MISSION

The overall mission of the Roy J. Carver Department of Biochemistry, Biophysics, and Molecular Biology (BBMB) is to investigate and understand the molecular mechanisms underlying biological processes as explained by the principles of chemistry and physics. Synergistic programs in teaching and research accomplish this mission. Undergraduate and graduate instruction emphasizes the fundamental relationships among the chemical, physical, and biological sciences. Basic research is the hallmark of the departmental mission, providing the knowledge that is essential for continual progress in the applied agricultural- and biomedical sciences. These two aspects of the mission are merged by involvement of students at all levels in primary research activities, and by a teaching approach that strives to promote rigorous and critical thought.

Research

The research mission of the Department is focused in related areas that encompass biochemistry, biophysics, molecular and structural biology. BBMB produces novel discoveries that are highly significant to the worldwide biomedical and agricultural research efforts. The faculty members are funded by the major federal competitive funding agencies and publish in journals with the highest international impact. The Department also seeks to integrate its basic experimental research activities directly with State-of-Iowa industries.

Teaching

Student learning is of paramount importance in the Department’s program design. The teaching mission includes broad contribution to the physical- and life sciences training programs at Iowa State University. BBMB faculty teach graduate and undergraduate courses in biochemistry, biophysics, molecular biology, and interdisciplinary programs, emphasizing the ways that biological mechanisms are founded on chemical and physical principles. Students are prepared to pursue professional careers in a variety of academic and industry environments, and to serve society as broadly educated individuals. Undergraduates are also engaged in discovery-based learning by participating directly in the primary research activities of the Department.

Outreach

The Department has a significant outreach mission in frequent and open communication with the public of Iowa. Basic research contributes significantly to this mission by providing the knowledge on which society can draw in the future to meet challenges dictated by limited global resources. Additionally the Department’s outreach mission includes direct efforts to stimulate economic development within the State of Iowa, by bringing basic research results to bear on applied research and development.
ADMINISTRATION

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Dr. Guru Rao
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Director of Graduate Education
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Program Coordinator for Graduate Education
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The Department Chair, the Director of Graduate Education (DOGE), and the Program Coordinator for Graduate Education oversee the biochemistry and biophysics graduate program activities and requirements. Please contact us if you have any questions or concerns about the program.

WELCOME

The Roy J. Carver, Department of Biophysics, and Molecular Biology (BBMB) welcomes you to Iowa State University. We sincerely hope your years in graduate school will be both exciting and valuable in preparation for your life’s endeavors. We are fortunate to be housed in the modern Molecular Biology Building. The building is designed to encourage collaboration among the many research laboratories it houses, and we believe your education will be greatly strengthened if you take advantage of the opportunities to interact closely with researchers in different areas of biochemistry, biophysics, molecular and cellular biology, genetics, plant physiology, toxicology, immunobiology, neuroscience, bioinformatics, and biotechnology.

To ease your transition into our department and life as a graduate student, especially during your first hectic weeks here, we have compiled this handbook describing the various academic and administrative matters which are, for the most part, peculiar to our department. These matters range from such small details as how to obtain room keys to very important matters such as choosing a major professor and preparing your final dissertation. We have incorporated some of the Graduate College policies into this handbook, and have included examples of required documents for your reference.

General information about the BBMB program and information about our faculty can be found on our website: http://www.bbmb.iastate.edu. You can also find this handbook and links to the Iowa State University Graduate College Student Handbook there. Any changes in the policies during the academic year can be found on these web-based handbooks.

We hope that your graduate studies with us will be interesting, challenging, and fruitful. BBMB looks forward to many rewarding interactions with you during your academic career in our graduate programs.
JOINING THE DEPARTMENT

As a new student in BBMB, your first week of orientation is designed to ease the transition into graduate school at ISU. This is a time to become acquainted with the BBMB Department and its faculty members, and to prepare for registration, laboratory rotations, and start classes. In addition to participating in the BBMB orientation events, you may take part in orientation activities offered by the University. Students should refer to BBMB orientation materials for information about other ISU orientation activities and requirements. Online you can find floor plans for the Molecular Biology Building to assist you in finding offices, labs, and classrooms.

CATEGORIES OF STUDENTS

New BBMB graduate students are admitted into the program in one of three categories:

1. **New ISU students**: admitted directly into BBMB for research exploration rotations. This includes Ph.D. students.

2. **Direct Admit**: students admitted directly into a BBMB faculty member’s research group. This includes Master’s Degree (MS) and Ph.D. students and concurrently enrolled BS/MS students.

3. **Interdepartmental students**: current ISU interdepartmental graduate program students who wish to establish BBMB as their home department.

4. **Current ISU graduate students**: seeking to transfer, co-major or minor in a BBMB graduate program.

ADVISING DURING THE FIRST SEMESTER

During the first semester, the Director of Graduate Education (DOGE) will serve as your temporary academic advisor. The Program Coordinator for Graduate Education is also well versed in all aspects of our graduate student programs and activities.

Toward the end of the first week of the orientation period and after the results of any test-out exams are available, you will meet with the DOGE for counseling and modification of your schedule for the fall semester. You will need it to register on-line using the Access Plus system. If it is necessary to add or drop a course, change sections of a course, or change the number of credits, you may do so through AccessPlus until the end of the first week of classes. After that time you will need to use the add/drop slip (Request for Schedule Change) to make changes in your schedule. You will need to take the completed form to Room 10, Enrollment Services Center to formalize these changes.

FIRST SEMESTER COURSES

Typically, entering graduate students take the following courses during their first fall semester:

- **BBMB 504** (2 credits)  
  Amino Acids and Proteins

- **BBMB 505** (2 credits)  
  Bioenergetics & Metabolism

- **BBMB 682** (Required)  
  Departmental Seminar

- **BBMB 699** (Varying credit hours)  
  Research

- **GR ST 565** (1 credit)  
  Responsible Conduct of Research in Science and Engineering

*Biophysics majors may substitute BBMB 404 for these courses.*

Students should take 2-4 credit hours of BBMB-600 level courses during their first year.

*International students may have other courses added based on results from English placement exams.*
SECOND SEMESTER COURSES

During the second, spring semester, graduate students take the following courses:

BBMB 506* (2 credits) Membrane Biochemistry
BBMB 507* (2 credits) Biochemistry of Nucleic Acids
BBMB 561 (2 credits) Molecular Biophysics
BBMB 561L (2 credits) Lab in Molecular Biophysics
BBMB 682 (Required) Departmental Seminar
BBMB 699 (Varying credit hours) Research

*Biophysics majors may substitute BBMB 404 and 405 for the BBMB 504, 505, 506, 507 course module series.

Students should continue to take BBMB-600 level courses in their first year to meet 8 credit requirement.

SELECTING A MAJOR PROFESSOR

A significant part of your time during your first semester in the Department will be devoted to the important process of selecting your major professor – the person who will guide you in your graduate studies and whose research group you will join. The students who have chosen and been accepted by a major professor prior to arrival on campus will not do lab rotations.

