THE UNIVERSITY OF ARIZONA

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

GRADUATE HANDBOOK BIOCHEMISTRY

FALL 2010

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A. GENERAL DESCRIPTION OF THE BIOCHEMISTRY GRADUATE PROGRAM

This handbook summarizes the graduate student requirements for the Ph.D. degree in the Biochemistry program of the Department of Chemistry and Biochemistry. There may be additional requirements for students who are involved in the interdepartmental graduate programs [(Biochemistry and Molecular & Cellular Biology (BMCB) or the Biological Chemistry Program (BCP)], and students should also be familiar with these requirements.

It is important to realize that successful completion of a graduate degree program in Biochemistry is the student's responsibility. All of the necessary steps that are required to finally receive the degree are important. The student should utilize resources the Graduate College makes available, including the Graduate Catalog and the Graduate College Handbook. This Department of Chemistry and Biochemistry Graduate Handbook is designed to assist students through the maze of graduate school requirements, but it is not all-inclusive. It is meant to be a useful guide, but does NOT serve as a contractual document.

The Dissertation Advisor, along with the Dissertation or Dissertation Committee, will serve as guides and mentors to help train each student as a scientist. Finally, the Graduate Program Coordinator and the Graduate Program Committee will do everything they can to keep students on track and to point them in the right direction. Nevertheless, each student needs to be focused and self-motivated to reach his/her goals.

SAMPLE ACADEMIC CALENDAR

Year 1

Fall 2010

Laboratory rotation one - August 23 – October 15, 2010
Laboratory rotation two – October 18 – December 8, 2010
Coursework (for example, see page 7)
Department Retreat - TBA

Spring 2011

Laboratory rotation three - January 12 – March 4, 2010
Laboratory rotation four – March 9 – May 4, 2011
Coursework

Year 2

Fall 2011

Coursework
Dissertation Research
Departmental Retreat (TBA)
Select Dissertation Committee
Hold first Dissertation Committee Meeting
Complete Plan of Study

Spring 2012

Coursework
Dissertation Research
Teaching Assistantship (flexible, may be in Year 3)
Undertake written and oral comprehensive exams

Years 3 and beyond

Coursework, as needed
Dissertation Research
Annual Dissertation Committee Meeting

B. EXPECTATIONS OF STUDENT & FACULTY

1. WHAT THE FACULTY EXPECT FROM THE STUDENTS

The faculty expect the students in this program to abide by the University of Arizona Academic Code of Conduct and the Academic Code of Integrity, as summarized in **Section C** of this Handbook. Failure to do so, at any time, may be grounds for dismissal from the graduate program, and from The University of Arizona. In addition, the faculty's expectations of the graduate students in this Program are:

Research

a) to discover and enthusiastically pursue a unique topic of research in order to participate in the construction of new knowledge in your chosen field, and in the application of that knowledge to the solving of new problems in the chemical sciences,
b) to learn the research methods and historical knowledge basis of the discipline -- honoring the scholarship of those who came before and learning what is needed to form viable research hypotheses,
c) to communicate regularly with faculty mentors and the masters/doctoral committees, especially in matters relating to your research and progress within the degree program,
d) to exercise the highest integrity in all aspects of your work, especially in the tasks of collecting, analyzing and presenting research data,
e) to work responsibly toward completion of the degree in a timely fashion,
f) to mentor other students in the group and foster the regular exchange of research ideas and teamwork between group members.

Teaching

a) to participate enthusiastically in appropriate training and evaluation, by the TA evaluation committee of all instructional roles you are asked to take on,
b) to take on (as opportunities arise) an appropriately sequenced variety of teaching duties relevant to your career expectations and likelihoods,
c) to devote the same seriousness to undergraduate instructional duties that you would expect from your own instructors, remembering that you are an employee of the State of Arizona in your role as a teaching assistant.

Professional Development/Program Progress

a) to develop, to the extent possible, a broad network of professional relations,
b) to contribute, wherever possible, to the discourse of the scholarly discipline through conference presentations, publications, collaborative projects, and other means,
c) to seek out a range of faculty and peer mentors that can help you prepare for a variety of professional and career roles and responsibilities,
d) to take responsibility for keeping informed of regulations and policies governing your graduate studies and to complete all required paperwork and other degree obligations in a timely fashion.

Community

a) to create, in your classrooms and laboratories, an ethos of collegiality and collaboration,
b) to realize your responsibilities as an individual and professional representative of both the university as a whole and the department or program in which you are studying,
c) to assist graduate student peers in their own professional and scholarly development.

2. WHAT THE STUDENT SHOULD EXPECT OF THE DISSERTATION ADVISOR AND HIS/HER COMMITTEE

In general, you should expect your Dissertation Advisor to:

a) be willing to meet with you regularly,
b) be someone with whom you can talk freely and easily about research ideas, and your professional development, and who never feels threatened by your capabilities,
c) be someone you can trust to look out for your professional interests,
d) be willing and enthusiastic in giving you credit for the work you do,
e) be willing to tell you when your work does or does not meet the standards he/she has set for their research program,
f) be willing to help you graduate in a reasonable time frame, with a dissertation which tells a complete story, and is representative of Ph.D. level research at all of our peer institutions,
g) have an active well-functioning research group for additional support when you are encountering difficulties.

It is unreasonable to expect one person to have all of the mentor qualities that you desire. You should therefore choose dissertation committee members who complement the strengths of your advisor.

3. WHAT THE STUDENT SHOULD EXPECT OF THE DEPARTMENT

a) A guarantee of funding for up to 5 years from the time of enrollment, provided that you remain in good standing in the program, and are making adequate progress toward completion of the Ph.D. degree,
b) Opportunities to develop skills beyond your specialty through seminars, short courses in department facilities, and interactions with renowned researchers,
c) Opportunities to provide feedback to the department and to review policies to ensure the quality of the department,

A guarantee that current students will not be held responsible for new requirements implemented in the middle of their tenure within the department, i.e. that you are held accountable for the rules in place in the Graduate Handbook, at the time of your admission.

FALL 2010 INCOMING GRADUATE STUDENTS

Chem/Bio	First Name	Last Name	University
Chem	Ali	Abbaspour Tamijani	University of Tehran
Chem	Mark	Agasid	University of California-San Diego
Chem	Eman	Akam	University of New Hampshire
Chem	Julie	Anderson	Temple University
Chem	Christopher	Atcherley	University of Denver
Chem	Leonard	Bright	Southern Illinois Univ-Edwardsville
Chem	Yu	Cao	Xiamen University
Biochem	Udeep	Chawla	Jamia Milia Islamia
Chem	Pi-Yu	Chen	National Central University
Chem	Isaac	Chogii	University of Nairobi
Chem	Nicole	Gagnon	St. Johns University
Chem	Sarah	Gerhardt	University of Arizona
Chem	Dawit	Ghebrehiwot	University of Asmara
Chem	Grace	Githaiga	University of Nairobi
Chem	Jared	Griebel	Case Western
Biochem	Sara	Hall	Indiana University Bloomington
Chem	Divya	Iyer	Bioinformatics Institute of India
Chem	Evan	Jones	Willamette University
Chem	Yue	Ju	Xiamen University
Chem	John	Keogh	University of Arizona
Chem	Pitambar	Khanal	Tribhuvan University
Chem	Vlad	Kumirov	University of Arizona
Chem	Nicholas	Laude	University of Texas – Austin
Chem	Daniel	Mies	Evergreen State College
Chem	Eric	Mitchell	University of Arizona
Biochem	Micah	Nelp	Mesa State College
Chem	Alfreda	Nelson	New Mexico State University
Chem	Kha	Ngyuen Thi	Irkusk State Technical
Chem	Ricardo	Palos Pacheco	Universidad Autonoma de Ciudad Juarez
Biochem	Kayla	Polzin	Willamette University
Chem	Daniel	Pritchard	Sonoma State University
Chem	Royston	Quintyn	Queen Mary University of London
Chem	David	Racke	Hillsdale College
Chem	Nilini	Ranbaduge	Asian International School
Chem	Ehamparam	Ramanan	University of Peradeniya
Chem	Keeper	Sharkey	University of Arizona
Chem	Rion	Shupe	University of Louisville
Chem	Steven	Sill	University of Wisconsin – Stevens Point
Chem	Sanhita	Sinharay	Indian Inst of Tech-Madras
Chem	Yang	Song	Peking University
Biochem	Rajshree	Srivastava	University of Texas – Arlington
Chem	Luis	Torres Figueroa	University of Puerto Rico
Chem	Edon	Vitaku	Idaho State University
Chem	Richard	Vreeland	Towson University
Chem	Jinyan	Wang	East China Normal University
Biochem	Warner	Weber	Arizona State University
Chem	Luyi (Roy)	Yang	Xiamen University
Biochem	Anthony	Young	Arizona State University

Chem	Zhonghao	Zhang	Beijing University
Chem	Yilong	Zheng	Tsinghua University

C. ACADEMIC CODE OF INTEGRITY AND CODE OF CONDUCT

Graduate Students in the Department of Chemistry and Biochemistry, University of Arizona are expected to have read, and understand, the following excerpts from the Academic Code of Conduct for the University of Arizona.

Excerpts and highlights from the Code of Academic Integrity for the University of Arizona: **http://dos.web.arizona.edu/uapolicies/**

PRINCIPLE
Integrity and ethical behavior are expected of every student in all academic work. This Academic Integrity principle stands for honesty in all class work, and ethical conduct in all labs and clinical assignments. This principle is furthered by the student Code of Conduct and disciplinary procedures established by ABOR Policies 5-308 through 5-404, all provisions of which apply to all University of Arizona students. This Code of Academic Integrity (hereinafter "the Code") is intended to fulfill the requirement imposed by ABOR Policy 5-403.A.4 and otherwise to supplement the student Code of Conduct as permitted by ABOR Policy 5-308.C.1.

PROHIBITED CONDUCT
Conduct prohibited by the Code consists of all forms of academic dishonesty, including, but not limited to:

1. Cheating, fabrication, facilitating academic dishonesty, and plagiarism as set out and defined in the Student Code of Conduct, ABOR Policy 5-308-E.6, E.10 and F.1
2. Submitting an item of academic work that has previously been submitted without fair citation of the original work or authorization by the faculty member supervising the work.
3. Violating required professional ethics rules contained or referenced in the student handbook (hardcopy or online) of undergraduate or graduate programs, or professional colleges.
4. Violating health, safety or ethical requirements to gain any unfair advantage in lab(s) or clinical assignments.
5. Failing to observe rules of academic integrity established by a faculty member for a particular course.
6. Attempting to commit an act prohibited by this Code. Any attempt to commit an act prohibited by these rules shall be subject to sanctions to the same extent as completed acts.
7. Assisting or attempting to assist another to violate this Code.

STUDENT RESPONSIBILITY
Students engaging in academic dishonesty diminish their education and bring discredit to the academic community. Students shall not violate the Code of Academic Integrity and shall avoid situations likely to compromise academic integrity. Students shall observe the generally applicable provisions of this Code whether or not faculty members establish special rules of academic integrity for particular classes. Students are not excused from complying with this Code because of faculty members' failure to prevent cheating.

FACULTY RESPONSIBILITY
Faculty members shall foster an expectation of academic integrity and shall notify students of their policy for the submission of academic work that has previously been submitted for academic advancement, as well as any special rules of academic integrity or ethics established for a particular class or program (e.g. whether or not a faculty member permits collaboration on coursework; ethical requirements, for lab and clinical assignments; etc.) and make every reasonable effort to avoid situations conducive to infractions of the Code.

STUDENT RIGHTS
Students have the right to a fair consideration of the charges, to see the evidence, and to confidentiality as allowed by law and fairness to other affected persons. Procedures under the Code shall be conducted in a confidential manner, although a student has the right to an advisor in any appeal to a University Hearing Board under this Code.

ACADEMIC INTEGRITY PROCEDURES

I. Faculty-Student Conference

The faculty member of record for the course (i.e., responsible for signing the grade sheet) conducts these procedures. Faculty shall make sure that students receive notice and fair consideration of the charges against them. The faculty member must confer with the student within 15 academic days (hereinafter referred to as "days") of receiving evidence of a suspected violation of this Code, unless good cause is shown for an extension of no more than 30 days. The faculty member shall confer with the student in private, explain the allegations, present any evidence, and hear the student's response. If more than one student is involved in an incident, separate conferences are recommended but not required. When dealing with students who are unavailable for the conference, students not enrolled in the class, or graduate students, refer to the General Provisions.

