feel so overwhelmed that you cannot function efficiently, counseling services are also available on campus specifically to help students who are having trouble meeting their personal and professional obligations. Student Counseling Services are available on the third floor of the Student Services Building. Their phone number is 294-5056.

***Checklist for Completion of Graduate Requirements for MCDB Majors***

Student: \_\_\_\_\_  
Degree Sought: \_\_\_\_\_  
Date Started: \_\_\_\_\_  
Major Professor: \_\_\_\_\_  
Co-advisor (if any): \_\_\_\_\_  
Major: MCDB \_\_\_\_\_  
Minor or Co-Major: \_\_\_\_\_

For each requirement in the following sections, list the term and year you met the requirement, for example, F09, S10, or SS10. If you have not completed a requirement yet, leave the line blank. Times when you should normally complete each requirement are indicated in parentheses.

**Academic Requirements**

Joined Laboratory of Major Professor:  
\_\_\_\_\_

POS Committee Formed: \_\_\_\_\_  
(within six months of joining your major professor's laboratory)

Research Proposal Presented to POS Committee (Ph.D. only):  
\_\_\_\_\_  
(prior to submitting your Program of Study to your POS Committee)

Program of Study Approved by the Graduate College: \_\_\_\_\_  
(within six months of joining your major professor's laboratory)

Preliminary Exam (Ph.D. only): \_\_\_\_\_  
(first semester of third year) (Note: The preliminary exam must include a written component.)

Dissertation Submitted to POS Committee: \_\_\_\_\_  
(Note: Unless an exception has been approved, your thesis must include one or more first author papers written in a form suitable for submission to a journal. The thesis must be given to your POS committee at least two weeks prior to your defense.)

Final Research Seminar: \_\_\_\_\_  
(Note: This must be a public seminar and the announcement must be given to the MCDB Office to distribute to all MCDB faculty and students. If possible, the seminar should be given during a regularly scheduled seminar series.)

Name of Seminar Series and Date Given:

\_\_\_\_\_

Defense: \_\_\_\_\_

**Course and Training Requirements**

(Note: All courses and non-course training taken during an M.S. program in MCDB counts towards the Ph.D. If more than one course is possible to meet a specific requirement, circle course taken.) Semester completed. If requirement has been waived, indicate date of approval of waiver.\*

Core Courses

Cellular Biology

(GDCB 529, GDCB 528, GDCB 642, \_\_\_\_\_  
BBMB 645, or BM.S. 575x)

Developmental Biology

(GDCB 512 or GDCB 533) \_\_\_\_\_

Molecular Genetics \_\_\_\_\_

(GDCB 545, BBMB 676, VMPPM/PLP 608  
GDCB 511, GDCG 520, or Micro 502)

Biochemistry \_\_\_\_\_

(BBMB 404/405 or BBMB 501/502)

Other Required Courses

MCDB 698  
(seminar)

\_\_\_\_\_

MCDB 699  
(Research )

\_\_\_\_\_

Teaching

(one semester)

\_\_\_\_\_

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\*The transferability of credits from other institutions will be determined on a case-by-case basis by the student's POS committee and the MCDB Chair. To waive a course requirement, send a memo, signed by your major professor (on behalf of your POS committee) and the instructor of the course you wish to waive, to the MCDB Chair. The memo should state that you have already received satisfactory instruction in the subject matter covered by the required course. Credits for seminars, workshops and colloquia are not transferable.

# Financial Matters

## *Your Appointment*

Most students in MCDB receive financial support. However, both the source of the support and the responsibilities associated with it vary from situation to situation. Students entering MCDB directly usually receive a research assistantship (RA) funded by MCDB during their first year; thus, for these students the amount of the stipend for the first year is usually determined by the MCDB program. Stipends for students supported by departments are governed by departmental policies. The responsibilities associated with your stipends depend on whether you have an RA or a teaching assistantship (TA). Information about these forms of support is available in the *Graduate College Handbook*.

Most entering students do rotations (See Rotations), while some are “direct admits” who go directly to a professor’s lab. Rotating students entering in the Fall are funded by the Graduate College according to the terms of their Letter of Intent. Usually this agreement will guarantee funding from the Graduate College until June 30 of the following year. The University will provide full tuition for the first year.

When a professor agrees to serve as the student’s major professor for the student’s Ph.D. research, (preferably by the end of March), the major professor must begin funding the student’s stipend and tuition.

Upon joining a lab the student’s stipend is determined by the major professor according to the professor’s department’s policies, unless the student has been awarded a special fellowship. This stipend may be lower than the stipend provided by MCDB to rotating students. Funding situations may change for a student during their years of study. Each fiscal year (beginning July 1) the student signs a new Letter of Intent that specifies the terms of funding for the coming year.