Here are the steps in selecting a major professor:

LEARN ABOUT THE PROFESSORS AND THEIR RESEARCH

During orientation week, you will have opportunities to meet with the faculty members of the department. In addition to the contacts during the social events, you will schedule appointments and meet with individual faculty members to discuss their research. You should make use of the faculty pages that can be accessed from the departmental web page. Many faculty members have their own web pages that contain extensive information. The intent is not to provide comprehensive discussions of specific research problems; rather, it is to be an opportunity to become acquainted with the faculty and their professional interests so that you can make an informed selection of the laboratories through which you wish to rotate while selecting a major professor.

LISTING LAB PREFERENCES

At a time specified in the orientation schedule, you will submit to the Department the names of at least three (preferably five) faculty members whose research groups you would like to participate in. The Graduate Selection Committee will then schedule a four-week visit for you in three of the groups you have selected. LAB ROTATIONS

During this time, you will be expected to meet with the professors and their graduate students to discuss their research, work in their laboratories, read reprints and reviews, and prepare yourself to decide which research group you wish to join. Feel free to visit with additional professors whose research interests you, even though you are not rotating through their laboratories.

LAB ASSIGNMENTS

At the end of the rotation period, you will be asked to submit a list (in order of preference) of the three professors in whose labs you have rotated. At this time, faculty members will also make known their preferences regarding the students with whom they have interacted. The Graduate Student Selection Committee, in consultation with the department Chair and the Director of Graduate Education (DOGE), and the Program Coordinator for Graduate Education will then assign you to a research group. Every attempt will be made to assign you to your top choice; however, you should understand that this assignment involves not only your choice, but also the choice of the professors, as well as considerations of space and the availability of funds. Assignments made at the end of the rotation period will be regarded as permanent. Changes can be made if justified by changes in career goals.
DEPARTMENTAL REQUIREMENTS FOR GRADUATION

There are several major aspects of the departmental graduate programs. These requirements are intended to develop the knowledge base and skills that are expected from an individual with a graduate degree in biochemistry or related fields. All students are expected to fulfill these requirements within the timeframes indicated.

In this section, you will find departmental requirements for graduate studies in the Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology including:

1. the department’s background and core course requirements
2. seminar requirements
3. guidelines for qualifying examinations
4. specific requirements for each departmental and interdepartmental major

Below, is a quick reference chart outlining the most important tasks associated with you meeting both departmental and graduate college requirements. By adhering to the deadlines listed below you position yourself to have a smooth matriculation through your degree program. Contrarily, disregarding these deadlines can result in interruptions in your stipend and/or tuition payment as well as delays in your actual degree completion.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Completion Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td>By the end of the second year</td>
</tr>
<tr>
<td>Seminars</td>
<td>Taken every semester</td>
</tr>
<tr>
<td>POS Committee</td>
<td>By the end of the second semester</td>
</tr>
<tr>
<td>POS Committee Meeting</td>
<td>By the end of the second semester</td>
</tr>
<tr>
<td>Online Program of Study (POSC)</td>
<td>Submit in Access+ after POS meeting, before the end of the second semester</td>
</tr>
<tr>
<td>Graduate Student Annual Report</td>
<td>By the end of each spring semester</td>
</tr>
<tr>
<td>Research</td>
<td>Every semester and summer. Typically the research by a graduate student is expected to yield several publications in reputed journals.</td>
</tr>
<tr>
<td>Teaching</td>
<td>Typically two ¼ or one ½ time teaching assistantships, generally after successfully passing preliminary exam; M.S. students typically need to teach for one semester.</td>
</tr>
<tr>
<td>BBMB Oral Research Proposition Exam (ORPE)</td>
<td>By end of second academic year; not required for M.S. or Interdepartmental Majors</td>
</tr>
<tr>
<td>Oral Preliminary Exam</td>
<td>By the end of the fifth semester; exclusive of summer terms. Not required for M.S.</td>
</tr>
<tr>
<td>Seminar Presentation</td>
<td>If possible, this presentation should take place directly before the Oral Thesis Defense. Not required for M.S.</td>
</tr>
<tr>
<td>Oral Thesis Defense</td>
<td>Must follow Oral Preliminary Exam by at least six months. Occurs at the end of graduate studies. Typical times for obtaining Ph.D. and M.S. are 5 and 2 years, respectively.</td>
</tr>
<tr>
<td>Graduation</td>
<td>Within the same or following semester of final examination. Graduate College deadline is 7 years from the first semester of program entry as a PhD degree candidate, 5 years if Ph.D. program entry follows an M.S. degree, and 5 years for M.S. degree candidates.</td>
</tr>
</tbody>
</table>
General Timeline for PhD Degree

Below is a timeline for achievements characteristic of a successful PhD program in biochemistry or biophysics in the Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology (BBMB) at Iowa State University. Failure to reach some benchmarks can result in the loss or interruption of financial support. Throughout the PhD graduate program, the student must maintain a Grade Point Average (GPA) of 3.0 or above, and after joining a research lab group, make adequate progress toward the successful completion of the thesis project.

### PhD Degree in Biochemistry or Biophysics General Timeline

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall Semester:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Administrative. Students meet with professors and submit preferences for three, one-month rotations, usually by the end of the second week in the semester. Rotations begin in the first week of September and end by mid-December. Student and faculty preferences then determine the placement of students in research groups by the end of December. The temporary major professor for rotating students is the Director of Graduate Education (DOGE) for the PhD program in biochemistry or biophysics.</td>
</tr>
<tr>
<td></td>
<td>Coursework. Initiation of 500-level core coursework.</td>
</tr>
<tr>
<td></td>
<td>Research. Work as assigned by the professors who host the rotation student.</td>
</tr>
</tbody>
</table>

| Year 2 | Administrative. Successful completion of the Oral Research Proposition Exam (ORPE) by end of spring semester. |
|        | Coursework. Continuation of 500- and 600-level discipline-broadening coursework as required by the POS. |
|        | Research. Development of a thesis project and research continues. |
|        | Annual Review. Financial support beyond the second year requires completion of coursework with a grade point average of at least 3.0, completion (with approvals) of an electronic POS form, completion of the OPRE and an evaluation of satisfactory research performance by the major professor. |

| Year 3 | Administrative. First attempt of the Preliminary Oral Examination before the end of the fifth semester (excluding summer terms), and successful completion of the Preliminary Oral Examination by the end of the sixth semester. |
|        | Coursework. Continuation of 500- and 600-level discipline-broadening coursework as required by the POS. |
|        | Teaching requirement. Typically two ¼ or one ½ time teaching assignments to be fulfilled before completion of the PhD program. |
|        | Research. Development of a thesis project, culminating in an approved thesis project by the POS. Thesis-related research continues.
## General Timeline for PhD Degree Continued