After the conference the faculty member shall decide, by a preponderance of the evidence, whether or not the student has committed an act prohibited by this Code. "Preponderance of the evidence" means that it is more likely than not that a violation of this Code occurred. If the evidence does not support a finding of a violation, the University will make no record of the incident in any University files. The student may continue in the class without prejudice.

If the evidence supports a finding that the student has engaged in misconduct, the faculty member shall impose sanctions after considering the seriousness of the misconduct, the student's state of mind, and the harm done to the University and to other students. In addition, the faculty member shall consider mitigating and aggravating factors in accordance with the provisions of ABOR Policy 5-308.H. A faculty member may impose any one or a combination of the following sanctions: a written warning, loss of credit for the work involved, reduction in grade, notation of the violation(s) on the student’s transcript (temporary or permanent), or a failing grade in the course. The faculty member may also impose a sanction of suspension or expulsion from the program, department, college, or University. Within 10 days of the conference, the faculty member shall prepare a written decision outlining the charges, evidence, findings, conclusions and sanctions imposed. The faculty member should use the standard form entitled "Record of Faculty-Student Conference," and furnish copies to the student (as provided in the "Notice" section under General Provisions) and to all others as noted on the form, including the Dean of Students Office. See the General Provisions section for Grade Before Appeals.

II. Additional Sanctions for Multiple Violations

Multiple violations of this Code may subject students to additional sanctions, including suspension or expulsion at the discretion of the Dean of the student’s College ("Academic Dean") or his/her designee. Students found responsible by a faculty member for a violation of the Code must immediately contact the Dean of Students Office to determine if they have multiple violations subjecting them to additional sanctions by their Academic Deans.

Upon receiving the Record of Faculty-Student Conference, the Dean of Students Office will notify the student and the Academic Dean of the existence of multiple violations. The Academic Dean will decide if any additional sanctions are to be imposed on the student as a result of multiple violations. The Academic Dean will convey this information to the faculty member, the student and the Dean of the college where the violation occurred ("Dean of the College"), as provided in the "Notice" section under General Provisions. The Academic Dean should use the form entitled "Sanctions for Multiple Violations," and outline the findings and conclusions supporting his/her decision for an additional sanction. If the case is appealed as set forth below, the Academic Dean will present the case for the additional sanction.

III. Appeal to Dean of the College

The student may appeal the faculty member’s decision and sanctions to the Dean of the College

or his/her designee. The student shall deliver the written appeal to the Dean of the College within 10 days of the date on which the notice of the decision is received. The Dean of the College may extend this filing period if the student shows good cause for the extension. If a student does not appeal within the time provided, the decision and sanctions of the faculty member will be final.

Within 15 days of receiving the appeal, the Dean of the College shall review the faculty member's decision, sanctions and supporting evidence, and shall confer with the faculty member and the student. The Dean of the College shall have the authority to uphold, modify, or rescind the faculty member's decision and sanctions. If the Dean of the College finds:

1. that the conclusion of a violation is not supported by the evidence, then he/she shall render a finding of no violation and that the sanction(s) imposed be rescinded.
2. that the conclusion of a violation is supported by the evidence and the sanction imposed is appropriate, then he/she shall uphold the faculty member's decision and sanction(s).
3. that the conclusion of a violation is supported by the evidence, and the sanction(s) imposed are inadequate or excessive, then he/she shall modify the sanction(s) as appropriate.

The Dean of the College shall notify the student, the faculty member and the Dean of Students in writing of his/her decision as provided in the "Notice" section under General Provisions. The Dean of the College should use the form "Record of Appeal to Dean of the College" for this purpose. If the Dean of the College fails to act within the 15 day period, the student may, within 10 days thereafter, appeal to a University Hearing Board by providing a written notice of appeal to the Dean of Students Office. If the Dean of the College decides no violation occurred, all reference to the charge shall be removed from the student's University records, and the student may continue in the class without prejudice. If the semester has ended, the faculty member shall calculate the grade without the sanction. If work was not completed due to the academic integrity allegation, the faculty member and the student shall confer and a grade of "W" or "I" shall be assigned. If a grade of "I" is assigned, the student shall have the opportunity to complete remaining work without prejudice

IV. Interim Action

1. The Dean of the College involved may suspend the student from one or more classes, clinics or labs for an interim period prior to resolution of the academic integrity proceeding if the Dean believes that the information supporting the allegations of academic misconduct is reliable and determines that the continued presence of the student in classes or class-related activities poses a significant threat to any person or property.

2. The Dean must provide a written notice of the interim suspension to the student, with a copy to the Provost. The interim suspension will become effective immediately as of the date of the written notice.

3. A student who is suspended for an interim period may request a meeting with the Provost or his/her designee to review the Dean's decision and to respond to the allegations that he or she poses a threat, by making a written request to the Provost for a meeting, including the student's dates of availability. The Provost or his/her designee will schedule the meeting no later than five (5) days following receipt of the written request and decide whether the reasons for imposing the interim suspension are supported by the available evidence.

4. The interim suspension will remain in effect until a final decision has been made on the pending academic misconduct charges or until the Provost, or his/her designee, determines that the reasons for imposing the interim suspension no longer exist or are not supported by the available evidence.

V. Appeal to University Hearing Board

The student may appeal any decision of the Dean of the College or the Academic Dean that imposes suspension or expulsion or provides for a notation on the student's transcript. The

student may also appeal if the Dean of the College failed to act within the 15 day period. The Dean may grant the student the option to appeal if the sanction of a failing grade is imposed and the Dean believes reasonable persons would disagree on whether a violation occurred. The appeal must be filed within 10 days from receipt of the decision or the Dean of the College's failure to act, by providing written notice of appeal to the Dean of Students Office. If a student does not appeal within the time provided, the decisions of the Academic Dean, and the Dean of the College or the faculty member if the Dean of the College failed to act, will be final. The University Hearing Board shall follow the procedures set forth in the Student Disciplinary Procedures ABOR Policy 5-403.D. with the following modifications:

1. The Hearing Board shall be composed of three faculty and two students and shall convene within 30 working days of the time the student files the appeal.
2. Wherever the term Vice President of Student Affairs appears, it shall be replaced with Senior Vice President for Academic Affairs/Provost. The Provost is empowered to change grades and the Registrar shall accept the Provost's decision. The Provost shall also notify the parties of the final decision.
3. Wherever the Dean of Students is indicated as presenting evidence or witnesses, it shall be replaced with the faculty member who made the charges or his/her representative. Additionally, the Academic Dean or designee may also present evidence to support sanctions for multiple violations.
4. The student may be assisted throughout the proceedings by an advisor or may be represented by an attorney. If the student is represented by an attorney, the faculty member may also be represented by an attorney selected by the University Attorneys Office..
5. The faculty member has the same right as students to challenge the participation of any Board member, as noted in the Student Disciplinary Procedures (5-403.D.3.f.)
6. The Board may, in its recommendations, address any egregious violations of process.
7. Sanctions for multiple violations will be recommended and presented to the Board by the Academic Dean or his/her designee.

GENERAL PROVISIONS

Academic Day - "Academic Days" are the days in which school is in session during the regular fall and spring semesters, excluding weekends and holidays. If possible, Faculty-Student Conferences and appeals may be heard during the summer or winter break. The Dean of the College or Dean of Students may extend these time limits when serving the interests of a fair consideration or for good cause shown.

Advisor – An individual selected by the student to advise him/her. The advisor may be a faculty or staff member, student, attorney, or other representative of the student. The student will be responsible for any fees charged by the advisor.

Grade Before Appeals - Students must be allowed to continue in class without prejudice until all un-expired or pending appeals are completed. If the semester ends before all appeals are concluded, a grade of "I" shall be recorded until appeals are completed.

Graduate Students - In cases involving graduate students, faculty shall follow the procedures outlined for undergraduate students except that in all cases where the student is found to have violated the Code, the faculty member (and in the case of appeals, the Dean of the College or Hearing Board) shall notify the Associate Dean of the Graduate College.

Notice - Whenever notice is required in these procedures it shall be written notice delivered by hand or by other means that provides for verification of delivery.

Record - Whenever a sanction is imposed, the sanction and the rationale shall be recorded in the student's academic file. It is recommended that the standard forms "Record of Faculty-Student Conference," "Record of Appeal to Department Chair," and "Record of Modification of Sanctions"

be used. These forms are available from the Dean of Students office. Students may petition the Senior Vice President for Academic Affairs/Provost after five years from the semester of the determination or upon graduation, whichever occurs first, to have the record expunged.

Rights and Responsibilities of Witnesses - Witnesses are expected to cooperate in any proceedings under this Code. The privacy of a witness shall be protected to the extent allowed by law and with consideration to fairness to the students charged and other affected persons. Retaliation of any kind against witnesses is prohibited and shall be treated as a violation of the Student Code of Conduct or of the applicable University rules.

Students or Faculty Not Available For Conference - In cases where the student is not available, e.g. out of the area after final exams, the faculty member shall make every reasonable effort to contact the student through personal contact, telephone, University email, or mail to inform the student of the charges. If the faculty member is able to contact the student, the Faculty-Student Conference shall be scheduled as soon as both parties are available, e.g. at the beginning of next semester. The student shall be given the of Incomplete until the conference is held. If either of the parties will not be available for an extended period, the Faculty-Student Conference shall be held via the telephone or by mail. If after several efforts, contact cannot be established, the faculty member may impose sanctions but must send a letter or copy of the "Record of Faculty-Student Conference" form via certified return receipt requested mail to the student's last permanent address outlining the charges, findings, conclusions and sanctions.

Students Not In Class - If students not enrolled in the class are involved in a violation of this Code, faculty shall file a Code of Conduct complaint with the Dean of Students office.

All policies found in the Policy Manual are subject to change from time to time as approved by the Arizona Board of Regents. The central office disseminates hard copies of additions/revisions not more than 3 times each year. The web copy, located at http://www.abor.asu.edu, is updated every 1-2 months, as needed. Prior to acting in reliance upon a specific board policy as it appears in any copy of the policy manual, please check to make sure that the board has not recently approved any additions/revisions to that specific policy.

5-303 Prohibited Conduct

The following misconduct is subject to disciplinary action:

1. All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty and plagiarism.
2. Intentionally or recklessly causing physical harm to any person on the university campus or at a university sponsored activity, or intentionally or recklessly causing reasonable apprehension of such harm.
3. Unauthorized use, possession or storage of any weapon, explosive device or fireworks on the university campus or at a university-sponsored activity.
4. Initiating or causing to be initiated any false report, warning or threat of fire, explosion or other emergency on the university campus or at a university-sponsored activity.
5. Intentionally or recklessly interfering with normal university or university-sponsored activities, including, but not limited to, studying, teaching, research, university administration, or fire, police, or emergency services.
6. Knowingly violating the terms of any disciplinary sanction imposed for an earlier violation of this Code of Conduct.
7. Unauthorized use, possession or distribution or possession for purposes of distribution of any controlled substance or illegal drug on the university campus or at a university-sponsored activity.
8. Intentionally or recklessly misusing or damaging fire safety equipment.
9. Intentionally furnishing false information, including false identification to the university.
10. Forgery, unauthorized alteration, or unauthorized use of any university document or instrument of identification.
11. Intentionally and substantially interfering with the freedom of expression of others on the university campus or at a university-sponsored activity.
12. Theft or misappropriation of property, or of services on the university campus or at a university-sponsored activity; knowing possession of stolen property on the university campus or at a university-sponsored activity.
13. Intentionally or recklessly destroying, damaging or misappropriating university property or the property of others on the university campus or at a university-sponsored activity.
14. Failure to comply with the directions of university officials, including campus police officers, acting in good faith and in the performance of their duties.
15. Failure to comply with other published rules and regulations of conduct that may from time to time be adopted by the Board or the University, including, without limitation, restrictions on the sale or possession of alcoholic beverages on the university campus or at university-sponsored activities.
16. Unauthorized presence in or use of the university campus, facilities or property.