All graduate students receiving support through an assistantship will sign a Graduate Assistantship Letter of Intent that lists the terms and conditions of their appointment. Generally, graduate assistantship appointments are on a “one-half time” basis. Although technically this means that a student being paid through an assistantship is expected to work 20 hours per week (“half time”) on the project for which the assistantship is given (the other half being classroom training), in practice the student is expected to work more than 40 hrs per week on classroom learning and lab research. After the first year, the vast majority of the student’s time is spent doing laboratory research. A Teaching Assistantship is for work in an assigned class; a Research Assistantship is for the research of the major professor. The research project for which the RA is given will usually (but is not required to) coincide with the student’s thesis research. “Half-time” is the maximum time appointment for a graduate student in order to allow the remainder of the student’s time to be spent on graduate courses and research. Appointments may be terminated

by mutual consent or for cause as described in the *Graduate College Handbook*. If you have any questions regarding your appointment, speak with the staff in the MCDB office (2018 Molecular Biology Building).

The university provides a full tuition scholarship to graduate students with an RA or TA. In addition, such students are considered Iowa residents. Information on fees and expenses can be found on the Office of the Registrar website: <http://www.iastate.edu/~registrar/>

Payday at the University is the last working day of each month. Your paycheck will be sent through campus mail to you by the ISU Treasurer to the university address you have given to Human Resources in Beardshear Hall, or you may authorize the Treasurer to deposit your check in a bank of your choice by completing an authorization form available at the Records Office, 3810 Beardshear Hall, or on AccessPlus. It is strongly recommended that you have your check sent to a banking institution. If applicable, deductions are made for Federal and State income taxes and Social Security.

### ***Grants for Research***

The Graduate and Professional Student Senate (GPSS) provides funds to support graduate student research. The Senate will provide up to a maximum of \$300 to each person submitting a research proposal. The projects for which you submit the proposals must be unrelated to your thesis or dissertation research. It is appropriate for you to apply for these funds during your first year while are rotating through research labs. Many larger grants are available from external sources. Students are encouraged to apply for such funds, with their professor's permission.

### ***Grants for Professional Travel***

Attendance and presentation of research results at professional meetings is an essential part of your training. All students should, if possible, attend at least one national or international meeting during their degree program.

Students should normally seek funds for travel from their major professor or department. However, to assist your travel when funds from your major professor or department are insufficient, you may request funds from the Graduate College and/or The Graduate and Professional Student Senate (GPSS) using the "Request for Professional Advancement Grant" form. Forms are available on the Graduate College website under "forms". <http://www.grad-college.iastate.edu/> The form can also be found on the Graduate and Professional Student Senate website, <http://www.grad-college.iastate.edu/gpss/>

Some funding agencies have a 90-day limit for turning in travel expense vouchers. If your trip is being supported in part by funds from your major professor, be sure to turn in your travel expense voucher soon after you return to insure that you will be reimbursed.

## ***Benefits***

### ***ISU Student and Scholar Health Insurance Program***

Single student coverage under the ISU Student Health Insurance Plan is provided as an employment benefit to all graduate assistants at ISU. As soon you become a graduate assistant, you should obtain the booklet describing the plan and fill out the enrollment form in the booklet. You will receive insurance cards and a benefit certificate within a few weeks. Newly employed personnel should not drop any other insurance they may have until they know the beginning date of the ISU insurance. The ISU Student and Scholar Health Insurance Program at Iowa State University is administered by The Chickering Group. The Iowa State Student Health Insurance Coordinator may be contacted in 3350 Beardshear Hall or at 515-294-4820. The Chickering **website is [www.chickering.com](http://www.chickering.com)**

All international students, whether on assistantship or not, are required to carry the ISU Student Health Insurance or to be covered by another health insurance policy. For more information, contact International Students and Scholars (ISS) in Room 3248 of the Memorial Union (294-1120).

### ***Prescription Drug Benefit Program***

Graduate students receive single coverage free of charge in a prescription drug benefit program that reduces the cost of generic and prescription drugs available at the Thielen Student Health Center. For details, contact the ISU Student and Scholar Health Insurance Plan, 515-294-4820. For a spouse or family to participate you must enroll in the SHC insurance health plan for your spouse or family. This option is only available through payroll deduction.

### ***Health Service***

As a student, you are eligible to use the ISU Health Service. A mandatory health fee of \$98.00 and an \$8.00 health facility fee per semester are assessed to all students registered for five or more credits per semester. (The fees are \$49.00 and \$4.00 for summer session). This health fee pays for some services offered at the Thielen Student Health Center. The health facility fee goes towards the cost of the Student Health Center building. For students enrolled for under five credits, the health fee is optional. Please note that these fees can change without notice.

