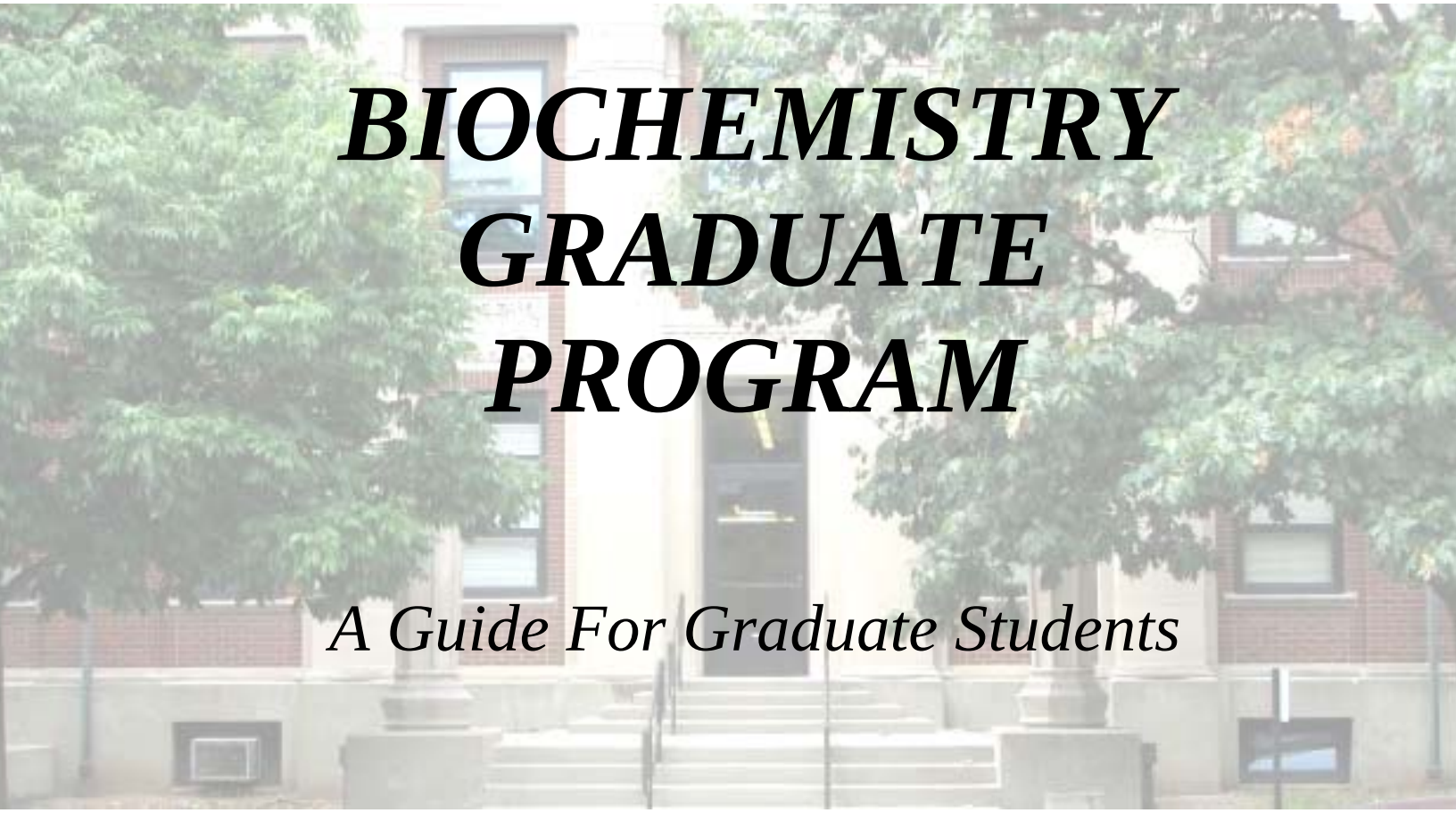

BIOCHEMISTRY GRADUATE PROGRAM

A Guide For Graduate Students

2012-2013

PURDUE
UNIVERSITY

Expectations for excellence in the Biochemistry Graduate Program

Many of our graduate students aspire to continue their research careers by becoming post-doctoral fellows in high profile laboratories or by accepting positions in the biotechnology sector, but are unclear about what they need to accomplish during their graduate training to achieve their goals. To assist these students in gauging their progress towards their degree, we have listed yearly milestones that are expected of a student during his/her Ph. D. program. A student who achieves these milestones would be competitive to join their choice of laboratories or companies as a post-doctoral fellow or employee.