5-304 Sanctions

A. In addition to any other interim or final action which may be taken to enforce this Code of

Conduct, any person, whether a member of the university community or not, may be ordered to leave the university campus when the president, or such other officer or employee designated by the president to maintain order on the university campus, has reasonable grounds to believe the person is committing any act which interferes with or disrupts the lawful use of university property by others or has reasonable grounds to believe any person has entered upon the university campus for the purpose of committing such an act.

B. One or more of the following sanctions may be imposed for violation of the disciplinary regulations set forth in ABOR Policy 5-303 (Prohibited Conduct):

1. EXPULSION: Permanent separation of the person from the university. As applied to faculty and other university employees, expulsion may involve dismissal and termination of employment or non-renewal of an employment contract. An indication of expulsion will appear on the student's transcript or be maintained in the permanent file of the university employee. The person will also be barred from the university campus.
2. SUSPENSION: Separation of the person from the university for a specified period of time. Permanent notification may appear on the student's transcript or in the file of the university employee. Except where any administrative decision under this Code of Conduct indicates otherwise, a person suspended under this Code of Conduct shall not participate in any university sponsored activity, may be barred from the university campus, and where such person is a faculty member or other university employee, any suspension shall be without pay or other benefits incidental to the person's employment position.
3. PROBATION: This sanction shall be applicable to students only and may include forfeiture of campus privileges for a definite period of time. Additional restrictions or conditions may also be imposed. Appropriate university officials shall be notified of the imposition of such sanctions.
4. FORFEITURE: This sanction shall only be applicable to faculty members or other university employees, and shall include forfeiture of the right or expectation to an increase in pay, sabbatical leave, or summer employment for a definite period of time.
5. WARNING: The person is warned that further misconduct may result in more severe disciplinary action.
6. RESTITUTION: Payment to the university or to other persons, groups, or organizations for damages incurred as a result of the violation of this Code of Conduct.

C. Imposition of any sanctions shall take into account the following:

1. Sanctions shall be imposed pursuant to the administrative procedures referred to in a ABOR Policy 5-306(Enforcement of the Code).
2. Mitigating factors may be considered. Factors to be considered in mitigation shall be the present demeanor and past disciplinary record of the individual charged with a Code of Conduct violation, as well as the nature of the offense and the severity of any damage, injury or harm resulting from it.
3. Repeated violations or an aggravated violation of any section of this Code of Conduct may result in the imposition of a more severe sanction.
4. Attempts to commit acts prohibited by this Code of Conduct shall be subject to sanctions of the Code to the same extent as completed violations.

5-305 Groups and Organizations

A. Student, faculty and employee groups or organizations may be charged with violations of this Code of Conduct.

B. Such a group or organization and its officers may be held collectively or individually responsible when violations of this Code of Conduct by those associated with the group or organization have received the tacit or overt consent or encouragement of the group or the

organization or its leaders, officers or spokespersons.

C. The officers or leaders or any identifiable spokesperson for such a group or an organization may be directed by the presidency of the university to take appropriate action designed to prevent or end violations of this Code by the group or organization or by any persons associated with the group or organization who can reasonably be said to be acting on its behalf. Failure to make reasonable efforts to comply with such a directive shall be considered a violation of ABOR Policy 5-303.14 (Prohibited Conduct) of this Code, both by the officers, leaders or spokesperson of the group or the organization and by the group or organization itself.

D. Sanctions for group or organization misconduct may include revocation of the use of university facilities for a definite period of time or denial of recognition or registration, as well as other appropriate sanctions, permitted under this Code of Conduct.

5-306 Enforcement of the Code

A. The provisions of this Code shall be enforced through use of the following administrative procedures:

1. Faculty shall be subject to those procedures set forth in ABOR Policy 6-201.L (Conditions of Faculty Service, Hearing Procedures for Faculty).
2. Administrators shall be subject to those procedures set forth in ABOR Policy 6-101.H (Conditions of Administrative Service, Termination and Release).
3. All other university employees shall be subject to the applicable grievance procedures existing at the university.
4. Students shall be subject to ABOR Policy 5-401, et seq. (Student Disciplinary Procedures) adopted by the Board.

B. For purpose of enforcement of this Code of Conduct, a group or organization shall be subject to the same procedures as the majority of its members would be subject to if charged on an individual basis with a violation of this Code of Conduct.

5-307 Miscellaneous Provisions

A. The several sections and provisions of this Code of Conduct are hereby declared to be independent and severable and if any section, subdivision, word, sentence or clause be held void or non-enforceable such holding shall not affect the validity or enforceability of any other part or parts of this Code of Conduct which can be given effect without the invalid or non-enforceable portion.

B. The list of prohibited misconduct set forth in ABOR 5-303 (Prohibited Conduct) shall be interpreted broadly and is not designed to define misconduct in exhaustive terms.

C. The Board reserves the right to take necessary and appropriate action to protect the safety and well-being of the university community.

D. Any prior existing Code of Conduct is repealed except that any pending action or proceeding shall not be affected by this Code and will be subject to the Code provisions in effect at the time the action or proceeding was originally brought.

5-302 Definitions

In this Code of Conduct, unless the context otherwise provides or requires:

1. “Aggravated violation” means a violation which resulted or foreseeably could have resulted in significant damage to persons or property or which otherwise posed a substantial threat to the stability and continuance of normal university or university-sponsored activities.
2. “Board” means the Arizona Board of Regents.
3. “Cheating” means intentionally using or attempting to use unauthorized materials,

information or study aids in any academic exercise.

4. “Controlled substance” means a drug or substance listed in schedules contained in A.R.S. 36-2512 through 36-2516.
5. “Distribution” means sale or exchange for personal profit.
6. “Fabrication” means intentional and unauthorized falsification or invention of any information of citation in an academic exercise.
7. “Faculty” means all employees of the Arizona Board of Regents in teaching, research, or service, whose notice of appointment is as lecturer, instructor, assistant professor, associate professor, professor or otherwise designated as faculty on the notice of appointment. Graduate students who serve as assistants, associates or otherwise, are academic appointees as well as graduate students but are not members of the faculty.
8. “Group” means a number of persons who are associated with each other and who have not complied with university requirements for registration as an organization.
9. “Illegal drug” means any drug whose use, possession or distribution is prohibited or restricted by provisions of Title 13 of the Arizona Revised Statutes, and includes, without limitation, narcotic drugs, dangerous drugs, marijuana and peyote.
10. “Organization” means a number of persons who are associated with each other and who have complied with university requirements for registration.
11. “Plagiarism” means intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise.
12. “President” means the president of the university or a designee.
13. “Reckless” means conduct which one should reasonably be expected to know would create a substantial risk of harm to persons or property or which would otherwise be likely to result in interference with university or university-sponsored activities.
14. “Student” means any person registered or enrolled in one or more classes except a faculty member or full-time employee who takes any course as a privilege of employment. Graduate students who serve as assistants, associates or otherwise, and all other students employed part-time are classified as students rather than faculty or other university employee.
15. “University” means the appropriate university involved: The University of Arizona, Arizona State University, Northern Arizona University, and any other university governed by the Arizona Board of Regents.
16. “University campus” means all land, buildings, facilities and other property owned, used or controlled by the university.
17. “University community” means university students, administrative and staff personnel, members of the faculty and all other university employees.
18. “University property” means all real and personal property owned by the Arizona Board of Regents and used by the university and includes all such property in the possession of or subject to the control of the university.
19. “University-sponsored activity” means any activity on or off campus which is initiated, aided, authorized or supervised by the university.
20. “Weapon” means any object or substance designed to inflict a wound, cause injury, or incapacitate, including, without limitation, all firearms, pellet guns, switch-blade knives, knives with blades five or more inches in length, and chemicals such as "mace" or tear-gas, but excluding normally available over-the-counter self-defense chemical repellents.

D. GRADUATE PROGRAM COMMITTEE - STRUCTURE AND FUNCTION

The Graduate Program Committee has several important roles with regard to overseeing the graduate program. These include advising new students, monitoring student progress, and recommending awardees for fellowships. The committee consists of several faculty members, up to four graduate students who have passed their Oral Comprehensive Examination, and two staff members. One of the goals of the committee is to help each student tailor an academic program that fits their needs prior to selection of a Dissertation Advisor and Dissertation Committee who will guide the research component of your training. The Graduate Program Committee also tracks students during their entire time in the program and meets regularly to discuss student progress. One of the faculty, staff, or student representatives on the Graduate Program Committee can be contacted at any time to discuss any problem that cannot be solved by the dissertation advisor or for advice on how to meet departmental or Graduate College requirements.

The following people are serving on the Graduate Program Committee in 2009-2010:

GPC MEMBER	ROOM	PHONE	E-MAIL
Dr. Neel Ghosh, Chair	CSB 410	621-6331	ghosh@u.arizona.edu
Dr. Craig Aspinwall	OC 322	621-6338	Aspinwal@email.arizona.edu
Dr. Vahe Bandarian	BSW 537	626-0389	vahe@email.arizona.edu
Dr. Brooke Beam	KECK	626-2591	bbeam@email.arizona.edu
Dr. Megan McEvoy	BSW 531	621-3489	mcevoy@email.arizona.edu
Dr. Katrina Miranda	CSML 518	626-3655	kmiranda@email.arizona.edu
Dr. Anne Padias	KOFF 201	621-9978	anne@u.arizona.edu
Dr. Andrei Sanov	CSML 220	626-8399	Sanov@u.arizona.edu
Ms. Lori Boyd	CHEM 223	621-4348	lboyd@email.arizona.edu
Ms. Laura Farrell-Wortman	CHEM 202	626-5154	farrell@email.arizona.edu
Ms. Olivia Mendoza	BSW 360	621-3868	omendoza@email.arizona.edu

GRADUATE ADVISOR'S OFFICE

The Graduate Program Coordinator is responsible for keeping all records relating to your academic progress. All the various forms may be obtained from the Graduate College (Administration Building 3rd floor) or the Graduate Program Coordinator. The Biochemistry office is located in Bio Sciences West 360.

E. FINANCIAL ASSISTANCE WHILE PURSUING THE PH.D. OR M.S. DEGREES

Most full-time students in good standing in the Ph.D. program in the Department of Chemistry and Biochemistry are provided with some form of financial assistance. Generally, financial assistance during the first year is provided in the form of a teaching assistantship for the academic year (August 15 to June 15) and a research assistantship for the summer (June 15 to August 15). The summer research assistantship is generally paid by the student's Research Director. Otherwise, the student may be employed as a teaching assistant in the summer school program. Both In-state and Out-of-state tuition are waived for all teaching and research assistants. A limited number of University Fellowships are available and are awarded competitively. Students should meet regularly with their Dissertation Advisor and/or teaching supervisor to insure that their performance is satisfactory. Unsatisfactory performance can result in loss of financial assistance and removal from the program. Adequate performance in our graduate program is a full-time commitment and students are expected to work on teaching, coursework and research for a minimum of 40 hours per week. ***Realistically, the student's commitment should be greater than that, on average, if the degree program is to be completed in 5 years or less.***

Registration for at least 6 units of graduate level credit (audit credits do not count) is required for having an assistantship.

1. TEACHING ASSISTANTSHIPS (TA)

While it is true that the teaching assistantship is a mechanism for supporting students during their graduate training, it can and should be an integral part of the training itself. As a TA each graduate student will have the opportunity to further consolidate their understanding of basic chemical principles, develop a formal, professional style of speaking and presentation of technical materials, and learn how to interact with a variety of personalities on a professional level.

Responsibilities and duties of a teaching assistant:

TAs are employees of the State of Arizona and representatives of the University of Arizona and Department of Chemistry and Biochemistry, and are subject to all Arizona Board of Regents policies regarding personnel. Student's actions as a TA reflect on all of us. It is expected that all TAs will demonstrate the utmost in professional behavior.

All TAs are required to work 20 hours per week for a half-time position regardless of the assignment. Because of the nature of teaching, the workload will vary from week to week so that the 20 hours is an average over the term. Specific job descriptions exist for every TA assignment and are available from the Teaching Support Office on request. Further information regarding the duties and responsibilities of TAs is provided in the department's "TA Training Manual".

Students awarded a teaching assistantship must attend the Graduate College Training Orientation, the Department of Chemistry and Biochemistry Orientation and Training, and the Red Cross Multimedia Standard First Aid Course. They also have to successfully complete specific units on TATO, TA training on-line. Students must provide written evidence of satisfactory completion of all these three requirements. This is required once and is typically accomplished during the weeks prior to the first semester of graduate school.