PhD Degree in Biochemistry or Biophysics General Timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Year 3 (Cont’d)</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6 and beyond</th>
<th>Preparation for Graduation (After year three)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Review. Financial support beyond the third year requires completion of coursework with a grade point average of at least 3.0, a current electronic POS form with completion of the OPRE and Preliminary Oral Examination indicated in notation, and an evaluation of satisfactory research performance by the major professor. In addition, the student completes a CV and a statement of career plans for approval by the DOGE.</td>
<td>Administrative. Modification of the POS as necessary to reflect changes in curriculum and committee membership.</td>
<td>Coursework. Continuation of 500- and 600-level discipline-broadening coursework as required by the POS.</td>
<td>Administrative. Student receives the following warning: Students in years 1—5 in good standing have first priority for financial support.</td>
<td>Departmental Seminar Presentation. If possible, this presentation should take place before the Final Oral Thesis Defense Exam.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual Review. Financial support beyond the fourth year requires completion of coursework with a grade point average of at least 3.0, a current electronic POS form with completion of the OPRE and Preliminary Oral Examination indicated in notation, and an evaluation of satisfactory research performance by the major professor. In addition, the student updates his/her CV and statement of career plans for approval by the DOGE.</td>
<td>Research. Thesis-related research continues.</td>
<td>Annual Review. Financial support beyond the fifth year requires completion of coursework with a grade point average of at least 3.0, a current electronic POS form with completion of the OPRE and Preliminary Oral Examination indicated in notation, and an evaluation of satisfactory research performance by the major professor. In addition, the student updates his/her CV and statement of career plans for approval by the DOGE.</td>
<td>Final Oral Thesis Defense Exam. Must follow Oral Preliminary Exam by at least six months. Occurs at the end of graduate studies.</td>
</tr>
</tbody>
</table>

Graduation Deadline. The Graduate College requires a memorandum from the major professor stating that courses taken more than 7-years prior to the indicated date of graduation remain valid. (The expiration date on courses for the MS is 5 years prior to the anticipated date of graduation). There is no limit on the time lapsed prior to graduation, but the Graduate College will monitor degree programs that extend beyond year seven. Such monitoring may entail additional POSC reviews and certification of student progress.
1. All graduate students entering the Department will be expected to have taken one semester of analytical chemistry and one year of organic chemistry. A student lacking either of these basic courses is required to take them as soon as possible, preferably in the first year of study.

2. Biochemistry or biophysics majors are expected to have taken one year of physical chemistry. A student lacking this background should acquire it as soon as possible.

**CORE COURSES**

Students enroll in a minimum of 12 credits each during fall and spring semesters and 2 credits during summer term. The basic courses for first-year graduate students are Comprehensive Biochemistry (BBMB 504, 505, 506, 507) and Molecular Biophysics (BBMB 561 and 561L). Additionally, Ph.D. students in biochemistry must take two credits of bio-organic mechanisms (met by BBMB 607, 622 and/or 642), four credits of cell biology (met by BBMB 615, 645, 661, 675, 676, and, new for fall 2014, BBMB 510X), and two credits of physical biochemistry (met by BBMB 552, 632, 652 and/or 653). All students are required to take the one credit course GR ST 565 Responsible Conduct of Research in Science and Engineering as early as possible in the first or second semester of their graduate program. All students in the Department are required to take the Seminar courses detailed below (except where noted). For all categories of students, permission of your major professor is required before enrolling in a class that is not part of the degree program and/or not listed on the approved POS.

**SEMINARS**

1. In each academic year, except the first and last years, Ph.D. students in biochemistry or biophysics must take one semester (spring or fall) of Advanced Seminar (BBMB 681).

2. Departmental Seminar (BBMB 682) consists of seminars by speakers from ISU and other research institutions. All graduate students must register for BBMB 682 each semester (R credit; registration only) and attend seminars. Presentation of a thesis seminar in BBMB 682 is a requirement for all Ph.D. students in the Department. Circumstances may require a thesis seminar at a time other than that scheduled for BBMB 682. Such seminars must be advertised to the Department by electronic mail and postings.

**TEACHING**

All Ph.D. students majoring in biochemistry or biophysics are required at the discretion of the Department to have a minimum of 1 half-time or 2 quarter-time teaching experiences in Departmental courses. Students are usually assigned to teach after successfully passing their preliminary exam. Students majoring in interdepartmental graduate programs are expected to meet the same teaching standard. For interdepartmental majors, a teaching experience in departments/programs other than BBMB can be used to meet the teaching experience in BBMB. M.S. students typically have 1 half-time or quarter-time teaching experience. B.S./M.S. students do not have a teaching requirement, but are eligible as teaching assistants.

Non-native English-speaking students must take the required OECT assessment before their teaching assignment begins. An OECT test result of 3 or higher is required to be a teaching assistant. Courses recommended to meet OECT certification must be taken before or during the semester of the student’s first teaching assignment. Without an acceptable OECT test result, a student cannot be given a teaching assignment and will, therefore, not meet the teaching requirement, and may delay their graduation. It is important, therefore, to take the assessment as early as possible, take the recommended English courses, and retake the assessment. If the student has taken the maximum two recommended English courses and still receives an unacceptable test result, it is at the department’s discretion whether to waive the teaching requirement or not.
MINOR IN BIOCHEMISTRY

Graduate students in other MS and/or PhD programs at Iowa State University can earn a graduate minor in biochemistry by completing the following requirements with a grade point average of 3.0 or above:

1. At least 6 credits from BBMB 504, 505, 506 and 507.
2. At least 6 credits of other BBMB 500- and 600-level courses.

A student wishing to declare a minor in biochemistry should arrange for a member of the graduate faculty in biochemistry to serve on the POS Committee.

COMMITTEE APPOINTMENT AND PROGRAM OF STUDY

Selecting a graduate program of study (POS) committee is done by consultation between the student and the major professor, and faculty members are nominated who seem appropriate for that particular student. For example, if a student has a concentration of course work in microbiology, it would be appropriate to nominate someone from that department. For the M.S. committee, at least three committee members, including the major professor, are required and for the Ph.D. degree at least five, including the major professor, are required.

After the POS Committee is selected, the student must meet with the Committee so the members can provide guidance for both the student and major professor, particularly on the details of the student’s course work. The student should bring a copy of their current unofficial transcript (printed from Access Plus) showing graduate courses taken and a proposed list of course work using the POSC Worksheet form available on the Graduate College Forms page. The current list of courses offered in the Biochemistry and Biophysics graduate program can be found in the ISU Catalog under BBMB courses primarily for graduate students.

Once the POS Committee has approved the program of study, the student should submit the online POSC form using Access+ under the Student Tab for routing and final approval by the Graduate College. The POS Committee and program of study must be submitted for Graduate College approval no later than the second semester of graduate study (exclusive of summer sessions).