Year 1

- Can handle course material efficiently and effectively
- Balances course work with commitments to laboratory research
- Attends lab meetings as well as departmental and other relevant seminars
- Makes presentations at lab meeting that demonstrate a basic knowledge of research area
- Works professionally with others in the laboratory
- Shows initiative and effort in first year laboratory rotations with regard to both experimental work and intellectual understanding of the project
- Is sufficiently proficient at research that he/she has already generated several completed figures for their own first manuscript, or a manuscript being prepared by someone else in the lab
- Recognizes that his/her position is a professional appointment with professional responsibilities, rather than a continuation of their undergraduate studies
- Understands that stipends and research supplies come directly from grants awarded to faculty members by the federal government, private foundations, or other outside sources, and as a recipient of these funds he/she has an obligation to contribute to the scientific enterprise by publishing their findings
- Understands that his/her reputation in the department will be based in part on their productivity in the lab as shown by the generation of new data and publications

Year 2

- Has completed course work with a GPA greater than 3.5
- Attends lab meetings as well as departmental and other relevant seminars
- Makes contributions to lab meetings
- Has become acquainted with most literature in areas directly related to research topic
- Makes presentations at lab meeting that demonstrate an advancing knowledge of research area
- Presents research findings as a poster during the Biochemistry Department Retreat
- Works professionally with others in the laboratory
- Fulfils lab responsibilities as requested
- Has demonstrated a strong commitment to research and gives his/her scientific endeavors highest priority
- Designs experiments and conducts research in consultation with their advisor
- Has the research for their first manuscript almost complete, most figures assembled, and an outline of the manuscript drafted.

Year 3

- Has successfully completed preliminary examination
- Attends lab meetings as well as departmental and other relevant seminars
- Makes substantial contributions to lab meetings
- Has mastered prior literature in areas directly related to research topic
- Makes presentations at lab meeting that demonstrates a good knowledge of research area
- Presents research findings as a poster or oral presentation during the Biochemistry Department Retreat
- Works professionally with others in the laboratory
- Takes initiative to deal with lab responsibilities and lab issues as they arise
- Can perform research sufficiently well that he/she can manage and benefit from the assistance of trained undergraduates
- Has begun to design and conduct experiments independently
- Has first manuscript in press
- Makes presentation at national meeting

Year 4-5

- Attends lab meetings as well as departmental and other relevant seminars
- Makes major contributions to lab meetings, making helpful suggestions to more junior students
- Keeps up with new literature directly and peripherally related to research topic
- Makes presentations at lab meeting that demonstrate a thorough knowledge of research area, setting an example for more junior students
- Presents research findings orally during the Biochemistry Department Retreat
- Works professionally with others in the laboratory
- Sets an example for and mentors newer graduate students in all aspects of their professional development
- Takes initiative to deal with lab responsibilities and lab issues as they arise, and provides leadership in dealing with the operation of the lab
- Can train undergraduates to complete tasks with which they are not already familiar and can mentor undergraduate students in the theory and practice of specific laboratory experiments
- Designs and conducts all experiments independently and gives advice to newer graduate students on research techniques and experimental design
- Identifies new research opportunities that are based upon current experimental goals
- Has second manuscript in press and the research for their third manuscript almost complete
- Can critically evaluate and review the manuscripts of others
- Has begun to make inquiries concerning post-doctoral or industrial positions

When appropriate

- Fulfills TA responsibilities efficiently and effectively

GENERAL CHRONOLOGICAL CHECKLIST

For those students who begin their program as Graduate Assistants in Research

Orientation Week

- Submit final transcripts for all previous course work and degrees.
- Attend Orientation as scheduled.
- Take orientation examinations.
- Discuss courses with First Year Graduate Chair and adjust pre-registration as needed.
- Obtain radiation safety certification.
- Take English Speak Test (international students).
- Interview faculty in the department to help in lab rotation preferences.

1st Year - Fall

- Attend faculty research talks.
- Participate in lab rotations and present talk after each.
- Attend annual research retreat.
- Attend Tuesday seminar series.
- Attend Friday grad/postdoc seminar series.