In addition to the above requirements, international students must have a minimum score of 550 paper based, 213 computer based or 79 iBT (web-based) on the Test of English as a Foreign Language (TOEFL) and must take a spoken English test as prescribed by the Graduate College. Students who fail this test must enroll in GRAD 697D or CESL classes and are allowed to teach in the classroom/laboratory setting only with a mentor present.

At the end of the first semester foreign students must qualify to teach to remain eligible for support. Appeals may be made.

2. RESEARCH ASSISTANTSHIPS (RA)

Students who have been offered financial assistance are eligible to be paid as graduate research assistants by their dissertation advisor.

Continuation in these research assistantships is based upon availability of research funds and adequate performance of the students in making progress toward completion of their degree program.

F. DEPARTMENTAL AND GRADUATE COLLEGE POLICIES

1. Registration Policy

a) All students who are accepted into the graduate program in the Department of Chemistry and Biochemistry are expected to have completed one year of **PHYSICAL CHEMISTRY** during their undergraduate studies. Students who lack the physical chemistry requirement are occasionally admitted into the program with the understanding that they will remedy the deficiency during their first year of studies at the University of Arizona by taking CHEM 480A and 481.

b) By Graduate College rules, all requirements for the degree of Doctor of Philosophy must be completed within **5 YEARS** of passing the Comprehensive Exam, whether the student is supported financially or not. Should a student not finish within that time period, he/she may be allowed to re-take the Comprehensive Exam (written and oral) with the permission of the program, then proceed to complete other requirements. This in no way implies that the Department of Chemistry and Biochemistry is bound to financially support the student for more than five years from the start of their program.

c) Full-time Biochemistry students must register each fall and spring semester for a minimum of 12 graduate units from original matriculation until the completion of all course requirements, written and oral comprehensive exams, and 18 dissertation units.

d) Students past their second semester in residence may drop courses with the approval of their dissertation advisor.

e) The total number of units must remain at 12. First semester students must obtain the permission of the Graduate Program Committee before dropping courses, and in general that is not permitted, except for students leaving the program.

2. Academic Probation Policy & Standards of Coursework

For the purposes of this section, *coursework* is defined as graded courses of 3 units or more (including undergraduate courses, but only if used to satisfy prerequisite or Minor requirements) and *core* courses are any graduate level courses that could potentially be used to satisfy the core course or core elective of the particular graduate program in which the student is enrolled.

All BIOC degree-seeking students are required to maintain a minimum of a B (3.0) average in all coursework. Students who fail to maintain an average of B or higher in a given semester will be placed on academic probation.

a) Graduate students who have not previously been on academic probation, but whose cumulative GPA by Graduate College and/or Departmental rules falls below 3.00, and are therefore placed on academic probation, may be eligible for Departmental support as a Teaching or Research Assistant during the subsequent semester, depending upon the support available and the student's overall record.

b) Probationary status **must** be removed in the semester immediately following its incurrence.

c) A student may be on probationary status for no more than one semester during their entire graduate program. A second instance of probationary status will result in loss of eligibility for continued Departmental financial support and will be counseled to withdraw from the program.

*Graduate College rules require a GPA of 3.00 or better in ALL graduate courses; The Department of Chemistry and Biochemistry rules require a minimum GPA of 3.00 in all graduate courses approved by the GPC as counting toward the Ph.D. degree.

Students whose GPA falls below 3.0 as calculated by the Graduate College OR the Department of Chemistry and Biochemistry may be placed on academic probation or be dismissed from the program depending on the severity of the GPA deficit. Students on academic probation have one semester in which to bring their GPA up to 3.0. No student will be allowed more than one semester on academic probation.

3. Grade Replacement Option

Graduate students are not eligible for grade replacement.

4. Teaching Probation Policy

a) It is expected that graduate students who are employed as TA's by the Department of Chemistry and Biochemistry will make every effort to perform their duties to the satisfaction of the Department and the University of Arizona. TA performance will be reviewed each term by the TA and Lab Course Evaluation Committee*, which will make its recommendations known to the Department Chair and others the Department Chair shall designate.

b) In the event that the performance of a TA is deemed unsatisfactory in any term, the TA may be placed on teaching probation by the Department Chair to alert the TA that improvement in performance of teaching duties is expected. The TA will be informed in writing of the TA's specific teaching deficiencies. Such improvement will be measured in the next term in which the student is employed as a TA. In the event that the deficiencies are remedied, the probationary status of the TA will end. In the event that deficiencies are not remedied, the TA will become ineligible for support as a TA in the Department of Chemistry and Biochemistry at The University of Arizona.

c) A TA may be placed on teaching probation only once. In the event that the performance of a TA is deemed unsatisfactory in any two terms, the TA will, at the discretion of the Department Chair, become ineligible for support as a TA in the Department of Chemistry and Biochemistry at The University of Arizona and may be counseled out of the program.

* The TA and Lab Course Evaluation Committee will consist of such faculty, staff, and student members designated by the Department. Current procedures are available from committee members and the TSO (Koffler/CBS 201).

5. Continuous Enrollment

Master's Continuous Enrollment Policy

A student admitted to a Master's degree program must register each fall and spring semester for a minimum of 3 graduate units, from original matriculation until all degree requirements are met. If the degree program requirements are to be completed in the

summer, the student must register for a minimum of 1 unit of graduate credit during that term.

Doctoral Continuous Enrollment Policy
A student admitted to a graduate degree program must register each fall and spring semester for a minimum of 3 graduate units from original matriculation until the completion of all course requirements, written and oral comprehensive exams, and 18 dissertation units. When these requirements are met, doctoral students not on financial assistance and/or needing to maintain appropriate visa status, must register for a minimum of 1 unit each semester until final copies of the dissertation are submitted to the Graduate Degree Certification Office. Students receiving teaching or research assistantships/associateships must register for at least 6 units. If degree requirements are completed during the summer term, the student must be registered for the minimum of 1 unit of graduate credit during the term. If degree requirements are completed during an intersession, the student must have been registered during the preceding semester.

6. Leave of Absence

Academic Leaves
Academic LOAs (i.e. leaves to take course work at another university, for research, field work, internships, professional development, etc.) are handled on a case-by-case basis by the student's Department and the Graduate College

Medical Leaves
With appropriate documentation from their medical provider, graduate students in degree programs may be granted a Medical Leave of Absence by the Dean of the Graduate College.

Personal Leaves
Graduate students in degree programs may be granted a Leave of Absence for a maximum of one year throughout the course of their degree program by the Dean of the Graduate College. LOAs are granted on a case-by-case basis for compelling reasons, including birth or adoption of a child, personal or family reasons, military duty or financial hardship.

LOAs may be granted retroactively for up to one year. Students will be readmitted without reapplying to the department and the Graduate College. Only when the LOA is approved prior to the beginning of the semester for which the LOA is being sought will students be exempt from fees for that semester.

G. COURSEWORK FOR THE Ph.D. DEGREE IN BIOCHEMISTRY

1. Total Credits

a) A minimum of 63 units of graduate credit are required for a Ph.D. in Biochemistry.
b) A total of 45 graded and ungraded units and 18 dissertation units comprise the 63 overall credits.
c) At least one half the units used on the Doctoral Plan of Study must be courses for which a letter grade (A,B,C,D,E) is awarded. Grade of B or better must be earned in each graded course that is to be counted towards the Major and Minor requirements for graded courses.
d) If a 'C' is received in a major or minor course, the student must: 1) repeat the course, or 2) take a different course at the discretion of the division in question and receive a at least a 'B' in that replacement course. The GPC must be advised of, and approve of, this change. Note that this does not automatically remediate the GPA, which must be raised to a minimum of 3.0.
e) The ungraded course work is mostly comprised of seminar, group meetings, college teaching, research opportunities, or intermediate level courses.

NOTE: See section F2 for rules regarding academic probation.

2. Transfer Credits

It is a Departmental policy that no more than 12 units of graduate credit may be transferred from another institution. All transfer credit must be approved by the Graduate Program Committee, and then finally the Graduate College. The Graduate College determines if the courses are eligible for transfer. A Transfer Credit Form should be submitted to the Graduate College before the end of the first year of study for courses to be reviewed.

3. College Teaching

One unit of College Teaching (Chemistry 595c) with a grade of S or P, is required of graduate students the first semester they hold a teaching assistantship.

4. Research Opportunities

During the first year of the graduate program, students will undertake 3-4 laboratory rotations. The laboratory rotations are designed to familiarize students with the work that is carried out in each laboratory. A matching process will take place at the end of the third rotation. If a successful match is made at this time, the student may spend a fourth rotation period working in the lab of their newly chosen dissertation advisor, or alternatively may arrange an "internship" in a different lab, if the PI of that lab is agreeable. If no match is made, the fourth rotation period will be a "real" rotation in which the student is seeking a potential dissertation advisor.

During a student's rotation in a lab, s/he is encouraged to discuss prospects for future work in the dissertation advisor's lab regarding projects, funding and space availability. However, to give all students an equal opportunity to join the lab of their choice, no commitments should be made by either student or faculty before the end of the third rotation (the middle of the second semester), except under special prior arrangements of direct first-year sponsorship of students by an affiliated professor. Near the end of the third rotation, all students will indicate up to three choices (in order of preference) for dissertation advisor by submitting the Dissertation Advisor Selection form. Matches

between a student and a lab will then be made by the relevant department chairs together, in consultation with the faculty and student. During this process, the potential advisors will be consulted by the department chairs for their preferences and approval, to insure that the match is mutually satisfactory. Potential advisors will not be compelled to agree to take on students whom they see as a poor match. Efforts will be made to match students with their first choices, but this will not always be possible. Since the final decisions are made for all students simultaneously, each student has equal opportunity to join the lab of their choice regardless of when they rotate through each laboratory. This policy will also ensure that the students will be assigned in labs by the end of the second semester.

In choosing rotation labs, students should keep three important factors in mind. First, be adventurous – students should think broadly about where their passion lies in science. Second, students should find a group and advisor well-matched to their personality. Third, check with the faculty member on the funding status and projects for a new student in the group.

Rotation Schedule and Rotation Symposia

In the first year, students will undertake 3-4 rotations in the laboratories of participating faculty and will give a brief presentation at the conclusion of each of the rotation periods listed below.

Rotation #	Rotation Period
1	August 23 – October 15, 2010
2	October 18 – December 8, 2010
3	January 12 – March 4, 2011
4	March 9– May 4, 2011

5. Biochemistry Required Coursework in the Major and Minor areas

a) The course requirements should be completed by the end of the second year in the Program. Section H also lists course requirements for students in the Biochemistry track of the BMCB program, or the BCP program.

b) A minor in an area outside of the department must be approved in advance by the Graduate Program Committee and must satisfy all the coursework, written and oral preliminary exam requirements of the minor department.

c) A ‘B’ or better is required in all graded courses to be counted towards the requirements of the major or minor. An average of 3.0 (B) is required for overall good standing within the program. If a ‘C’ is received in a major or minor course, the student must: 1) repeat the course, or 2) take a different course at the discretion of the division, and the GPC, and receive a at least a ‘B’ in that replacement course

6. Elective courses

Students are encouraged to broaden their knowledge through participation in courses beyond the minimum requirements. Elective graduate courses are offered on a regular basis to provide students the conceptual background to plan and execute original

graduate research and to provide breadth in related areas. (see the list of course offerings in Section H).

7. Seminar
Regular attendance at seminar is expected of all students each semester. These units may be used to meet graduation requirements.

Students are required to give at least 2 seminars to the department during their residency. The first is to occur during the student's 2nd year. The format will depend on the student's division and research progress. The second seminar is to be given shortly prior to the student's defense of the Dissertation. The department encourages students to give more seminars than the minimum as a way to develop formal presentation skills and share research within the department.

It is the student's responsibility to contact the seminar coordinator for their division to schedule seminars. This should be done over the summer before the 2nd year and approximately 1 semester before their expected graduation.

8. Group Meeting
At least one unit of Exchange of Chemical Information should be taken each semester in residence after joining a research group. These units may be used to meet graduation requirements. The format for this course is set by individual research directors.