The Graduate College program of study is one of the more important documents a graduate student will submit during graduate study at Iowa State. It is a contract between the student and the Graduate College that indicates the minimum course work to be taken to complete a Ph.D. or M.S. degree. Modifications of the online POSC and only be made by the mutual approval of the student, the student’s POS Committee, and the Graduate College.

Program of Study for biochemistry and biophysics MS and PhD degree students

<table>
<thead>
<tr>
<th>Course</th>
<th>When Offered</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBMB 504. Amino Acids &amp; Proteins*</td>
<td>Fall 2015</td>
<td>2 cr</td>
<td>Replaces BBMB 501. Comprehensive Biochemistry 1, 4 cr</td>
</tr>
<tr>
<td>BBMB 505. Bioenergetics &amp; Metabolism*</td>
<td>Fall 2015</td>
<td>2 cr</td>
<td>Replaces BBMB 501. Comprehensive Biochemistry 1, 4 cr</td>
</tr>
<tr>
<td>BBMB 506. Membrane Biochemistry*</td>
<td>Spring</td>
<td>2 cr</td>
<td>Replaces BBMB 502. Comprehensive Biochemistry 2, 4 cr</td>
</tr>
</tbody>
</table>
Program of Study for biochemistry and biophysics MS and PhD degree students (Continued):

<table>
<thead>
<tr>
<th>Course</th>
<th>When Offered</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBMB 561. Molecular Biophysics</td>
<td>Spring</td>
<td>2 cr</td>
<td>Replaces BBMB 511</td>
</tr>
<tr>
<td>BBMB 561L. Lab of Molecular Biophysics</td>
<td>Spring</td>
<td>2 cr</td>
<td>Replaced BBMB 511</td>
</tr>
<tr>
<td>BBMB 600 level courses in 3 specialty areas**: Bio-organic mechanisms (2 cr) Cell biology (4 cr) Physical biochemistry (2 cr)</td>
<td>Fall or Spring</td>
<td>At least 8 credits for PhD, 1 course for MS degree</td>
<td>Bio-organic mechanisms met by BBMB 607, 622 and/or 642 Cell biology met by BBMB 615, 645, 661, 675, 676 and/or 510X Physical biochemistry met by BBMB 552, 632, 652, 653 and/or 660</td>
</tr>
<tr>
<td>GR ST 565. Responsible Conduct of Research in Science &amp; Engineering (or take online version)</td>
<td>Fall or Spring</td>
<td>1 cr</td>
<td>Not a program requirement, but all students who may receive federal funds to conduct research must receive RCR training.</td>
</tr>
<tr>
<td>BBMB 681 Advanced Seminar</td>
<td>Fall or Spring</td>
<td>1 cr</td>
<td>Expect to enroll at least 3 times during PhD degree – from year 2 to year 4. Enrollment not required for BS/MS degree students.</td>
</tr>
<tr>
<td>BBMB 682 Dept. Seminar</td>
<td>Fall and Spring</td>
<td>R credit</td>
<td>Expect to enroll at least 10 times during PhD degree, twice a year from year 1 to year 5, or graduation. Enrollment not required for BS/MS degree students.</td>
</tr>
</tbody>
</table>
## COURSES IN OTHER DEPARTMENTS

### ANIMAL SCIENCE
- 619 Advanced Nutrition and Metabolism-Protein (2)
- 620 Advanced Nutrition and Metabolism-Energy (2)

### BIOINFORMATICS & COMPUTATIONAL BIOLOGY
- 544 Introduction to Bioinformatics (4)
- 596 Genomic Data Processing (3)
- 660 Selected Topics in BCB (1-2)

### BIOMEDICAL SCIENCES
- 502 Methods in Biomedical Sciences (3)
- 575 Cell Biology (3)

### CHEMICAL ENGINEERING
- 415 Biochemical Engineering (3)
- 562 Bioseparations (3)
- 625 Metabolic Engineering (3)

### CHEMISTRY
- 503 Bioinorganic Chemistry (2)
- 531-2 Organic Synthesis I and II (2 ea.)
- 537-8 Physical Organic Chemistry I and II (3 ea.)
- 564 Molecular Spectroscopy and Structure (3)
- 572 Spectrometric ID of Organic Compounds (3)
- 575 Diffraction and Crystal Structure (3)
- 578 Chemical Kinetics and Mechanisms (2)
- 632 Selected Topics in Organic Chemistry (1)

### ECOLOGY, EVOLUTION & ORGANISMAL BIOLOGY
- 562 Evolutionary Genetics (3)
- 563 Molecular Phylogenetics (3)
- 566 Molecular Evolution (3)

### GENETICS, DEVELOPMENT & CELL BIOLOGY
- 510 Transmission Genetics (3)
- 511 Molecular Genetics (3)
- 513 Plant Metabolism (2)
- 520 Genetic Engineering (3)
- 528 Advances in Molecular Cell Biology (3)
- 545 Plant Molecular, Cell & Developmental Biology (3)
- 640 Signal Transduction (3)
- 679-81 Light and Electron Microscopy – visit website to sign up for individual instruction modules.

### HISTORY
- 323 Science and Religion (3)
- 482 Birth, Death, Medicine & Disease (3)

### MICROBIOLOGY
- 502 Microbial Genetics and Genomics (3)
- 508 Virology (3)
- 575 Immunology (3)

### PHILOSOPHY
- 336 Bioethics & Biotechnology (3)
- 380 Philosophy of Science (3)
- 480 Controversies in Science (3)

### PLANT PATHOLOGY
- 506 Plant-Pathogen Interactions (2)
- 509 Plant Virology (4)
- 577 Bacterial-Plant Interactions (3)
- 608 Molecular Virology (3)
- 692 Molecular Biol. of Plant-Pathogen Interactions (3)
- 694 Colloquium in Plant Pathology (2)

### STATISTICS
- 401 Statistical Methods for Research Workers (4)
- 402 Statistical Design of Experiments (3)

### TOXICOLOGY
- 501 Principles of Toxicology (3)
- 502 Toxicology Methods (3)
What is the Biochemistry and Biophysics ORPE Exam?

The Biochemistry ORPE is a test of the ability of PhD students in biochemistry to apply their graduate course work toward creative independent thought, which must be completed prior to admission to candidacy. Students will write and present a research proposal in the area of their major, but unrelated to the subject or general laboratory techniques associated with their thesis research. The written proposal should be no longer than three pages including an introduction to the problem, specific aims, and rationale and significance paragraphs (this should resemble the first two or three pages of an NIH, NSF, or USDA proposal). The student then defends the proposal in detail by constructing an approximately 30 minute presentation for a committee of three BBMB faculty.

When is it given?

This exam is to be completed in the second year of study. The student has two chances to complete the exam. All students will take this exam in the fall semester, those not passing the first time will take it again in the spring.

How is it organized?

The examiners: The ORPE committee consisting of six faculty members is responsible for administering these exams. Three members of the committee will administer each exam. A student's major professor may not serve on their examination committee.