1st Year – Spring

- Participate in lab rotations and present talk after each.
- Attend Tuesday seminar series.
- Attend Friday grad/postdoc seminar series.
- Submit major professor preference to the First Year Graduate Chair.
- Receive a permanent laboratory assignment.

1st Year – Summer

- Select a Thesis Advisory Committee.
- File a DRAFT Plan of Study.

2nd Year – Fall

- Hold 1st Thesis Advisory Committee meeting. Conduct initial discussion of thesis project with committee members.
- File a FINAL Plan of Study.
- Meet the teaching requirement (typical, but not mandatory for this semester).

2nd Year - Spring

- Hold 2nd Thesis Advisory Committee meeting. Committee will determine whether the student is eligible to take the Preliminary Examination in the upcoming Fall semester.

3rd Year - Fall

- Take the Preliminary Examination.

Future Years

- Complete all coursework.
- Continue with research, attending seminars and retreats, and holding annual Thesis Advisory Committee meetings.

Final Semester

- Complete the manuscript publication requirement by the time of the Final Examination.
- Review thesis information on Graduate School website, http://www.gradschool.purdue.edu/students/current/index.cfm
- Attend a Thesis Format and Deposit Workshop.
- Request the Final Examination at least two weeks prior to the exam.
- Hold and complete the Final Examination by semester deadline.
- Deliver the *Report of the Final Examination* by semester deadline.
- Prepare the *Deposit Copy* of the thesis. The *Deposit Copy* must incorporate all changes and modifications requested by the final examining committee and must adhere to both departmental and University format requirements.
- Schedule a final deposit appointment with the Thesis/Dissertation Office.
- Submit electronic *Deposit Copy* to the Thesis/Dissertation Office by semester deadline.
- Deliver a bound hard copy to the BCHM Graduate Office and each committee member.
- Deliver a *Thesis Receipt* to the Graduate Student Records office by semester deadline.
- Pay diploma fee and Ph.D. thesis fee to the Bursar.

1. **First Year Graduate Chair**: Oversees students during their first year. Manages the graduate orientation, rotation assignments and presentations, curriculum/registration process, grades, and permanent lab assignments. She/he is available to meet with graduate students about any problems or issues that may arise during their first and subsequent years of graduate study.

2. **Major Professor**: The major professor shall have the supervisory responsibility for a student's research. She/he is available to meet with students about any problems or issues that may arise throughout their graduate career.

3. **Preliminary Exam Graduate Chair/Graduate Career Chair:** This faculty serves dual roles. As Preliminary Exam Graduate Chair, they oversee preliminary examinations, approve preliminary examination proposal topics, assign preliminary exam committees, read and approve all preliminary exam committee reports, and meet with graduate students about any problems or issues that may arise regarding preliminary exams. As the Graduate Career Chair, they read and approve all thesis committee reports and will be available to meet with graduate students about any problems or issues that may arise in their 2nd and subsequent years of graduate study.

4. **Department Head**: Is the head of the Biochemistry graduate program. She/he is available to meet with graduate students about any problems or issues that may arise throughout their graduate career.

5. **Ombudsman and Peer Ombudsman**: The Associate Dean of the Graduate School serves as an Ombudsman to assist graduate students, faculty, and staff. The Ombudsman regularly interacts with people, mostly graduate students, on a range of issues and concerns connected to graduate education. The Peer Ombudsman office is available to serve as a resource for graduate students to receive peer feedback on any issues related to graduate education at Purdue. There are three Peer Ombuds who are trained graduate students. They meet regularly with students to discuss a host of topics including relationship issues with major professors, sources of funding and adequate housing options. The Peer Ombuds are neutral persons that will listen, provide information, offer options, seek explanations, make referrals, and advise regarding rights and responsibilities. If you would like to share, and perhaps, make better a concern that you have about your graduate education, please contact the Peer Ombuds through the Graduate School website (http://www.gradschool.purdue.edu/ombuds).

1. **Official Transcripts**: Official transcripts from all universities previously attended are required by the Graduate School. An official final transcript showing the degree and date conferred is required by the end of the first semester of residence. Students will not be allowed to register for subsequent semesters until this requirement has been met.

2. **Immunization Requirement**: Indiana state law requires all new, regularly enrolled students attending residential campuses of Indiana public universities be immunized against Rubeola (10 day measles), Rubella (German measles), Mumps, Diphtheria, and Tetanus. Evidence of immunizations is required by the end of the first semester of residence. Students will not be allowed to register for subsequent semesters until this requirement has been met.