9. Dissertation Research
Independent Dissertation Research under the guidance of a Dissertation Advisor and Dissertation Committee forms the heart of a Ph.D. degree in Biochemistry. The Graduate College requires a *minimum of 18 units of Biochem 920.*

H. DEPARTMENTAL PLAN OF STUDY (DPOS)

In conjunction with his/her major advisor, each student is responsible for developing a Plan of Study during their first year in residence, to be filed with the Graduate College no later than the student's third semester in residence. The Plan of Study identifies (1) courses the student intends to transfer from other institutions; (2) courses already completed at The University of Arizona which the student intends to apply toward the graduate degree; and (3) additional course work to be completed in order to fulfill degree requirements. The Plan of Study must have the approval of the student's major professor and department chair (or Director of Graduate Studies) before it is submitted to the Graduate College.

Submit the completed DPOS form to the Graduate Program Coordinator.

BIOCHEMISTRY

The core courses for the program are BIOC 565 and 568. In addition, students select one additional course from the core electives listed below.

BIOC 565	Proteins & Enzymes	3 units	Fall semester
BIOC 568	Nucleic acids	4 units	Fall semester

Plus one of these additional core courses:

BIOC 553	Functional and Evolutionary Genomics	4 units	Fall semester
BIOC 585	Biological Structure	4 units	Spring semester (alternate years)
BIOC 586	Computational Biology	3 units	Spring semester (alternate years)
BIOC587	Practical Macromolecular Crystallography	1 unit	Spring semester (alternate years)

Biological Chemistry Program (BCP)

BIOC 565	Proteins & Enzymes	3 units	Fall semester
BIOC 568	Nucleic Acids	4 units	Fall semester
Plus one from the following:			
CHEM 541	Mechanisms of Organic Reactions	3 units	Fall semester
CHEM 510	Advanced Inorganic Chemistry	3 units	Fall semester
CHEM 521B	Advanced Analytical Chemistry	3 units	Fall semester
CHEM 550	Synthetic and Mechanistic Organic Chemistry	3 units	Fall semester
CHEM 580	Introduction to Quantum Chemistry	3 units	Fall semester
PHSC 530	Proteins and Nucleic Acids as Drug Targets	3 units	Spring semester (alternate years)
PHSC 670	Principles in Drug Discovery, Design, and Development	3 units	Fall semester

Biochemistry track of Biochemistry and Molecular and Cellular Biology Program (BMCB)

BIOC 565	Proteins & Enzymes	3 units	Fall semester
BIOC 568	Nucleic Acids	4 units	Fall semester
And one of the following:			
BIOC 553	Functional and Evolutionary Genomics	4 units	Fall semester
BIOC 585	Biological Structure	4 units	Spring semester (alternate years)
BIOC 586	Computational Biology	3 units	Spring semester (alternate years)

BIOC587	Practical Macromolecular Crystallography	1 unit	Spring semester (alternate years)

MCB track of Biochemistry and Molecular and Cellular Biology Program (BMCB)

BIOC 565	Proteins & Enzymes	3 units	Fall semester
BIOC 568	Nucleic Acids	4 units	Fall semester
And one from:			
BIOC 553	Functional and Evolutionary Genomics	4 units	Fall semester
BIOC 572	Cell Regulation	3 units	Fall semester
BIOC 585	Biological Structure	4 units	Spring semester (alternate years)
BIOC 586	Computational Biology	3 units	Spring semester (alternate years)
BIOC 587	Practical Macromolecular Crystallography	1 unit	Spring semester (alternate years)

Please note that students are required to attain a grade of B (3.0) or better in each of the above courses; failure to do so could result in dismissal from the program.

Additional Course Requirements:
In addition to the core courses listed above, students are also required to register for two sections of the Laboratory Rotation course in both semesters of their first year:

BIOC 795A	Laboratory Rotation	Variable units (1-6)	Fall and Spring semesters

Students will be graded on their individual rotations. Consult with the graduate coordinator before registration.

During the course of their graduate studies, students must register for one semester of BIOC 595C, which will introduce them to the current state of biochemical research and permit them to interact with departmental seminar speakers.

BIOC 595c	Current Topics in Biochemistry and MCB Research	1 unit	Fall and Spring semesters

An ethics course is required and is usually taken in years one or two.

MCB 695e	Science, Society and Ethics	1 unit	Spring semester

In addition, students must register for BIOC 696a (laboratory meeting) and BIOC 900 *each* semester after their first year. Once the student has advanced to candidacy for the Ph.D. by passing the written preliminary and oral comprehensive examinations, the student should enroll in BIOC 920 (dissertation) each semester rather than BIOC 900. These courses have variable credits; students must register for as many credits as are required for 12 units/semester.

BIOC 696a	Laboratory Meeting	1-3 unit
BIOC 900	Research	Variable credits
BIOC 920	Dissertation	Variable credits (18 required)
BIOC 930	Supplementary Dissertation	Variable credits

Students in the BCP must also take 2 semesters of BCP Journal Club (graded by attendance).

BIOC 595b	BCP Journal Club	1 unit	Fall and Spring semesters

400-Level Courses
Doctoral students may, with the approval of their major and minor department chairs, apply up to 6 units of 400-level course work taken at The University of Arizona to fulfill degree requirements in the minor area. These units must not have been used to fulfill requirements for an undergraduate degree. These units will not receive graduate credit or be included in the calculation of the student's graduate grade-point average.

Correspondence & Extension Credit
Correspondence courses and courses provided through Extension at other institutions will not be accepted for graduate credit.

Minor Subjects
A student must choose a minor subject. Students may meet the minor requirement by one of the two options listed below.

Option 1 - Minor in Biochemistry
A minor in BIOC consists of three advanced (500 level or above) courses or a minimum of 9 units. The 9 units required for the BIOC minor can be from any department that the graduate advisor (first year students) or Dissertation committee (second year students) approves. (Non-majors who wish to minor in BIOC must take 9 units of classes listed in BIOC.

Option 2 - Minor in a Specialty Area Other than Biochemistry
Students should check with the respective departments to verify minor degree and course prerequisite requirements.

Worksheet to plan schedule:

Courses for which all students should register are listed.

Choose any necessary courses and then use the Program of Study guidelines, of the Biochemistry program, on the previous pages to choose additional courses.

Fall I			**Spring I**		
Course #	Topic	Units	Course #	Topic	Units
BIOC 595c	Current Topics in Bioc And MCB Research	1			
BIOC 568	Nucleic Acids	4			
CHEM 595c	College Teaching	1			
BIOC 595b	Journal Club	1			
BIOC 565	Protein & Enzymes	3			
	Total	12		Total	12
Fall II			**Spring II**		
Course #	Topic	Units	Course #	Topic	Units
Total		12	Total		12

BIOCHEMISTRY GRADUATE COURSE LISTINGS

BIOC 500 -- Computer Concepts and Perl Programming (3 units)
Description: Basic Perl programming with applications to biology and fundamental computer concepts that are necessary to efficiently utilize computers in biological research. Graduate-level requirements include writing two functional specifications.
Grading: Regular grades are awarded for this course: A B C D E.
Identical to: MCB 500; MCB is home department.
May be convened with: BIOC 400.
Usually offered: Fall.

BIOC 501 -- Medical Biochemistry (7 units)
Description: Meets concurrently with BIOC 801.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): formal admission into the Ph.D./M.D. program, consent of instructor.
Usually offered: Spring.

BIOC 508L -- Genes, Biotechnology and the Environment (2 units)
Description: This course is an intensive summer lab course in DNA technology for secondary school science teachers and pre-service teachers. Students use molecular techniques of PCR, DNA sequencing, and computer BLAST searches to learn how genes and molecules are linked to the ecology of many species. The course may include field trips and may involve high school student participants. Graduate-level requirements include writing and presenting to the class a plan for applying course material to a secondary science classroom by using biotechnology and bioinformatics to answer a problem in ecology and/or evolution.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): Some experience with lab techniques/biotechnology required (equivalent to BIOC 597A "DNA Recombinant Techniques").
Typical structure: 3 hours laboratory, 1 hour lecture.
May be repeated: for credit 2 times (maximum 3 enrollments).
Identical to: ECOL 508L; ECOL is home department.
May be convened with: BIOC 408L.
Usually offered: Summer.

BIOC 543 -- Research Animal Methods (3 units)
Description: Regulations, care, diseases and techniques involving common laboratory animals used in research and teaching programs. Graduate-level requirements include an in-depth research paper on one of the lecture topics presented in the course plus research proposal preparation.
Grading: Regular grades are awarded for this course: A B C D E.
Identical to: V SC 543; V SC is home department.
May be convened with: BIOC 443.
Usually offered: Fall.

BIOC 553 -- Functional and Evolutionary Genomics (4 units)
Description: Computational, functional, and evolutionary approaches to genomics, including bioinformatics and laboratory methods relevant to many modern research approaches in biology. Graduate-level requirements include students completing independently designed lab exercises and relate these to the primary literature in a paper. Undergraduate students will only complete defined lab exercises.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): Concurrent registration, ECOL 553L for first year IGERT fellows.
Typical structure: 3 hours laboratory, 3 hours lecture.
Identical to: ECOL 553; ECOL is home department.
May be convened with: BIOC 453.
Usually offered: Fall.

BIOC 553L -- Functional and Evolutionary Genomics - Laboratory (1 unit)
Description: Computational, functional, and evolutionary approaches to genomics, including bioinformatics and laboratory methods. Graduate-level requirements include completion of independently designed lab exercises and relating them to the primary literature in a paper.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): Concurrent registration, ECOL 553R.
Identical to: ECOL 553L; ECOL is home department.
May be convened with: BIOC 453L.
Usually offered: Fall.

BIOC 564 -- Neurophysiology: Sensorimotor Perspective (3 units)
Description: Focuses on mammalian sensorimotor system as a model system to understand principles of neural communication, sensory functions, information processing, and production of behavioral responses. Graduate-level requirements include a research paper.
Grading: Regular grades are awarded for this course: A B C D E.
Identical to: PSIO 564; PSIO is home department.
May be convened with: BIOC 464.
Usually offered: Spring.

BIOC 565 -- Proteins and Enzymes (3 units)
Description: Advanced consideration of enzyme structure and function.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 462A, CHEM 480B.
Identical to: CHEM 565.
Usually offered: Fall.

BIOC 567 -- Computational Biophysics (3 units)
Description: The course is intended to provide a solid theoretical background in methods used in computational biophysics as well as practical skills to perform simulations of biological molecules. The course is open to a wide audience: biochemistry, physics, chemistry and applied mathematics.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 565, CHEM 480B or equivalent, or consent of instructor.
Identical to: BIOC 567, CHEM 567.
Usually offered: Spring.

BIOC 568 -- Nucleic Acids (4 units)
Description: Chemistry, structure, and function of nucleic acids; replication, transcription translation, gene organization, regulation of gene expression and organelle nucleic acids. Both prokaryotic and eucaryotic systems will be considered.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 411 or consent of instructor.
Identical to: MCB 568, GENE 568, INSC 568.
Usually offered: Fall.

BIOC 572 -- Cell Systems (3 units)
Description: Advanced treatment of biological regulation in eukaryotic cells. Topics to be discussed include regulation of cellular metabolism, cytoskeletal dynamics, organelle function, and cell division.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): MCB 462A, MCB 462B, and consult department before enrolling.
Identical to: MCB 572; MCB is home department.
Usually offered: Fall.

BIOC 573 -- Recombinant DNA Methods and Applications (4 units)
Description: Relevant techniques for the isolation, purification, and cloning of genes in E. Coli hosts. Eukaryotic lambda genomic DNA clones will be characterized by restriction mapping,

hybridization analysis, and sequence analysis. Graduate-level requirements include a one hour discussion section of classic and recent papers featuring major advances in molecular biology or their application to current issues or problems.
Grading: Regular grades are awarded for this course: A B C D E.
Special course fee required: $150.
Typical structure: 6 hours laboratory, 2 hours lecture.
Identical to: MCB 573; MCB is home department.
May be convened with: BIOC 473.
Usually offered: Fall, Spring.

BIOC 578 -- Signal Transduction in Molecular Medicine (3 units)
Description: Advanced treatment of the biochemistry and molecular biology of disease, considering both genomic and environmental factors.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 462A, BIOC 462B, or consent of instructor.
Identical to: CBIO 578, MCB 578, PCOL 578, PSIO 578.
Usually offered: Spring.