The exams: In May of the first year of study, the Biochemistry students to take the exam will be randomly assigned three members of the committee to serve for their exam. The students then need to schedule dates (in accordance with the members of their committee), rooms, and audio/visual resources as needed (The exam needs to be completed by December 1st.) The three-page written proposal is due one week before the exam date. The exam consists of the student presenting their proposal and defending their ideas by answering questions from the committee. The questions can be specific to the exam, or covering material that the students should be familiar with as a result of their coursework. After this presentation, the student leaves the room for consideration and grading by the committee. When the student returns, a pass/fail decision is rendered.

If the student fails the fall examination, it is repeated in the following spring semester. The topic of the exam is to be dictated by feedback from the committee on the first exam. If the student fails the repeat (spring) examination, they cannot continue in the PhD program, and their status will be reviewed by the department at the end of the spring semester leading to a switch to the Masters program or termination of support for graduate studies.
The written component of the ORPE exam

Once the exam date has been scheduled, a student needs to select a topic for the exam. This is up to the student. The student’s job is to select a topic from the literature and construct a feasible and significant proposal for its investigation. The only requirement is that the topic cannot be what the student is working on for his/her thesis research, or the focus of a previous research project on which the student has participated (such as a previous masters thesis). It can be related, but must differ in either the subject or method. The student must get his/her topic approved by the committee prior to writing the proposal. The student should not spend a lot of time preparing for a topic that has not been approved by your committee.

The written component of the exam is due at least one week prior to the exam. The criteria for the written component are:

1. It should be no more than three single-spaced pages.
2. It should resemble the beginning of the description of research in a federally grant proposal (USDA, DOE, NIH, or NSF).
3. It should include the following sections:
   - A brief introduction that describes the problem to be addressed, and the long range goal of the research.
   - A description of each research project.
   - A rationale paragraph that tells the reviewer (the ORPE committee) why this research is a good idea to conduct at this stage of the long range project.
   - A significance paragraph that tells the reviewer why this work is important in general.

The members of the student’s ORPE committee are going to spend some time reading about this topic, including a literature search, so you should be ready to defend the current literature in the field during the oral proposal.

FAQ’s about the OPRE

Q: What if I do not choose a topic in time to get the exam scheduled in the fall semester?
A: This is treated as a failure of the exam.

Q: Should I be able to draw chemical structures related to the basic biochemistry of the system I am investigating?
A: Yes, and the inability to do so has led to failure of the exam.

Q: Is it my responsibility to contact my committee and organize my exam, or will they eventually find me and make me do this?
A: You will be contacted at the beginning of the semester and given the names of the members of your committee. It is your responsibility to contact them and schedule the exam.

Q: Do I need to have read the literature extensively concerning my research topic?
A: Yes. The first thing your committee will do is search the literature in the area of your topic. (They may even do this during your exam.) If you miss significant articles that impact your proposal, it can easily lead to failure of the exam.
The oral component of the ORPE exam

The student should prepare a approximately 30 minute presentation of his/her proposal for their oral exam. Students can use the chalkboard, overhead, or a computer/slide presentation at the student’s discretion. The student may be questioned over any aspect of the presentation, any aspect of their ORPE topic, or over any of his/her previous course material. These questions will be of a depth similar to what the student should expect in a graduate course, PhD qualifying exam and PhD defense.

The ORPE exam committee will be looking for clear communication, sound logic, and depth of scientific understanding of the ORPE topic by the student, generally at the level of BBMB 501 and 502. These exams are supposed to last no more than two hours. If the exam is still going after two hours, the ORPE committee will ask the student to leave the room and will make a decision among three options: 1) The exam will be continued; 2) The exam will be ended and a pass/fail grade delivered; or 3) The exam will be rescheduled. The student’s ORPE committee’s decision will be based on the student’s exam performance and the reason the exam is running long.

FAQ’s about the OPRE, Cont’d

Q: Do I need to understand the details of the experiments I am proposing?
A: Yes. If you propose an experiment, you must be able to explain how it works. For example, treating a commercial "kit" as a black box will lead to failure of the exam.

Q: In my thesis research I work with kinases and use NMR to study their structures. Can I use NMR, or structural biology as part of my ORPE proposal?
A: Yes, just don’t work on kinases or other systems associated with your thesis research. Alternatively, it would be ok to focus on kinases in your ORPE exam, just don’t study them by NMR or direct measurements of structure.

Q: Is it ok for me to talk about my topic with my advisor or other students?
A: Yes. But the ideas should be yours, and the writing and presentation should be yours. Use those around you for advice like you would in the lab. But beware, those you ask for advice will not be in the exam with you, so make sure that during your exam you are not presenting other peoples ideas and experiments that you cannot defend, because you will be asked to defend them, and that could get ugly.
**PRELIMINARY EXAM**

For admission to candidacy for the Ph.D. degree, BBMB and the Graduate College requires a student to take and pass an oral preliminary exam by the end of the fifth semester, exclusive of the summer terms. The Graduate College requires that the Program of Study (POS) Committee and POS forms must be approved by the Graduate College no later than one semester before the preliminary oral exam.

Remember, the Department of BBMB also requires that PhD. degree candidates in the biochemistry and biophysics graduate programs first pass the Oral Research Proposition Exams (ORPE) before taking the preliminary oral exam. The preliminary oral exam is conducted by the student’s POS Committee and must be completed by the end of the third year. Failure to do so can result in resignation of the Graduate Research Assistantship and loss of tuition scholarship.

At the preliminary oral exam, the POS Committee will examine the student’s general knowledge in areas related to the degree program and will evaluate plans for the dissertation research. The format of the exam requires that the student submit a written proposal concerning the dissertation research to the POS Committee at least one week in advance of the exam.

Following the preliminary oral exam, the student’s POS committee will review the performance on the ORPE and the preliminary oral exams and complete the Report of Preliminary Exam. The student will be notified when the POS Committee has reached its decision. If the student passes the exam, they are admitted to candidacy for the Ph.D. degree; if they receive a Conditional Pass, they must meet the conditions set forth by the student’s major professor and/or POS committee. Every member of the POS committee must sign a request in writing (by email memo OK) to the Graduate College to change the Conditional Pass to a Pass.
GRADUATE COLLEGE REQUIREMENTS FOR GRADUATION

CREDIT HOURS
For M.S. degrees, the Graduate College requires a minimum of 30 credits of course work and research. Recent M.S. students in the BBMB department have typically included about 27 credits of course work and 43 credits of research in their programs. For a Ph.D., a minimum of 72 credits is required. Recent Ph.D. students in BBMB have had about 33 credits of coursework and 100 credits of research.

ENGLISH PLACEMENT
The English Placement Exam is required of all entering international graduate students whose native language is not English. International students who have received their undergraduate degrees at Iowa State University must take the Graduate English Exam for International Students. These exams are scheduled in early fall. Performance on these tests determines whether students must take a follow-up exam or courses. The department requires that these courses be taken on a graded basis. Consult the graduate catalog for further details.