3. **Orientation Examinations**: During orientation week and prior to the beginning of classes, all entering BCHM students will take standard ACS (American Chemical Society) placement examinations in biochemistry and organic chemistry. If the results indicate a need for background course work, "remedial" classes will be assigned by the First Year Graduate Chair during an individual counseling session.

4. **Registration**: Students and their major professor (or the First Year Graduate Chair) will plan their program each semester. Students are responsible for registering each semester, including summer. (See Appendix 4 for complete instructions.) Plan to register early each semester for the best course selection and to avoid paying a late fee. Students must be registered for at least 3 credit hours research, "exam only" or "degree only." All academic requirements must be completed before the first day of classes to register for "exam only" or "degree only." Research in absentia registration also requires that academic requirements be completed before the first day of classes. (Please see Appendix 5 for further information.)

5. **Oral English Proficiency Test for International Students**: Graduate students are required to teach one semester (one-half time) during their program. All students whose first language is not English must pass a test of spoken English with a score of 50 or greater. Certification to teach will be determined by the results of this examination and/or satisfactory completion of ENGL 620, which may be required as a result of this examination. The test will be taken during Orientation week. Failure to complete the spoken English requirement by the end of the first year of graduate study will result in the student not being permitted to register and progress in the program.

6. **Lab Rotations**: Students will perform three lab rotations with the option of a fourth if it's needed. These rotations will each be for approximately eight weeks. At the end of each rotation, students make a presentation of their work. Students not placed in a permanent lab after the third rotation will have a fourth rotation. Additional details are given during orientation week.

7. **Selection of the Major Professor**: The major professor shall have the supervisory responsibility for a student's research. She/he is available to meet with students about any problems or issues that may arise throughout their graduate career. Each student will be given adequate opportunity to investigate various laboratories and to become acquainted with professors who have positions available. Details of the selection procedure are described below.

   The selection of the major professor will be based upon the student's choice and the availability of openings in the various laboratories. The selection must be a mutually acceptable arrangement between student and professor. Selection and assignments occur after 3 (or optional 4) rotations, in first year. To help in the decision making process, the following information may be helpful:

   1. Faculty web pages briefly describe the laboratory work of each professor.
   2. During orientation week, students are expected to interview at least five professors in the department and are encouraged to interview more.
   3. Students will attend Faculty Research Talks during the fall semester of their first year. Each faculty presents a 30-minute talk about their research.
   4. Lab rotations.

8. **Ph.D. Thesis Advisory Committee**: Until a major professor is selected, the progress of a student is the concern of the First Year Graduate Chair. During the first summer of work in a major professor's laboratory, students will, in consultation with the major professor, select a Thesis Advisory Committee. This committee will consist of the major professor as chairman and three additional professors. The committee must include at least three biochemistry faculty members and a faculty member outside the Department of Biochemistry. The Thesis Advisory Committee will counsel and review the student's progress in both thesis research and course work throughout their graduate study.

   On the rare occasion that a student needs to choose an advisor outside of the Department of Biochemistry, the thesis advisory committee shall consist of the major professor, at least two faculty members from the Department of Biochemistry, plus one additional member.

   M.S. Thesis Advisory Committee: This committee will consist of the major professor as chairman and two additional professors. It is not a requirement to have a member outside the Department of Biochemistry.

9. **Thesis Advisory Committee Meetings**: Meetings are held with the specific purpose of helping students upgrade the quality of research by critical discussion. Students are required to hold a committee meeting once each during the fall and spring semesters of their second year. At the spring meeting, the Thesis Advisory Committee will determine whether the student is eligible to take the Preliminary Examination. It is required that students hold Thesis Advisory Committee meetings at least annually beyond their second year. Students are responsible for arranging each committee meeting and may schedule the meeting any time prior to the deadline. A 2-5 page typed summary is to be prepared and distributed to the Thesis Advisory Committee at least one week prior to each meeting. This summary will contain the following information: statement of the problem and objectives of the research, significance of the problem, changes in objectives, summary of work completed, summary of work attempted but incomplete or unsuccessful, research plan, and anticipated date of completion. An Annual Progress Report will be attached to the written summary as an appendix. This report will resemble curriculum vitae and will document the student's major achievements as she/he progresses toward the Ph.D. degree. Specific guidelines for preparing the Annual Progress Report are located in Appendix 7 of this manual. The Summary Report, the most recent version of the Annual Progress Report, a *Thesis Advisory Committee Report* form (Appendix 8), *Student Progress Feedback* form (Appendix 9)*, and Rating of Student Performance* form (Appendix 10) signed by the committee members will be placed on file along with other material pertaining to progress toward the degree objective. Registration for subsequent semesters will be contingent upon compliance with this rule.