BIOC 584 -- Nuclear Magnetic Resonance Spectroscopy (3 units)
Description: Basic theory and interpretation of nuclear magnetic resonance (NMR) methods from a multidisciplinary perspective. The course covers experimental NMR methods; nuclear spin interactions; relaxation and dynamics; solid state NMR; liquid state NMR; and magnetic resonance imaging (MRI). Emphasis is placed on a unified description of magnetic resonance phenomena at a level appropriate for chemists, physicists, biochemists, and engineers.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): CHEM 480B or CHEM 481; or PHYS 371 or equivalent or consent of instructor.
May be repeated: for credit 1 time (maximum 2 enrollments).
Identical to: CHEM 584; CHEM is home department.
Usually offered: Fall.

BIOC 585 -- Biological Structure I (4 units)
Description: Introduction to the current understanding and methods used for study of the structure, thermodynamics, and dynamics of proteins, nucleic acids, and membranes.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 462A; BIOC 565, CHEM 480B, or consent of instructor.
Identical to: CHEM 585, MCB 585.
Usually offered: Spring.

BIOC 587 -- Practical Macromolecular Crystallography (1 unit)
Description: Concomitant with BIOC 585. Provides practical experience in protein crystallization and cryocrystallography methods. Students conduct individual X-ray diffraction experiments followed by structure solution and refinement exercises.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 585 or consent of instructor.
Usually offered: Spring.

BIOC 588 -- Principles of Cellular and Molecular Neurobiology (4 units)
Description: Detailed introduction to the biology of nerve cells, emphasizing cellular neurophysiology, synaptic mechanisms, and analysis of neural development.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): Consult program office before enrolling.
Identical to: NRSC 588; NRSC is home department.
Usually offered: Fall.

BIOC 593 -- Internship (1-6 units)
Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading: Alternative grades are awarded for this course: S P F.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring.

BIOC 594 -- Practicum (1-6 units)
Description: The practical application, on an individual basis, of previously studied theory and the collection of data for future theoretical interpretation.
Grading: Alternative grades are awarded for this course: S P F.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

BIOC 595A -- Oncogenes and Signal Transduction (1 unit)
Description: The exchange of scholarly information and/or secondary research, usually in a small group setting. Instruction often includes lectures by several different persons. Research projects may or may not be required of course registrants.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
Prerequisite(s): open to graduate students in biological discipline, exceptionally qualified undergraduates.
Identical to: CBIO 595A; CBIO is home department.
Usually offered: Fall.

BIOC 595B -- Journal Club (1 unit)
Description: The exchange of scholarly information and/or secondary research, usually in a small group setting. Instruction often includes lectures by several different persons. Research projects may or may not be required of course registrants.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
May be repeated: for credit 5 times (maximum 6 enrollments).
Identical to: CHEM 595B, MCB 595B.
Usually offered: Fall, Spring.

BIOC 595C -- Current Topics in Biochemistry and MCB Research (1 unit)
Description: Students do directed reading and discussion of current literature and attend lectures on current research by experts in the field.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
May be repeated: for credit 4 times (maximum 5 enrollments).
Identical to: MCB 595C.
Usually offered: Fall, Spring.

BIOC 595G -- Cancer Biology: Focus on Breast Cancer (1 unit)
Description: This a graduate-level journal club which will focus on the biology of cancer with a specific focus on breast cancer-related peer-reviewed research articles.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
May be repeated: for credit 6 times (maximum 7 enrollments).
Identical to: MCB 595G; MCB is home department.
Usually offered: Fall.

BIOC 596F -- Cognitive Psychology (3 units)
Description: Investigation of research and ideas on a specialized topic within cognitive psychology, including the psychology of language, visual perception and memory, decision, and learning. The discussion and exchange of scholarly information in a small group setting, papers and student presentations. This is a writing emphasis course. Investigation of research and ideas on a specialized topic within cognitive psychology, including the psychology of language, visual perception and cognitive memory, decision, and learning. The discussion and exchange of scholarly information in a small group setting, papers and student presentations.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.

May be repeated: for credit 3 times (maximum 4 enrollments).
Identical to: PSYC 596F; PSYC is home department.
Usually offered: Fall, Spring.

BIOC 597A -- Recombinant DNA Techniques (2 units)
Description: The practical application of theoretical learning within a group setting and involving an exchange of ideas and practical methods, skills, and principles.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): open to high school biology teachers only.
Identical to: MCB 597A.
Usually offered: Summer.

BIOC 599 -- Independent Study (1-5 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.
Grading: Alternative grades are awarded for this course: S P F.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

BIOC 621 -- Molecular Plant-Microbe Interactions (3 units)
Description: Molecular properties that control development of host, parasite, and symbiotic relationships. Contemporary molecular hypotheses are related to genetic and biochemical data available on disease resistance and pathogenesis.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 460.
Identical to: PL P 621; PL P is home department.
Usually offered: Fall.

BIOC 649 -- Survival Skills and Ethics (3 units)
Description: This course is designed for graduate students and postdoctoral fellows. It provides information and experiences that will aid in successful "survival" during the graduate-student years and those following graduation. Topics include effective speaking and writing, grantspersonship, mentoring, teaching, career options, among others. Discussion of ethical issues and resources is integrated across topics.
Grading: Regular grades are awarded for this course: A B C D E.
Identical to: SP H 649; SP H is home department.
Usually offered: Spring.

BIOC 665 -- Analysis and Purification of Proteins (3 units)
Description: [Taught alternate even-numbered years]. Principles and procedures for analyzing, purifying, and characterizing proteins and amino acids from cells or from cDNA expression systems.
Grading: Regular grades are awarded for this course: A B C D E.
Prerequisite(s): BIOC 460, BIOC 462A.
Identical to: N SC 665; N SC is home department.
Usually offered: Spring.

BIOC 691 -- Preceptorship (1-3 units)
Description: Specialized work on an individual basis, consisting of instruction and practice in actual service in a department, program, or discipline. Teaching formats may include seminars, in-depth studies, laboratory work and patient study.
Grading: Alternative grades are awarded for this course: S P F.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring.

BIOC 693 -- Internship (1-6 units)
Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.
Grading: Alternative grades are awarded for this course: S P F.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring.

BIOC 695D -- Human Genetic Disease Colloquium (3 units)
Description: The course will cover a few medical genetic disorders in depth, with different topics each year. Clinical presentation, pathophysiology, genetic mechanisms and biochemical features will be considered. Readings will come mainly from the primary biomedical literature.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
May be repeated: for credit 3 times (maximum 4 enrollments).
Identical to: CBA 695D; CBA is home department.
Usually offered: Fall.

BIOC 696A -- Laboratory Presentations and Discussion (1-3 units)
Description: Laboratory small group presentations and discussion.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
May be repeated: for a total of 9 units of credit.
Identical to: MCB 696A.
Usually offered: Fall, Spring, Summer.

BIOC 696C -- Informatic and Comparative Analysis of Genomes (1-3 units)
Description: This course provides hands-on experience in the manipulation and analysis of genomic data and teaches the steps in the preparation of writing scientific manuscripts.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
Prerequisite(s): ECOL 553.
May be repeated: for credit 3 times (maximum 4 enrollments).
Identical to: ECOL 696C, MCB 696C, PL S 696C.
Usually offered: Spring.

BIOC 699 -- Independent Study (1-3 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.
Grading: Alternative grades are awarded for this course: S P F.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring.

BIOC 795A -- Introduction to Research (1-6 units)
Description: The exchange of scholarly information and/or secondary research, usually in a small group setting. Instruction often includes lectures by several different persons. Research projects may or may not be required of course registrants.
Grading: Regular or alternative grades can be awarded for this course: A B C D E or S P C D E.
Prerequisite(s): Open to MCB, CHEM, PHSC, and BIOC majors only.
May be repeated: for a total of 10 units of credit.
Identical to: CHEM 795A, MCB 795A, PHSC 795A.
Usually offered: Fall, Spring.

BIOC 799 -- Independent Study (1-5 units)
Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.
Grading: Alternative grades are awarded for this course: S P F.

May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

For descriptions of medical student electives, see the College of Medicine Electives Manual.

BIOC 801 -- Medical Biochemistry (7 units)
Description: Comprehensive treatment of general biochemistry with clinical applications, oriented toward human biology. Includes protein and nucleotide chemistry and metabolism, enzymology, lipid and carbohydrate metabolism, metabolic regulation, biochemical nutrition, biochemical endocrinology and related topics. Includes clinical case studies, clinical discussions, tutorials and computer-assisted instruction. Meets concurrently with BIOC 501.
Grading: Medical grades are awarded for this course: S P F K.
Usually offered: Spring.

BIOC 899 -- Independent Study (1-16 units)
Description: The goal of this elective is to allow the student to work with a particular faculty member in pursuit of a particular field of study in biochemistry.
Grading: Medical grades are awarded for this course: S P F K.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring.

BIOC 900 -- Research (1-9 units)
Description: Individual research, not related to thesis or dissertation preparation, by graduate students.
Grading: Alternative grades are awarded for this course: S P C D E K.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

BIOC 909 -- Master's Report (1-8 units)
Description: Individual study or special project or formal report thereof submitted in lieu of thesis for certain master's degrees.
Grading: Alternative grades are awarded for this course: S P E K.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring.

BIOC 910 -- Thesis (1-9 units)
Description: Research for the master's thesis (whether library research, laboratory or field observation or research, artistic creation, or thesis writing). Maximum total credit permitted varies with the major department.
Grading: Alternative grades are awarded for this course: S P E K.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

BIOC 920 -- Dissertation (1-9 units)
Description: Research for the doctoral dissertation (whether library research, laboratory or field observation or research, artistic creation, or dissertation writing).
Grading: Alternative grades are awarded for this course: S P E K.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

BIOC 930 -- Supplementary Registration (1-9 units)

Description: For students who have completed all course requirements for their advanced degree programs. May be used concurrently with other enrollments to bring to total number of units to the required minimum.
Grading: Grade of K is awarded for this course except for the final term.
May be repeated: an unlimited number of times, consult your department for details and possible restrictions.
Usually offered: Fall, Spring, Summer.

I. SATISFACTORY ADACEMIC PROGRESS

The Department of Chemistry and Biochemistry maintains a Graduate Student Progress Committee to oversee the performance of all graduate students who receive a Ph.D. degree in BIOC and to maintain academic standards that have been agreed upon by faculty members in the Department. This committee ensures that students meet the BIOC degree requirements in a timely manner. When a student fails to meet program guidelines for satisfactory progress, the student will receive written notification with a clear statement of what the student must do and a date by which such actions must be completed. The Graduate College will receive a copy of letters of unsatisfactory progress. Students will be given an opportunity to appeal or rebut by following the appeals guidelines stated below. Students who fail to remediate by the deadlines specified may be dismissed from the program. Students have the right to appeal such decisions to the Graduate College.

Academic Standards for Coursework

For the purposes of this section, *coursework* is defined as graded courses of 3 units or more (including undergraduate courses, but only if used to satisfy prerequisite or Minor requirements) and *core* courses are any graduate level courses that could potentially be used to satisfy the core course or core elective of the Biochemistry Program (see Section G).

All BIOC degree-seeking students are required to maintain a minimum of a B average in all coursework. Students who fail to maintain an average of B or higher in a given semester will be put on departmental probation and will be required to raise their GPA to a B (or higher) in the subsequent semester. Failure to improve the GPA during the probationary period will be grounds for dismissal from the program.

Additionally students must earn a grade of B or higher in all of the required core and core elective courses. Any student who receives a grade lower than a B in a core course will be placed on departmental probation. To be removed from probation, the student will be required to retake the course when it is next offered. Upon re-taking the course, failure to receive a grade of B or higher will be grounds for dismissal from the program. Students who receive a grade lower than a B in two core courses will be dismissed from the program.

1. Laboratory rotations and choice of major advisor

Evaluation of rotations

Each student will be evaluated by the PI's of the labs in which they rotate. Students who consistently perform poorly in their rotations will be identified by the committee, which will make recommendations on areas where the student requires improvement. These recommendations will be communicated to the student's faculty mentor who will be responsible for conveying this information to the student. On occasion, the committee may also seek the opinions of other faculty about students whose performance is consistently poor. Such students will be dismissed from the program without prejudice.