GRADUATION REQUIREMENTS
When you are ready to graduate, apply for graduation through AccessPlus, following the Graduate College deadline for the semester that you plan to graduate. If your plan changes and you must cancel your graduation plan, you must again apply for graduation through AccessPlus following the Graduate College deadlines for the next expected term of graduation.

You will then schedule and set a final exam date with your POS committee and submit the Request for Final Exam form with required signatures to the Graduate College. Following the exam, the results are reported on the Report of Final Exam form, which is sent to the graduate program office prior to the scheduled exam and passed on to the student’s major professor to bring to the exam. Based on the results, you will complete the requirements necessary to graduate.

See the Graduate College website and online Graduate College Handbook for important information regarding deadlines, policies and guidelines. Also, most of the forms you will need during your academic career as a graduate student at ISU can be found under the Current Students’ tab at the Graduate College website.
BBMB GRADUATE STUDENT SUPPORT

RESEARCH ASSISTANTSHIPS
Most Ph.D. students entering the graduate program in BBMB receive a half-time Research Assistantship that provides financial support. Effective January 1, 2014, the stipend is $26,004 per year, paid over 12 months. The obligation taken on by the student in return for this support is a minimum of 20 hours per week of work towards the research objectives of their host laboratory and towards the student’s Ph.D. dissertation project. This obligation is in excess of any formal course work or research course credits (BBMB 699).

For students admitted for the fall semester, who are required to participate in the research rotation program before selecting a host laboratory, every effort will be made to provide continuous support for five years, as long as satisfactory progress is being made.

Those students admitted directly into a specific laboratory, without participating in the rotation program, will be supported solely by the major professor, as outlined in their individual official offer of admission letters from the Department Chair. The details of the support may vary for students admitted directly into a specific laboratory who did not participate in the rotation program. The details of the level of support and the duration of the stipend will be specified in a letter from the Department Chair that formally offers admission to the program.

M.S. and BS/MS students also typically receive half-time research assistantships, although the level of the stipend is reduced from that of Ph.D. students. The stipend for M.S. students on a half-time assistantship effective July 1, 2014 is $20,400 per year. In addition, only a quarter-time assistantship is provided to BS/MS students while they are working toward their B.S. degree.

Current BBMB Ph.D. stipend levels are above the minimum specified by the Graduate College and are subject to change in accordance with the availability of university and departmental funds.

TEACHING ASSISTANTSHIPS
During the periods that students are serving as teaching assistants they will receive the same level of financial support as when they are on a research assistantship. Teaching assistants are obliged to spend 20 hours per week in their teaching duties for a half-time appointment.

The Department makes assignments for Teaching Assistantships each spring semester for the following academic year. It is the TA’s responsibility to meet with the assigned instructor to learn your obligations and requirements for successfully completing the TA position.

TUITION & FEES
Tuition is paid by a student’s major professor, provided they remain students in good standing (minimum GPA of 3.0, satisfactory progress in program and research) as follows:
- Ph.D. students on a half-time assistantship receive 100% tuition scholarship
- M.S. and B.S./M.S. students on a half-time assistantship receive 50% tuition scholarship
- B.S/M.S. students on a quarter-time assistantship receive 25% tuition scholarship

If for any reason a student is enrolled but is not receiving a research assistantship, then he or she would be charged tuition at either the in-state or out-of-state rate – whichever is appropriate. In any case, mandatory fees assessed by the Registrar’s Office are the responsibility of the student.

ASSISTANTSHIP APPOINTMENTS
All graduate students on assistantships have signed a Graduate Assistantship Letter of Intent listing the terms and conditions of appointment. Graduate assistantship appointments are usually on a half-time basis.

Appointments can be terminated by mutual consent or for cause as described in this Graduate Student Handbook or in the Iowa State University Graduate College Handbook.

If you have any questions regarding your appointment, contact the DOGE or the Program Coordinator for Graduate Education.
REAPPOINTMENT OF ASSISTANTSHIP

The department seeks to provide research assistantships or teaching assistantships to the greatest possible extent, so that all of our graduate students receive a stipend. Each year, after satisfactory progress has been ascertained, the student typically is reappointed to an assistantship for the next 12 month period, usually from July 1st to June 30th. Continuation of the assistantship, however, is not guaranteed beyond the period that was specifically committed in the offer letter that is transmitted when a student is originally admitted into the department.

Only in exceptional circumstances is assistantship support continued past the maximum time limits established by the Graduate College, which are five years for the M.S. degree and seven years for the Ph.D. degree.

UNSATISFACTORY PERFORMANCE

Reappointment and continuation of any graduate assistantship always depends on satisfactory academic and research progress. Failure to meet the requirements for satisfactory progress can result in various actions. These include 1) renewal of the appointment for only six months with successive continuation pending improved performance, 2) reduction in the level of the stipend or conversion from a monthly stipend to hourly pay, 3) a requirement that an M.S. thesis be completed as a prerequisite for the Ph.D. degree, 4) dismissal from the Ph.D. program with a terminal M.S. degree to be granted if the requirements for that degree can be met, or 5) dismissal from the Ph.D. or M.S. programs.

It is also possible that an assistantship could be terminated within the appointment period. The Graduate College stipulates that one or more of the following may be grounds for termination of appointment for cause prior to the end of the stated appointment period:

1. Failure to maintain a cumulative GPA of at least 3.0. The assistant can be dismissed at the end of the semester in which notice of academic probation is received. Dismissal for this reason is not mandatory, because a grace period during which students may continue even though their GPA is below 3.0 may be extended for a specified period of time by agreement between the department chair and the Graduate Dean.

2. Failure to comply with graduate student responsibilities listed in the Graduate Student Handbook.

3. Personal conduct seriously prejudicial to the university, including violation of the Regents’ Uniform Rules of Personal Conduct and General University Regulations discussed in the ISU Information Handbook.

4. Neglect of duty or incompetence.

BREAKFAST CLUB

The Breakfast Club is purposed to promote relationships amongst undergraduate students, graduate students, faculty, and staff.

On the first Thursday of each month, undergraduate students prepare breakfast in the interaction area on the third floor of the Molecular Biology Building.
HEALTH INSURANCE

A graduate student on a Research or Teaching Assistantship receives single student coverage free of charge through the student and scholar health insurance plan offered by ISU. Students have the option of paying premiums for coverage for his or her immediate family, i.e., spouse and children. Graduate students may purchase dental insurance coverage for themselves and their dependents.