10. **Plan of Study**: A Plan of Study is prepared by the student electronically using myPurdue. The Plan is to be drafted in consultation with the major professor and discussed at the student's first Thesis Advisory Committee meeting (the fall semester of 2nd year). The final Plan of Study must be submitted by the end of that fall semester and approved by the Graduate Career Chair, each committee member and the department head. The Plan will consist of a minimum of 18 credits of advanced coursework above BCHM 561/562 (or equivalent) and will include a set of first year core courses BCHM 601 (Literature), BCHM 695 (Macromolecules), and a statistics course. Students are also required to take two-semesters of BCHM 690 (1 credit each), a seminar course focusing on oral presentation and an ethics course (GRAD 612, see #18) within their first year. Additionally, students must minimally take graduate level elective courses totaling 7 credits at or above the 500 level (with the exception of BCHM 561/562). Of these 7 elective courses, one course of at least 2 credits must be focused on the application of quantitative approaches to science. The choice of the additional electives will be made in consultation with the major professor. Any additional course(s) beyond the requirements and related to the student's field of study should also be included in the Plan of Study. Courses not related to the student's field of study should not be included. All courses listed on the Plan of Study are included in the GPA calculation.

    In general, transfer credits will be considered under the following conditions:
    A. The student has a minimum cumulative graduate index at Purdue of 3.00 or better.
    B. The student has obtained approval from the Thesis Advisory Committee for the requested transfer of credits.
    C. The request from the student includes documentation about the content of the transfer course and the level at which it was taught (undergraduate or graduate). Transfer credits will be accepted only after one semester of satisfactory work in residence at Purdue.

Year 1	Course Title	Semester	Credits
BCHM 601	Critical Analysis of Biochemical Res. Literature I	fall	2
BCHM 695	Macromolecules	fall	3
BCHM 602	Critical Analysis of Biochemical Res. Literature II	spring	2
BCHM 695-003	Regulation of Gene Expression	spring	2
GRAD 612	Responsible Conduct of Research	fall or spring	1

In addition, at least 2 credits in a course that take, or would be useful for, a quantitative approach to the study of biochemistry must be taken such as (but not limited to):

BCHM 630	Analytical Biochemistry	spring	2
BCHM 664/BIOL 600	Bioenergetics	fall	2
BIOL 511	Introduction to X-Ray Crystallography	spring	3
STAT 503	Statistical Methods for Biology	fall/spring/summer	3
STAT 511	Statistical Methods	fall/spring/summer	3
STAT 512	Applied Regression Analysis	fall/spring/summer	3
STAT 598	Statistical Methods for Bioinformatics	fall	3

Students are welcome to take a quantitative course not included in the above list by submitting the course syllabus to their major professor for approval then the post-graduate committee for their approval.

Year 2

BCHM 690	Seminar in Biochemistry	fall	1

Graduate level electives to bring total credits to a minimum of 18 that could include courses such as:

BCHM 663	Membranes Structure, Function, Control	spring	1
BCHM 693	Molecular Mechanisms of Signal Transduction	spring	2
BCHM 695-001	Regulation of Gene Expression in Eukaryotic II	spring	1
BCHM 695-002	Protein Mass Spectrometry & Proteomics	spring (alt. yrs.)	2

11. **Computational Life Sciences (CLS) Program:** Biochemistry is a participating home department in the Computational Life Sciences program. CLS is an interdisciplinary graduate area of specialization offered at the MS and PhD levels. Students participating in this program will perform Ph.D. thesis research in a laboratory in our department while simultaneously developing skills in the computational life sciences. A student's participation in the program is indicated on the transcript as a specialization in "Computational Life Sciences." An approved CLS plan of study will enable participants to become proficient in the use of computational tools and techniques employed in the life sciences, preparing them for the discovery and implementation of algorithms that facilitate the understanding of biological processes. The CLS PhD plan of study includes a minimum of 12 credit hours with 6 of these credits obtained from CLS- relevant courses specified by Biochemistry. Remaining credits come from one of two CLS bridge courses, CLS core courses, and CLS relevant courses specified by CLS graduate committee. Dr. Andy Tao is the Biochemistry representative to the CLS program (http://www.gradschool.purdue.edu/cls).