Choosing a major advisor (major professor)

All students will be required to be matched with a dissertation advisor prior to being reappointed for year 2. Students who fail to find laboratories mutually agreeable to the student and potential dissertation advisor will be advised to seek graduate studies elsewhere and will be dismissed from the program without prejudice.

First year review
The Graduate Student Progress Committee will evaluate the progress of each of the students at the end the first semester and after the first year of graduate work. The evaluations will consider the students' performance in coursework and rotations. Students whose performance in the first year has been exemplary may be selected by the committee and recommended for departmental recognition. Students who may meet the standards described above but have inappropriate conduct or other concerns that may impede their progress to their doctoral degree may be reviewed at this time.

Second year review
Evaluation of academic performance
The Graduate Student Progress Committee will evaluate the progress of each of the students at the end of their second year of graduate work. The evaluations will consider the students' performance in coursework and ascertain that the preliminary examination has been completed. Students who have passed both portions of the examination will be recommended for reappointment. The committee will evaluate all students' progress at the end of the Fall and Spring semesters, and will provide feedback on course deficiencies as necessary.

Preliminary Examination Evaluation
All students are required to complete the written and oral comprehensive examination by the end of their second year of study. Students who fail to meet this deadline are required to seek, in writing, an extension to comply with the requirement. The committee may grant extensions of up to one semester to allow the student to complete both portions of the preliminary examination. Failure to seek an extension or to complete the exam by the end of June will result in placement on departmental probation. To be removed from probation, the student will be required to complete the exam by the end of the subsequent Fall semester. Failure to do so will be grounds for dismissal from the program.

Review in subsequent years (after year 2)
To remain in good standing (i.e., not placed on probation and eligible for departmental support), each student must submit a 2-3 page annual progress report to their Dissertation Committee members at least 2 weeks prior to their annual Committee Meeting, and (*ii*) schedule and undergo a meeting with their Dissertation Committee prior to the last day of classes of the Spring semester; and (*iii*) the student's progress must be deemed as "adequate" by all members of the Dissertation Committee. In addition, the student's advisor must complete the Annual Performance Review form (see Appendix, or http://www.biochem.arizona.edu/dept/graduatehandbookforms.html) indicating that the student is making acceptable and adequate progress towards his/her degree. In all cases whereby students or their advisors request departmental support beyond year 2, the Graduate Student Progress Committee will evaluate the students' records, possibly request additional information, and make recommendations to the Department Chair. To ensure adequate progress towards obtaining a degree, under no circumstances will graduate students be supported by departmental TA or RA funds beyond their sixth year enrolled in the program, excluding any approved time for personal or medical leave.

Implementation of Dismissal
The department has a mechanism in place for enforcing the withdrawal of students from the graduate program. Students, to whom recommendations of withdrawal have been

made, cannot be appointed as TA or RA by the Department and will not be eligible to receive any form of financial aid. The recommendation to withdraw will be made by the Graduate Student Progress Committee and shall be approved by the Chair of the Department.

Appeals
The decision of the Graduate Student Progress Committee and the Chair to dismiss (or recommend withdrawal of) a student from the program can be appealed. To appeal the student and his/her faculty mentor(s) will be required to submit to the committee, in writing, a description of the mitigating circumstances that led to poor performance, and how the student's problems, deficiencies or inadequacies will be rectified. The decision of the committee and the Department Chair to dismiss or retain the student will be final.

2. Selecting a Dissertation Committee
Students will form a Dissertation Committee by the end of their first year of study. Individual faculty members may decline membership on committees for academic reasons. Candidates must be able to develop a proposal of sufficient academic merit and on a topic to satisfy their committee. Candidates can be suspended if they do not have an approved dissertation chair and committee.

The Dissertation Committee responsibilities include: 1) administering the written preliminary examination; 2) administering the oral comprehensive examination; 3) approving of the final dissertation; and 4) administering the final oral examination. The dissertation committee also will mediate any conflicts that may arise between the student and the dissertation advisor.

Note that the Comprehensive Exam and Final Exam committee are generally identical.

Comprehensive Exam:
- The Oral Comprehensive Exam Committee requires a minimum of four (4) members.
- A minimum of three (3) members must be current UA faculty in tenure/track status. This is sometimes referred to as the core committee.
- The 4th or 5th members on a committee may be UA tenure/track faculty or Special Members, approved by the Graduate College.
- All members should sign the Application for Oral Comprehensive Examination form.

Final Exam:
- The Dissertation Committee that administers the Final Oral Examination (also referred to as the dissertation defense or final exam) requires a minimum of three (3) members (core committee).
- The core committee must be in tenure/track status.
- Any additional members on the committee must be either tenure/track status or Special Members with approvals on file.
- All members should sign the Announcement of Final Oral Examination form.

Special Members
With the student's major and minor departments' approval, any tenured or tenure track person may serve anywhere in the university. The Special Member Form is only for

people outside the university or for UA faculty or staff who are non-tenure-track.

Co-Chair or Chairs:

- To have a Special Member serve as a Chair or Co-Chair on a committee, a memorandum on departmental letterhead or an email from the department chair addressed to Dean Dianne Horgan must accompany the Special Member Approval request. The information about this is listed in a paragraph on the Special Member Approval request form.

- On occasion a Special Member may serve as sole Chair on a committee, but generally Special Members will only be approved to serve in a Co-Chair capacity, and the other Co-Chair must be in current UA tenure/track status.

3. Changing Dissertation Advisor

In unusual circumstances, a student may consider changing Dissertation Advisor. This is a decision that has profound implications and should be undertaken only after thoughtful discussion with faculty members in the department who can guide the student and discuss the pros and cons of the situation.

Graduate school is challenging and worthwhile research projects are not easy. Researchers often encounter rough spots or tedious sets of experiments on the way to the Ph.D. Research directors who push students to perform quality research and write quality manuscripts generally have the best interests of the students in mind. Students who have thoughtfully considered whether a change is necessary should meet with a faculty member who can provide guidance. A member of the student's dissertation committee, the GPC chairperson, or the Department Chair would be appropriate. The initial contact person will undoubtedly suggest others who may be able to provide valuable input. The processes of separating from one advisor, and selecting a new advisor should be sequential, not concerted processes.

a) The Research Director and the GPC should be made aware of the situation at the earliest stage possible. Once it is clear to the student that this change is needed, a short memo should be delivered to the GPC explaining the need for a change in advisor. The GPC will consider the case on its merits, and then, if it is clear that a change is warranted, will act to facilitate the change of Research Directors.
b) Once the GPC has ruled on the need for the student to select a new advisor the student should pick up a Dissertation Advisor Selection form from the Graduate Program Coordinator. Next, the student should meet with and obtain signatures from at least 3 faculty members. During this process, the student will also identify a new dissertation advisor. The completed form, listing the new Director should be provided to the Graduate Program Coordinator. Finally, a letter must be submitted to the Graduate Program Committee explaining the reasons for the selection of the new advisor.
c) Once the new advisor has been selected, and a new Committee of Studies constituted, it is an extremely good idea for the student to meet with this committee, to map out exactly what the new research effort will involve, and the expected time to completion of the degree.

4. Keeping the Dissertation Committee Updated on Progress Toward the Ph.D. Degree

It is important that student's dissertation committee stay updated of progress during the

student's time in the Department, because this committee serves as a secondary source of advising and council, and members of the committee and will be called upon to write letters of recommendation. All Department of Chemistry and Biochemistry Ph.D. students should prepare an annual research summary, due at the end of July. One copy of the summary should be given to each committee member and to the Graduate Program Coordinator.

Although the exact format of the meeting will be at the discretion of the Dissertation Committee chair, each meeting will include time during which 1) the advisor leaves the room and the student is able to discuss concerns in the absence of the advisor, and 2) the student leaves and the advisor can speak to the committee in the absence of the student.

The student should bring a BIOC Annual Progress Report form (see Appendix and on-line at: http://www.biochem.arizona.edu/dept/graduatehandbookforms.html) to be completed by the appointed chairperson and signed by committee members who attend. The original should be given to Olivia Mendoza and copies should be distributed to the committee.

The following are specific topics that will need to be addressed during the first, second and all subsequent committee meetings:

First Meeting (summer after Year 1)

- General discussion of the proposed research for the dissertation
- Discussion course work taken and planned
- Discussion of possible topics for the written comprehensive exam

Subsequent Meetings

- Students should provide an outline of the research progress to the committee members at least one week before the meeting
- Brief presentation (30 min) of present and future research
- Discussion of any concerns

Final Meeting before the Dissertation Defense (at least 6 months prior to defense)

- Write a dissertation prospectus and give to the committee members at least two weeks before the meeting (see Appendix or at: http://www.biochem.arizona.edu/dept/graduatehandbookforms.html)
- Thoroughly discuss the prospectus and reach to a consensus on what research needs to be completed to satisfy the committee
- The prospectus, and a detailed summary of the meeting, needs to be sent to the Graduate Studies Committee for inclusion in the student's file

J. EVALUATION EXAMINATIONS, WRITTEN AND ORAL COMPREHENSIVE EXAMS, AND ADVANCEMENT TO CANDIDACY

1. Evaluation Examinations - Biochemistry

The Biochemistry Evaluation Examinations are equivalent to the Qualifying (Diagnostic) Examinations required by the Graduate College. All entering students will take the Examinations in the five core study areas: Analytical, Biological, Organic, Inorganic, and Physical Chemistry. The exams will be ACS standardized examinations to allow comparison to national norms. These exams are for self-evaluation and are not for placement purposes.

2. Description of the Comprehensive Examination

Before admission to candidacy for the doctoral degree, the student must pass a written and an oral Doctoral Comprehensive Examination. This examination is intended to test the student's comprehensive knowledge of the major and minor subjects of study, both in breadth across the general field of study and in depth within the area of specialization. The Comprehensive Examination is considered a single examination, although it consists of written and oral parts.

A student will ordinarily pass the written portion before sitting for the oral portion. There is no set time period between the written and oral portions of the exam, but the oral portion should be completed early enough to allow the student to advance to candidacy in a timely fashion. In order for a student to remain in good standing, **the written and oral portions of the comprehensive examination must be completed by the end of the student's second year in the program.**

i) The Written Comprehensive Exam

Information and Guidelines for the Written Comprehensive Exam

The written examination has two components. The first component examines his/her ability to synthesize information from *outside* their research area; the second component is a research proposal that the student prepares outlining the research that s/he plans to carry out. Students are required to pass both components prior before they can schedule an oral comprehensive examination.

Written Comprehensive Exam outside the Area of Research

The first part of the written portion of the examination consists of three questions outside of the area of the student's research topic. The general areas of questioning are determined by consultation of the student with the members of the Dissertation Committee, excluding the Dissertation Advisor. The student is encouraged to suggest areas of interest from which questions might be generated. Each member of the committee generates one question. After consultation with the committee members, the student then selects three of the four questions to answer.

The goal of this part of the written exam is to teach the student to 1) rapidly assimilate a body of information from the primary literature; 2) critically evaluate the data within the body of information, summarize the key concepts, and define unsolved problems; 3) formulate models or hypotheses; 4) devise experimental approaches to test the predictions of the models or hypotheses; and 5) communicate the approaches and results in a concise and informative manner.

Thus, the format of each question should require the student to learn a concept or

principle from a field within the primary literature, and then to use the concept or principle to solve a problem or test a hypothesis. The scope of each question will be limited so that it can be concisely answered in no more than ten double-spaced typed pages. The student is allowed three weeks to answer the questions. The answers to the three questions are submitted to the Dissertation Committee members at the end of the three-week period. Although students are encouraged to use library resources and to discuss the question with colleagues or researchers on campus or elsewhere who study related problems or topics, the synthesis of material and final answers must be the student's own.

The write-up should be presented in the form of a scientific review or research article. The document should include references throughout and be the student's own work (please consult http://www.library.arizona.edu/help/tutorials/plagiarism/index.html for information on how to avoid inadvertent plagiarism). The ideal response would include as many visual aids (figures, schemes, etc.) as are necessary to provide context and clarity. For instance, if structural aspects of a family of proteins are discussed, the student should include appropriate structural figures to illustrate the points made in the text. It is important, however, that any illustrations that are utilized be the students own work. Students are discouraged from copying and pasting illustrations from the literature; however, it is expected that certain figures cannot be reproduced. In such cases, the student should provide clear citation to the original source. Figures, schemes and references do not count toward the 10-page limit of the document.