### ***Vacations and Sick Leave***

Vacation and sick leave is set at the discretion of your major professor. One possible scenario is that a research assistant with a half-time appointment (C base) will earn vacation at a rate of eight hours per month. Because you are half time, this would be equivalent to two calendar days. You can take vacation with the approval of your academic advisor and by notifying your departmental secretary or, in the first year, the MCDB office staff.

To obtain approval for vacation time you need to fill out an Absence Request card. In your first year, the card needs to be signed by your temporary advisor and submitted to the MCDB office at least three days before you leave. In later years, Absence Requests will be handled by your home department. Students on assistantships are employees of ISU and therefore are allowed time off on university holidays. However, absences preceding or following the official holiday are to be taken as vacation.

Teaching assistants are subject to the academic calendar and do not accumulate vacation time. However, they are not required by the University to perform teaching duties when classes are not in session. Graduate assistants on teaching assistantships must, nevertheless, get permission from their major professor before taking a vacation from their thesis research responsibilities.

If you will be absent because of an illness, you should call your advisor or major professor as soon as possible on the day you are sick and must be absent. On your return, you will need to fill out an Absence Request form; these are available from your home department. You should also use the form in advance when you have a planned absence for medical reasons.

### ***Injuries and Injury Reports***

If you are injured while performing your duties as a Graduate Assistant, you must stop by the office of the department in which you reside or in the MCDB program office and fill out an Employers First Report of Injury as soon as you are able to do so. As a rule, the University's Worker's Compensation insurance carrier will pay for your medical care.

# Administrative Matters

## *Administrative Assistance*

There are a number of offices on campus to help with the administration of your graduate program. The main one for MCDB students is the Interdepartmental Graduate Programs office. There, Amy Ahrens, Program Coordinator can provide expert help with questions about all administrative procedures. (Academic advice about courses and rotations will be provided by your first-year academic advisor or major professor. See “Academic Matters”).

Amy Ahrens, Program Coordinator  
Interdepartmental Graduate Programs  
2018 Molecular Biology Building  
☎ 515-294-7252  
FAX 515-294-6790  
E-mail: idgp@iastate.edu

The MCDB program office is open 8-4 Monday through Friday unless otherwise noted.

## *Office and Home Addresses*

The MCDB program needs to know your local address and telephone number and also needs to be informed of any changes in your address or phone number that may occur during your tenure in the program.

All first year MCDB RAs will receive campus mail in the MCDB office. Your permanent office (desk) address will be determined once you have chosen a major professor.

## *Communications*

It is vital that you maintain good contact with MCDB personnel throughout your graduate program. There are a number of ways to do this:

E-mail. The office staff can show you where to go to get an account and an e-mail address. E-mail should be checked at least daily as this is the **primary means** of keeping our students informed about program activities.

WWW. The MCDB home page which contains most of the information that pertains to on-going program events. Our address is: <http://www.mcdb.iastate.edu>

Mail Service. You will normally pick up your mail in your home department. If you have not yet chosen a home department, mail will be sent to you in 2018 Molecular Biology Building. You will be notified when you receive mail.

Telephone. Local calls (phone numbers in Ames) may be made on most campus phones, including the phone in 2018 Molecular Biology. Long distance calls must **not** be made on University phones without the prior approval of the person to whom the phone is assigned.

Bulletin Board. General messages about the MCDB program will be posted on a bulletin board located outside the administrative office (2018 Molecular Biology Building).

### ***Transportation***

Bicycles. You can park your bicycle at many locations on campus. Except for walks labeled as bike paths, bicycle riders must not use campus sidewalks. A bicycle used between sundown and sunrise must be equipped with a headlight, taillights or an adequate reflector, and a warning device. Bicycles used only on campus can be registered free through the ISU Parking Office. Bicycles used off campus must be registered by the city of Ames.

The city of Ames requires that all bicycles be licensed. The cost is \$5 for a two-year permit. The licenses may be obtained from various locations in Ames (all bike shops in Ames, Ames City Offices [finance department], the University Book Store, Cub Foods, and Hy-Vee) or from the Parking Systems Office in the Armory on campus.

Buses. The city of Ames has an excellent bus system called CyRide. During the school year the buses leave from most locations every 20 minutes. The fare is free to Iowa State students if you show a current, paid University fee card. The Cyride website is [www.cyride.com](http://www.cyride.com).

Cars and Parking. A copy of the ISU Traffic and Parking Regulations can be obtained from Public Safety, Parking Division, 27 Armory, or at [www.dps.iastate.edu/parking](http://www.dps.iastate.edu/parking). Consult the section covering students.