12. **Degree Requirements**: Biochemistry students must meet all of the degree requirements of the department unless the requirements have been waived. It is advisable to check the requirements during tenure in the Program.

13. **BCHM 698 and 699 Syllabus - Goals and Objectives**
Graduate research in biochemistry consists of an original experimental or theoretical investigation beyond the undergraduate level that is performed by an individual graduate student in consultation with his/her major professor. An essential component of graduate research involves acquiring thorough knowledge of the field of inquiry based on the scientific literature. Students performing graduate research are expected to devote the majority of their time towards obtaining scientific data through experimentation that will form the basis of published manuscripts in scientific journals and the doctoral dissertation. They will be diligent in their data collection using an organized and transparent record keeping system. They will apply their skills in critical thinking to design appropriately controlled experiments, to analyze their results and to

arrive at conclusions that are supported by the evidence and by the existing knowledge in the field. Graduate students, in conjunction with their faculty advisors, will exercise the highest integrity in collecting, analyzing, and reporting their scientific data, and will adhere to strict ethical standards in all aspects of their degree program.

14. **Changes to the Plan of Study**: Changes to the Plan of Study are submitted electronically using myPurdue. Deletion of courses will require the electronic approval of the major professor. Changes must also meet the approval of the Graduate Career Chair before being forwarded to Graduate School.

15. **Changes to the Thesis Advisory Committee**: If a student finds that their research has changed substantially, and upon the advice of the major professor, determines that the composition of the Thesis Advisory Committee must be changed, the student should submit an electronic *Change of Advisory Committee* in the Plan of Study using myPurdue. This also applies should a professor leave the university and be replaced on the committee. If a committee member is absent from campus only at the time of the final examination, there is no need to change the committee member listed on the Plan of Study. Please see #21 for instructions for the assignment of a final examination committee.

16. **Changing the Major Professor**: If a student finds that their research interests change such that they no longer want to remain with the major professor, the student may change to another professor. However, the original major professor may insist that the student complete either an M.S. degree or complete enough work to submit a manuscript for publication before transferring to another laboratory. Signed approval from the original major professor releasing the student and from the proposed new major professor accepting the student must be submitted to the BCHM Graduate Office for approval. After approval of the change is granted, a new Plan of Study must be filed.

17. **Change of Departments**: If a student wishes to transfer from the Department of Biochemistry to another department, he or she should write a letter to the Graduate Career Chair requesting this change. The letter should be signed by the student and by the current major professor. The letter should be accompanied by a completed G.S. Form 17 (Request for Transfer of Department), which will be forwarded (after being signed by the Head of the Department of Biochemistry) to the department to which transfer is requested. The other department may request copies of any application forms, transcripts, GRE scores, etc. it desires for making a decision and for their permanent records. The BCHM Graduate Office will send copies of the student's records to the other department if requested to do so by the student.

    A student who has completed a Master's degree program in another department and has not entered into any other degree program in the University should apply to the Biochemistry Ph.D. program by completing a Graduate School Application (not by submitting the G.S. Form 17).

18. **Grade Requirements**: In addition to the standards set by the Graduate School, the following requirements apply to students enrolled in the Biochemistry Program.

    Students who finish their first year with a coursework GPA below 3.0 in courses which would normally be included on their Plan of Study will be required to hold a meeting of their rotation advisors and their chosen major professor (if one has accepted the student) or the head of the Department of Biochemistry if no major professor has been selected. The meeting must take place before the beginning of the third semester of the student's studies. The professors will determine whether the student has shown sufficient indications of scientific understanding and growth in the laboratory experiences to warrant continued support in the program. If the answer is affirmative, there shall be assessments made by the major professor and the thesis advisory committee within a month of the end of each semester thereafter until the student has surmounted the academic deficiencies. If the answer is negative, the student may pursue a Master's thesis at the discretion of the major professor or may be dropped from the program.

    Only grades of A, B, and C are acceptable on a Plan of Study. Incomplete grades are not acceptable on the Plan of Study. Incomplete grades must be cleared during the semester following the session in which the incomplete grade was received. In the case of a course offered once a year, the incomplete grade must be cleared during the next semester the course is offered. A Thesis Advisory Committee may require higher performance than C in certain courses.