The faculty members whose questions are chosen by the student serve as the primary reviewers. Before writing the answer to the question, the student is encouraged to discuss with each primary reviewer what is expected in terms of answering the question and to discuss any portions of the question that may not be clear to the student. The other faculty will serve as secondary reviewers. After consultation, the Dissertation Committee will grade each question on a pass or fail basis within one week of receiving the student's written answers. All three questions must be answered satisfactorily to pass this portion of the written examination. If the student fails one or more of the questions, the student will be asked to answer the remaining questions generated by the committee. If the student cannot satisfactorily complete 3 of 4 questions, the student's continued participation in the program must be discussed with the Dissertation Committee.

Written Comprehensive Exam within the Area of Dissertation Research

This portion of the written examination consists of a research proposal on or related to the student's dissertation topic. The proposal must originate with the student and should be an independent synthesis of ideas and experimental design from within the student's field of interest. However, the proposal is not expected to serve as a "contract" for research to be accomplished and may substantially differ from the final dissertation project. The topic and scope of the research proposal, however, must be approved by the Dissertation Committee prior to writing the proposal.

The student is advised to develop a well-focused proposal which is not overly ambitious and that can be completed in a timely manner. The responsibility for the quality of the proposal, which includes originality, practicality, significance, and methodology, rests entirely with the student. The student may seek general advice from members of the Dissertation Committee and the dissertation advisor, but should not expect them to be active participants in the generation and completion of the proposal. The topic for the

original research proposition must be approved by the Dissertation Committee prior to the student's devoting a substantial commitment of time and effort to writing the proposal. Once the research proposal topic has been approved, the appropriate program form needs to be signed and submitted to the Dissertation Committee. The proposal description that the Dissertation Committee reads for approval should be a concise 2 - 3 page draft of the proposal defining the problem being addressed and the experimental approaches proposed. In general this document should contain an abstract, a brief description of the background material, and specific aims of the project. Try to focus the proposal on no more than 3 independent specific aims. Also, avoid highly interdependent specific aims where the feasibility of each is directly related to the success of the other aims in the proposal.

Once the topic of the research proposal has been approved by the Dissertation Committee, the student then proceeds to write the complete document. Be prepared to spend *at least* 2 - 4 weeks writing this draft. As with any other good grant proposal, quality will come from spending a lot of time thinking about the potential flaws in the proposal and then finding solutions. Fellow students and colleagues may be asked to critique the document before it is distributed to the Dissertation Committee. The committee will need two weeks to critique the proposal and to give feedback. Don't be surprised if major revisions are requested. The committee member will not sign off on this part of the comprehensive exam until the document is acceptable. It is expected that the student will be able to complete writing of the proposal *while* carrying out studies and/or teaching duties.

The proposal should have a title that accurately describes the major hypothesis. This should be followed by an abstract (<200 words) that concisely summarizes the problem being addressed and the proposed experimental approaches (specific aims). The body of the proposal should include background information, enumerated specific aims, methods of approach, and an appraisal of the significance of the proposition. An excessive bibliography should be avoided, however it needs to include all pertinent references in which the methods are described and any relevant papers that support the goals of the proposal. Use primary references where possible and avoid excessive reliance on reviews. The written proposal, including figures and tables, but excluding references, should be limited to 20 double-spaced typewritten pages. Font size should be no less than 11 points and a standard font, such as Arial or Times should be utilized throughout. Moreover, the margins of the document should be at least 1/2 inch in all directions. While detailed descriptions of established methods may be left to the oral defense, the proposal must contain enough detail to permit the comprehensive examination committee to follow the methodology that will be used in the dissertation research. In addition, the proposal should discuss potential pitfalls and problems that may be encountered in the course of the proposed research and include alternative approaches to address the stated goals of the research. Carefully proofread the document for grammar and spelling errors prior to submitting it to the committee.

A suggested format for the text of proposal is given below:

I. Title Page
II. Abstract
III. Research Plan (10 pages total)
    A. Hypothesis/Specific Aims (1/2 page)
    B. Background and Significance (2 - 3 pages)
    C. Experimental Design (6 - 8 pages)

IV. References (include full article titles)
V. Appendix including figures, tables, flow diagrams (≤ 10 pages)

The page descriptions format should be taken as a suggestion with the exception of the total length of the Research Plan, which should be at least 10 pages. The proposal is easier to read if the figures and tables are included in the text of the research plan rather than as a separate appendix and students may consider interleaving the figures in the proposal. However, the written proposal (with the figures separate or interleaved) must not exceed 20 pages. A well-written, defensible proposal is the major requirement for passing the written comprehensive exam.

ii) The Oral Comprehensive Examination

The student's Dissertation Committee is responsible for administering the oral examination. Together, the student and the dissertation advisor will decide whether the director will be present at the oral exam. If the director attends he/she must leave prior to the discussion of the student's performance by the Dissertation Committee.

No student will be allowed to officially schedule the oral exam unless the written exam has been passed, although a tentative date can be arranged at any time with the Dissertation Committee.

Components of the Comprehensive Exam

The oral portion of the comprehensive exam generally will consist of two components: 1) a defense of the original research proposition; and 2) examination of general knowledge within the field of Biochemistry.

The defense of the research proposition will test the student's ability to generate original ideas and to defend the adequacy of the proposal for solving the problems addressed. It is expected that the student will demonstrate a reasonable knowledge of the literature and special techniques of the field.

The general questioning portion may account for up to 50% of the oral examination. The general questions will be derived primarily from both the core and elective courses that the student has taken. Additional questions pertaining to the questions from the written portion of the exam may also be asked.

The exam must last a minimum of 1 hour, but cannot exceed 3 hours. It is common for the student to give a 5 - 10 minute overview of the research proposal followed by questions from the committee centered on defense of the research proposal (1 - 1.5 hours).

The best way to study for the exam is to 1) know the proposal thoroughly, including all related topics; 2) review all class notes and lecture material from all the classes taken as a graduate student up to that point, especially the core course material; 3) review the general principles of Biochemistry; and 4) be familiar with the recent literature (particularly in the fields represented by the committee members). It is an excellent idea to have at least one "practice oral exam" with other graduate students and post-doctoral fellows about two weeks before the scheduled exam. This can be very helpful in identifying any weaknesses and giving the student practice thinking on their feet.

Policies Regarding the Oral Comprehensive Examination
Three outcomes are possible for the oral comprehensive examination.

1. If the oral exam is passed with no deficiencies, the student will be advanced to Doctoral Candidacy by the Graduate College.
2. Students who fail to pass the oral examination on the first attempt may be given a chance to retake all, or part, of the exam after 4 months or asked to leave the program. Students who are given a second attempt at passing the oral examination but fail to do so may be given one of the following three options. The student may be: 1) dismissed from the Ph.D. graduate program and Graduate College; or 2) dismissed with a recommendation that a Master's degree be conferred; or 3) dismissed with a recommendation to write a Master's Thesis. If option 2 or 3 is decided upon, the student must file a Change of Degree request with the Graduate College. To obtain a Master's degree the student must have completed 30 units of coursework. However, a minor is not required for the MS degree. Such students will not be allowed re-entry into the same graduate program.
3. Upon successful completion of the written examinations in the major and minor(s), the Oral Comprehensive Examination is conducted before the examining committee of the faculty. This is the occasion when faculty committee members have both the opportunity and obligation to require the student to display a broad knowledge of the chosen field of study and sufficient depth of understanding in areas of specialization. Discussion of proposed dissertation research may be included. The examining committee must attest that the student has demonstrated the professional level of knowledge expected of a junior academic colleague.

Comprehensive Examination Committee
The examining committee must consist of a minimum of four members. The Dissertation Advisor must be tenured, or tenure track. A continuing faculty or an academic professional who has been pre-approved by the Dean of the Graduate College to serve as sole chair of a dissertation committee may also serve as Dissertation Advisor. The other members must be tenured, or tenure track, or special approved member. Special members must be pre-approved by the Dean of the Graduate College.

K. DISSERTATION AND FINAL DEFENSE

The Announcement of Final Oral Examination is due seven (7) business days (1½ weeks) prior to the date of the examination, with the Graduate Degree Certification Office at least 7 working days in advance, and announced publicly in Lo Que Pasa at least one week in advance.

The examination focuses on the dissertation itself but can include general questioning related to the field(s) of study within the scope of the dissertation. The exact time and place of this examination must be scheduled prior to filing the Announcement of Final Oral Examination.

The dissertation advisor presides over the examination. The examination is closed to the public, except for an initial seminar portion during which the student presents the dissertation and entertains questions.

The candidate must be registered during the semester or summer term in which the final oral examination (dissertation defense) takes place.

Dissertation

Completion of a dissertation which meets required standards of scholarship and demonstrates the candidate's ability to conduct original research is required. Instructions relating to the format of the dissertation and required abstracts are included in the Manual for Theses and Dissertations.

Submission of the Dissertation

Upon successful completion of the Final Oral Defense Examination, the candidate submits the dissertation electronically for forwarding to the Library of The University of Arizona and to University Microfilms, Inc. The major department may require a print copy for department files. A processing and microfilming fee also must be paid to the University Bursar. Upon receipt of the finalized dissertation, the Dean of the Graduate College will recommend conferral of the doctoral degree by the Arizona Board of Regents.

Storage & Publication of Dissertation

University Microfilms, Inc., Ann Arbor, Michigan catalogs, microfilms, and stores the dissertation and sends catalog information to the Library of Congress for printing and distribution for depository catalogs and libraries. The abstract of the dissertation is printed in Microfilm Abstracts and distributed to leading libraries in the United States and elsewhere, and to a select list of journals and abstracting services. A copy of the dissertation will be archived in The University of Arizona Library, where it serves as the record of the student's research.

Publication by microfilm does not preclude publication by other means, and successful candidates are urged to submit dissertation material for publication in a scholarly or in professional journals. Suitable acknowledgment must indicate the publication was a dissertation, or portion of a dissertation, submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at The University of Arizona.

BIOC DEPARTMENTAL FORMS

ROTATION SELECTION FORM

DISSERTATION ADVISOR/STUDENT MATCHING FORM

ANNUAL PROGRESS REPORT

APPROVAL OF PRELIMINARY EXAMINATION TOPIC

APPROVAL OF WRITTEN PRELIMINARY EXAMINATION

DISSERTATION PROSPECTUS APPROVAL

http://www.biochem.arizona.edu/dept/graduatehandbookforms.html

ROTATION SELECTION FORM

STUDENT: _____

ROTATION PERIOD (circle one) FALL 1 FALL 2 SPRING 1 SPRING 2

LIST ROTATION CHOICES

Dissertation advisor/student matching form

Please return this form to Olivia Mendoza directly (BSW 362) or by email (omendoza@email.arizona.edu).

Student's name: _____

Please indicate below up to three choices for dissertation advisor, in order of preference. These choices will be examined by the relevant department heads to find the best matches between student and advisor. An attempt will be made to match students with their first choice, but this will not be possible in every case.

Advisor preferences:

1. _____

2. _____

3. _____

BIOC STUDENT ANNUAL PROGRESS REPORT

STUDENT _____ MEETING DATE _____

COMMITTEE MEMBERS IN ATTENDANCE

_____ _____

_____ _____

_____ _____

COMMENTS:

APPROVED

_____ _____

_____ _____

_____ _____

APPROVAL OF PRELIMINARY EXAMINATION TOPIC

STUDENT _____ DATE OF APPROVAL _____

TITLE OF PROPOSED TOPIC _____

APPROVED

_____ _____

_____ _____

_____ _____

APPROVAL OF WRITTEN PRELIMINARY EXAMINATION

STUDENT _____ APPROVAL DATE _____

COMMENTS:

APPROVED

_____ _____

_____ _____

_____ _____

DISSERTATION PROSPECTUS APPROVAL

STUDENT:_____ MEETING DATE: _____

COMMITTEE MEMBERS IN ATTENDANCE:

_____ _____

_____ _____

_____ _____

COMMENTS:

APPROVED _____

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