Annual full-year coverage for 2014-2015 is from August 12, 2014 to August 11, 2015. Enrollment is through the University AccessPlus system during the Open Enrollment period (July 14, 2014 to September 12, 2014), and coverage is retroactive to the start date of the Assistantship. For information about program plan, see 2014-2015 Plan Year Highlights for Graduate Assistants: http://www.hrs.iastate.edu/hrs/node/718/attachment

ANNUAL EVALUATIONS

Every category of graduate student in BBMB is evaluated annually by the entire BBMB faculty, as well as by the continual input and evaluation provided by the major professor and the Program of Study Committee. The annual departmental evaluation meeting is held near the end of spring semester, and written notification of the faculty’s findings is provided to each student. Satisfactory progress in graduate study involves:

1. Maintaining a grade point average of 3.0 or above.
2. Demonstrating diligent effort and productivity in laboratory research. Evaluation of laboratory research progress is made by the major professor, and by the Program of Study Committee.
3. Satisfactory performance in teaching assistant duties, when applicable. Evaluation of teaching assistantship performance is provided by the instructor of the course and from student feedback.
4. For Ph.D. students, completion of the ORPE by the end of the second academic year, and the oral preliminary exam by the end of their fifth semester.
5. Submitting the Graduate Student Annual Report by the end of each spring semester. This report allows you to report your progress to us as you view it. It is also a way of ensuring that you are aware of your requirements and deadlines for such.
6. Meeting University, College, and Departmental requirements in a timely manner. These requirements include meeting the English requirement, successful completion of the OECT requirement, selection and approval of the Program of Study Committee and completion and approval of the Program of Study.

GRADUATE LEARNING COMMUNITY

The BBMB Graduate Learning Community (GLC), led by the BBMB DOGE and BBMB graduate student peer mentors, meet during the academic year to explore professional development and career planning. In addition, at least one career workshop is planned each year.

The perception of most graduate students in BBMB is that they have two career options, academia or industry and that jobs in these areas are highly competitive. The challenge for a graduate student is to figure out which career path to prepare for or to discover other career options that may be of interest to them where their advanced degree is useful. The focus of the GLC is to explore professional development and careers for graduate students studying for their advanced degrees in the area of biochemistry or biophysics.

Visit the BBMB Graduate Learning Community webpage for more information and a schedule of planned activities.

Quinlin Hanson and Sannie Olson, Ph.D. in biochemistry degree candidates and 2014-2015 Peer Mentors
DEPARTMENTAL PROCEDURES AND OTHER TOPICS OF INTEREST

The Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology provides a variety of services. Contact the following persons for specific needs, as follows:

Connie Garnett, Program Coordinator (1210 MBB, 294-3317): graduate program administration, including admission and orientation, arranging support, and advising students during their academic career until graduation. Also updates BBMB website graduate student pages.

Kelly Yohnke, Administrative Specialist (1210 MBB, 294-2226): All operations dealing with personnel and funding, grant records, departmental accounts, budgets.

Tennan Everly, Administrative Specialist (1210 MBB, 294-9916): Purchasing, travel arrangements, standing orders and contracts, seminars, hourly payroll, vacation and sick leave records, teaching evaluations.

ACCOUNT NUMBERS

Ask your major professor for the account number you should use. When charging supplies and services from various offices on campus, please be sure the account number you use is valid.

PURCHASES

All purchases using department funds must be approved by your major professor.

Intramural (within the University) purchases: the receipt (sales ticket) must be returned to the "Sales Ticket" basket in the department office.

External (outside the University) purchases: present full information (catalog number, description, size and current price) on a Purchase Requisition form available in the department office Forms Drawer, and deposit it in the "IN" box on Stacey Poling’s desk (1210 MBB). Stacey can order the items, if your lab wishes, or your lab can order them. Check the appropriate box on the purchase requisition form.

SERVICES & SUPPLIES

Work done at the Instrument Shop, Chemistry Machine Shop, Photo Service, or Printing Service must be accompanied by an Intramural Purchase Order. Supplies from Central Stores must be purchased using CyBuy. Common supplies such as glassware, chemicals, etc., can be purchased at the Chemical Stores using CyBuy. In order to do this, you first must obtain an account number from your major professor. All receipts for services or supplies purchased on campus should be submitted to Tennan Everly (1210 MBB).

OFFICE SUPPLIES

Office supplies can be obtained from the University Bookstore with either cash or a Bookstore Order form, available on-line or via Officemax on the CyBuy system.

MAKING PURCHASES USING CYBUY

The CyBuy Contract Marketplace is a system available through AccessPlus where ISU employees may find online catalogs for ISU’s contracted vendors. Shoppers create online carts, which are routed to releasers (typically administrative personnel in your department) for review before being submitted to the vendor.

The following vendor catalogs are available through the CyBuy site:

- Bio-Rad Labs
- Fisher Scientific
- Sigma-Aldrich
- Integrated DNA Technology (IDT)
- Invitrogen
- CDW-Government
- Dell
- Hewlett Packard Computers
- W.R. Grainger
- Office Max
- Qiagen
- VWR
- ISU Central Stores
- ISU Chemistry Stores

All salaried ISU employees, including graduate assistants, will be able to access CyBuy through AccessPlus.
TELEPHONES
Most offices and laboratories have telephones for safety and as a convenience to department members. Personal calls should be kept to a minimum as a consideration to others. University calls have a five-number code, 4-XXXX or 6-XXXX. For an off-campus Ames line, dial "8" followed by the seven-digit number.
Long distance telephone calls should be made only for professional purposes and should be brief. Dialing instructions can be found in the ISU Faculty/Staff/Student Directory. Graduate students should make office-related long distance calls on their major professor's phone. Emergency long distance calls made for personal reasons (dial "8," then "0" for operator) should be billed to your home phone number or personal calling card.

COMPUTERS & TYPEWRITERS
A Macintosh computer lab, open during the day, is available in 1340 MBB. A Linux computer lab, open with your building key 24 hours a day, is available in 0101 MBB. Laptop computers are also available for checkout. Reserve them using the red binder in 1210 MBB. A typewriter is available in 1210 MBB.

PHOTOCOPIES
Photocopying for professional and department matters is available as follows:

1. The University Copy Centers - The copy center is recommended when more than ten copies of high quality are needed. An account number must be obtained from Stacey Poling and given when work is presented. (Only the Copy Center in the Memorial Union will accept cash for personal work.)

2. MBB Copiers - Copiers located in 1224 MBB and 4014 MBB are recommended for high quality copies of letters, memos, book and journal articles, and for fewer than ten copies of short (one- to three-page) reports. These copiers also make transparencies, backed copies and colored paper copies. Obtain a copy code number from your major professor.

3. Parks Library Photo duplication, Physical Science Reading Room and Veterinary Medicine Library - All have copy machines available. Your major professor can advise you regarding authorized use of these copy machines.

4. Personal copies can be made on coin-operated copiers which are located throughout campus (the nearest locations are the Physical Sciences Reading Room and the main library) or at the Memorial Union Copy Center.

VISUAL AIDS
1. Media equipment such as the laptop computer or projector can be checked out from the building manager's secretary (1210 MBB, 294-4125) or from Stacey Poling (1210 MBB, 294-6116). A reservation book is located in the BBMB receptionist area.