    The Graduate School considers a G.P.A. of below 3.00 as performance below that expected of a graduate student and grade reports will so indicate. Students with unsatisfactory academic records (scholastic

index below 2.70) will be placed on probation. Failure to remove probationary status can become the basis for terminating the training of a student.

Continuation in the graduate program also requires satisfactory effort in performing research. Any student receiving an unsatisfactory grade ("U") will be placed on probation. When a student is assigned a grade of "U", the major professor will provide the student with a written explanation on the Student Progress Feedback Form that describes the specific deficiencies that resulted in the unsatisfactory grade. Research credits for which a student receive a grade of "U" cannot count toward satisfaction of the residency requirement. When a student receives "U" grades in research for two consecutive sessions, the BCHM Program is mandated to take action by informing the Graduate School either that the student will discontinue in the program or that conditions are being set for the continuation of the student's graduate study.

19. **Teaching Requirement**: Each Ph.D. graduate student is expected to fulfill a teaching requirement of one semester as a half-time teaching assistant or two semesters as a quarter-time teaching assistant. The teaching requirement may be fulfilled by serving as a teaching assistant in a course taught in another department on campus but the course topic should be in the natural sciences or applied life sciences. If a student gained equivalent teaching experience at the college level while a graduate student elsewhere, they may petition to have the experience fulfill the requirement. The petition must include a brief description of the course content and the name of the supervising professor. If a recommendation from the professor is not on file in the BCHM Graduate Office (as part of your application file for admission), one must be obtained and submitted with the petition.

20. **Publication Requirement**: (Revised requirement for students entering August 2006.) A Ph.D. candidate is required to show at the time of the final examination that at least one first author (or equivalent, i.e. co-first author) paper from his or her thesis research has been accepted to, or published in, a reputable scientific journal. This requirement is to be viewed as an absolute minimum, and it is much preferred to have manuscript(s) covering all major results of the thesis research published prior to the defense.

ACS Publications has an educational video series, Publishing Your Research 101, found at, http://pubs.acs.org/r/publishing101

21. **Guidelines for authorship (Purdue University)**: A commonly accepted standard states that ***all*** authors of a scholarly publication should satisfy three conditions: (1) first, each author should have made a *significant contribution* to the work described. (A *significant contribution* entails a substantial role in the conceptualization, design, execution, or interpretation of data, and a clear understanding of the goals and outcomes of the work.)

(ii)Second, each author must be prepared to take responsibility for all aspects of the work described in the publication. However, they should be sufficiently familiar with the total project that they are comfortable with the description, methods, and conclusions and that they are willing to accept responsibility for the content of the publication.

(ii)Finally, each author should have read and approved the final draft of the manuscript and explicitly consented to the submission of the manuscript to a publisher. Individuals who have contributed to the project, but whose contributions do not rise to the level justifying authorship, should be recognized in an *Acknowledgements* section of the manuscript.

22. **Responsible Conduct of Research/Ethics Training**: All graduate students in the Biochemistry Program are expected to follow the guidelines set forth by the Graduate School regarding Responsible Conduct of Research (www.gradschool.purdue.edu/rcr). All students are required to take GRAD 612, which provides an overview of values, professional standards, and regulations that define responsible conduct in research. Typically this course is taken the Spring semester of a student's first year. University policy on Research Misconduct can be found at www.purdue.edu/policies/pages/teach_res_outreach/viii_3_1.html.

23. **Plagiarism**: Purdue University is committed to the highest standards of ethical behavior with respect to writing and reporting. Plagiarism is considered to be a form of academic dishonesty at Purdue and is not permitted as stated in the Student Code of Conduct. Moreover, plagiarism is not tolerated in the scientific community and attempts to publish plagiarized material can have severe consequences. Through a contract with the company iThenticate, the Graduate School and Office of the Vice President for Research now offer Purdue students electronic document screening as a safeguard to check work for plagiarism. See Appendix 11 & 12 for complete information about iThenticate and plagiarism tips.

24. **Master's Degree**: No grade lower than a C is allowed for a course on the *Plan of Study*. A student must maintain at least a 2.7 grade point average on those courses included in the *Plan of Study* and deficiencies must be removed prior to graduation. The deadline for completing a Master's degree and the requirement of holding Thesis Advisory Committee meetings for Master's students will be made by each student's Thesis Advisory Committee.