### ***Help in Preparing Material for Research Presentations***

The Instructional Technology Center on campus provides services relating to visual and audio media. For example, slide projectors, videotape players, etc. can be taken out on loan by departments, students, faculty, and staff. There is a section of the Instructional Technology Center known as Creative Technology Services that prepares graphs and designs as requested by the purchaser.

## *Professional Ethics*

During Orientation activities in August, you will be introduced to the concepts of ethical behavior and good practice in science. Included will be a discussion of proper research methods, ways to avoid self-deception in the practice of science, and scientific misconduct.

It is imperative that you understand the ethical standards of science and conduct your scholarly activities accordingly. Scientists, who commit unethical acts, whether from carelessness, ignorance, or malice, quickly lose the respect of the scientific community and/or are prevented from practicing science. Scientific misconduct includes such activities as: falsification of data, fabrication, deceptively selective reporting, purposeful omission of conflicting data with the intent to falsify results, plagiarism, representation of another's work as one's own, misappropriation of the ideas of others, the unauthorized use of privileged information, misappropriation of funds or resources for personal gain, and falsification of one's credentials. At ISU, these acts are taken very seriously and constitute "academic misconduct" (ISU Faculty Handbook). Individuals found guilty of academic misconduct may suffer a variety of penalties, up to and including expulsion from the university.

Occasionally, you may be faced with situations in which you are tempted to act in a manner you think might be unethical. If this occurs, we recommend discussing the situation with your major professor, or another professor whom you trust, to determine whether the actions you are considering are unethical. He or she should be able to suggest alternative actions that will be free of ethical questions.

Unfortunately, not all people understand or care about ethical issues and, at some time in your career, you may be witness to an act you believe to be unethical. When the individuals committing the presumed unethical acts are members of your own laboratory, or worse yet, individuals with power over you, such as your major professor, the situation can be very awkward and you must proceed cautiously. You will find yourself torn between a fear of retribution and a desire to stop the unethical behavior before it hurts you and other members of your laboratory.

If you believe that unethical behavior is going on in your laboratory, we recommend that you first attempt to discuss the situation informally with the person whom you think might be behaving unethically. Sometimes friendly questions will resolve the problem, such as "This data looks almost perfect; how did you do this experiment?" or "Are you sure that you can omit that data point? Won't that prejudice your interpretation?" or "This paragraph doesn't sound like your writing; are you sure you didn't unintentionally copy some of this?" If you feel uncomfortable in this approach, or if you have tried this approach and it didn't resolve the problem, we recommend that you discuss the situation informally with a professor whom you trust. You may also go directly to the Chair of MCDB or a member of the MCDB Executive Committee. All discussions with the Chair and the MCDB Executive Committee members will be confidential. You may also go directly to Associate Vice Provost for Research, 2810 Beardshear Hall, who is responsible for investigating charges of academic misconduct on campus. No matter what you choose to do, you should take great care to ensure the rights of the individual

whose actions you are questioning. Frivolous accusations of misconduct and vicious spreading of rumors are just as unethical as fabrication of data or plagiarism.

***Discrimination, Sexual Harassment, Nondiscrimination and Affirmative Action***

The University Policy on Discrimination and Harassment can be read in its entirety at **<http://policy.iastate.edu/policy/discrimination/>**

This website will provide guidance to you on how to proceed in addressing these concerns. The University Nondiscrimination and Affirmative Action Policy can be found at this website: **<http://policy.iastate.edu/>**

***This Handbook...***

This student handbook is provided to give you general guidance about important issues and activities that you will encounter in your graduate career. Because the MCDB interdepartmental graduate major continually seeks to improve, as does the entire graduate education program at Iowa State, some changes may occur between the times of the annual printing of this handbook. You are expected to stay in close communication with your major professor regarding important issues. You are also encouraged to bring questions and comments to the Chair and members of the Executive Committee of MCDB at any time.

# Important Forms

All of the forms you need to turn in to the Graduate College should either be available for download at <http://www.grad-college.iastate.edu/forms/forms.html> or available upon request at the **MCDB Office, 2018 Molecular Biology Building**.

Forms mentioned in this handbook:

*Online:*

- “Request to Establish a Home Department for Students Admitted to Interdepartmental Majors
- “Recommendation for Committee Appointment”
- “Request to Change Committee Appointment”
- “Program of Study”
- “Modifications to the Program of Study”
- “Application for Graduation (Diploma Slip)”

*MCDB Office or administrative office of your home department:*

- “Request for Schedule Change or Restriction Waiver”
- “MCDB Annual Report of Academic and Professional Activities”
- “Request for Preliminary Examination”
- “Request for Final Examination”
- “Request for Professional Advancement Grant”