2. Transparencies can be made on the copiers in 1224 MBB and 4014 MBB. Special transparency sheets are available for use with copiers, and can be ordered through Central Stores or the University Bookstore. (Do not use transparencies designed for use with overhead projectors; they will melt and jam the copier.) Teaching transparencies are available from the department office.

3. The Instructional Technology Center (1200 Communications Building) offers a variety of services, including the delivery of projectors, PA systems, etc. An E-lab is available there with instruction for teaching staff in computer programs such as WebCT.
CONFERENCE ROOMS
Reservations for Molecular Biology Building (MBB) conference rooms can be made online (starting April 1, 2015 – use reservations book in 1210 MBB until that date). Please follow this link and sign-in using your NetID and password http://mbbreservations.bb.iastate.edu. Your MBB lab or office key will open the conference room doors. If you don’t have a key, you can sign out one from the 1210 MBB administrative suite.

READING ROOM
The Molecular Biology Building Reading Room in MBB 4014 houses current and recent issues of journals pertinent to biochemistry and biophysics. A copy machine and a public access Project Vincent workstation are also located in the Reading Room.

COMMUNICATIONS
Bulletin Boards - Department information as well as some job information and other notices is posted on a bulletin board in 1210 MBB; seminar, conference and symposia notices are posted by the elevators.

MAIL
1. Incoming: Mailboxes are located outside the main office. Mail distribution is usually completed by 11 a.m. each day. University Mail Services cannot handle personal mail; please arrange to have all personal mail sent to your home address.
2. Outgoing: Mail should be deposited by 10 a.m. in the appropriate mail slot. Off-campus mail must have postage or a Mail Card attached. Mail Cards are available from your major professor. Personal outgoing mail cannot be handled by University Mail Services. The nearest mailbox for personal stamped mail is on the south side of the Armory.

POST-GRADUATION PLACEMENT SERVICES
1. Mailing: Department envelopes are provided for mailing inquiries and curriculum vitae. Students are expected to address envelopes and letters and to provide stamps.
2. Individualized letters and ongoing correspondence: Students who wish to continue correspondence relative to a professional position are expected to prepare their own letters. Computers, stationery and envelopes are available for this purpose.

KEYS
You will need to order keys to the Molecular Biology Building and mailbox during Orientation. When you join your assigned research group, you can get keys to your new laboratory and mailbox by making arrangements with the building manager’s secretary (1210 MBB, 294-4125) or the building manager, Pete Lelonek (1210M MBB, 294-2699). Keys to your temporary mailbox should be returned to Key Desk in the General Services Building when you join your assigned research group.

UTILITY PROBLEMS
If your lab has water leaks, plugged drains, cracked sinks, power outages, spent fire extinguishers, broken windows, etc., please report to Pete Lelonek (1210M MBB, 294-2699) or his secretary (1210 MBB, 294-4125), and notify your major professor.
PAY

1. PAYDAY: The University payday is the last working day of each month. ISU requires all pay to be directly deposited into your checking or savings account. Your pay stub can be viewed on AccessPlus. It is important that new employees visit the Records Management Office of Human Resources Services in 3810 Beardshear to complete all appropriate forms prior to the first day of work.

2. PAY DEDUCTIONS: If applicable, deductions are made for Federal and State income taxes and Social Security.

TRAVEL

1. Support: The Graduate College and Graduate Student Senate (GPSS) offer limited support for travel to professional meetings and conferences. The online Request for Professional Advancement Grant (PAG) can be found on their website. Funds are limited and in high demand, so requests should be made early in the semester for travel anticipated any time during the academic year.


3. Travel Expense Voucher: should be submitted promptly on return from travel. Original receipts are necessary for major expenses, such as hotel and car rentals. Airline tickets may be purchased through Travel and Transport or other selected agencies (see Stacey Poling for details).

LEAVES & ABSENCES

While BBMB and ISU does not track your absence, and there is no leave policy for graduate students, students should complete a monthly leave report form at the end of each month to report time off taken during the month (a reminder will be sent via email along with the form). This report will confirm your communication with your major professor or supervisor about your leave. Reports will be kept in a folder on the BBMB server during your academic career in the department. If a conflict arises between the graduate assistant and that assistant’s supervisor regarding leave of absence use, either party may involve the appropriate Director of Graduate Education (DOGE), or take further action as outlined in the Graduate College Handbook.

Arrangement for a leave of absence is made between you and your major professor or supervisor as outlined in the Graduate College Handbook. As a guideline, a graduate student in BBMB earns 2 paid days off a month that should be taken during their assistantship appointment period, unless other arrangements have been made between with their major professor or supervisor. Students should not have the expectation that they can carry forward earned days off into a new assistantship appointment period without the approval of their major professor or supervisor.

Students also have paid time off during official ISU holidays. If it is critical to your research comp (compensatory) time off may be used in exchange for working on official ISU holidays with the permission of your major professor or supervisor.
INJURIES

*Departmental Appointee:* If you are injured while performing your duties as an employee, you must immediately report the incident to your supervisor and receive initial treatment with Occupational Health Works at McFarland Clinic. Your supervisor or Kelly Yohnke, the BBMB Administrative Specialist, will have to call to make the appointment. Within 24 hours your supervisor must complete a Workers’ Compensation – First Report of Injury or Illness form. These forms may be obtained from Kelly Yohnke in 1210 MBB. First aid treatment is available through the Thielen Student Health Center.

*Student* - See Student Health Center and ISU General Catalog for a description of health programs administered by Iowa State University.

PARKING PERMITS

Because you will be classified as a graduate student at Iowa State, you will be covered under the student section of Traffic and Parking Regulations.

BICYCLES

Bicycles may not be used on campus sidewalks and footpaths between 7:30 a.m. and 5:30 p.m. except on those walks designated as bike paths. See http://www.fpm.iastate.edu/maps/ (Select Bike Routes/Hoops) for details. Bicycles used between sundown and sunrise must be equipped with a headlight, either a tail light or an adequate reflector, and a warning device. Bike racks are located outside the Molecular Biology Building. Bicycle licenses are available for FREE via the Ames City Hall Financial Department (515 Clark, 239-5280). For more information concerning bicycles, see http://www.parking.iastate.edu/permit/bike/.

ISU PROPERTY

*Apparatus and Furniture:* Every item of ISU property that is in the laboratory or office assigned to you by your major professor becomes your responsibility, even though the arrangement may be temporary. This includes lab benches, all shelving, desks, chairs, stools and all scientific equipment. If you want to dispose of movable items of ISU property, you should first consult with your major professor; he/she may want to store it for future use or transfer it to someone else in the research group or in the department. Before removing any item, the inventory number must be reported to the department office.

*Theft of University Property:* If an item of ISU property for which you are responsible has been stolen, please report the details of the theft to your major professor and the department office. The department is required to submit a report of thefts to the Vice President for Business and Finance, Campus Security Office and the Facilities Planning and Management Office.
Students are at the center of all we do.