Track 1 (for students entering directly into the BCHM M.S. program): The requirement is a total of 11 hours of course work above BCHM 561/562 (or equivalent) including BCHM core courses BCHM 659, 660, 663, 667 and BCHM 601, and one semester of BCHM 690, one semester of an ethics course, plus a thesis and the defense of the thesis.

Track 2 (for students who work with a BCHM faculty member, but entered through an interdepartmental program, e.g. BMB, PGP, PULSe): If the student has fulfilled all course requirements for the Ph.D. in an interdepartmental program and the major professor is a BCHM faculty member, then the Department of Biochemistry will accept the completed Plan of Study and require a Master Thesis and successful defense. The thesis advisory committee as established for the Ph.D. is acceptable for the Master Degree.

25. **Preliminary Examination:** Students are required to defend a hypothesis-driven research proposal as the basis for their preliminary examination. This proposal must be original, and designed to advance the current state of knowledge in the chosen field. Preliminary examination proposals cannot be directly based on the student's own research project. Although the proposal may address a topic within a field or area closely related to that of the thesis project, it must focus on a research problem that is clearly differentiated from the student's current or past research project(s). For example, a student investigating for their thesis project the cell cycle-dependent regulation of protein kinase D by the protein activator Q could develop a prelim proposal to evaluate hypotheses regarding the role of protein kinase D in triggering the onset of cytokinesis. In addition to the student's research, the proposal topic and aims cannot overlap with other lab projects.

Students who transfer to the Biochemistry Graduate Program are not permitted to defend a proposal based on a project developed as part of graduate studies conducted in a laboratory prior to their transfer. Similarly, any student who transfers between laboratories within the Biochemistry Graduate Program may not select a project topic developed under a previous advisor. If a transfer student selects a research topic in an area similar to that of a project developed prior to their transfer, they may be required to have their previous advisor verify that their proposal topic and specific aims meet the criteria listed above.

In summary, student proposals must satisfy the following criteria:

(1) No specific aim/objective can be identical to or overlap with objectives of current or past research projects that the student has performed.
(2) No specific aim/objective can be identical to or overlap with any goal(s) of ongoing research projects in the advisors lab including those conducted by the advisor, postdocs, graduate students, undergraduates, or technicians.
(3) The specific aims/objectives must be different from those of research groups actively collaborating with the advisor's laboratory.

The Preliminary Examination is taken in the fall semester of the third year of study, but may be deferred as appropriate if the core courses were not taken during the first year. Prior to taking the examination, the student must have met twice with the Thesis Advisory Committee, once each during the fall and spring semesters of the second year. At the spring meeting, the Thesis Advisory Committee will consider the following criteria to determine whether the student is eligible to take the Preliminary Examination:

(1) Is the student in good academic standing (no major deficiencies in coursework or in understanding of the fundamentals of biochemistry and molecular biology)?
(2) Is there evidence of significant progress in establishing technical proficiency in the laboratory?
(3) Does the student exhibit an adequate mastery of the literature underlying his/her research project?
(4) Can the student clearly articulate the rationale for his/her research plans?
(5) Are the major professor and committee members satisfied with the student's work ethic and commitment to research?
(6) Are there any problems or other deficiencies in performance that would impede the student's ability to complete the research required for a Ph.D.?

In the event of a split vote, the major professor will have the prerogative of deciding whether the student can take the Preliminary Examination. The student is expected to take the Preliminary Examination in the fall semester of the third year if approval is obtained. If approval is not given, it will be mandatory for the student to meet with the Thesis Advisory Committee during the fall semester of the third year. The student

will take the Preliminary Examination during the spring semester of the following calendar year if approval is obtained at this meeting. The student will enter the Master's degree track if approval to take the Examination is not obtained at this meeting. Upon completion of the Master's degree, the student is eligible to pursue research towards the doctoral degree if he/she identifies a major professor to sponsor the research and the Thesis Examination Committee approves his/her entering into a Ph. D. program. Students who have not taken the core courses during the first year must obtain approval to take the Preliminary Examination by the fall semester of the third year and are expected to take the Examination during the spring semester of their third year. Failure to do so will require that the student enter the Master's degree track. Delay of deadlines must be appealed to the Preliminary Exam Graduate Chair.

The Preliminary Exam Graduate Chair must approve the preliminary examination proposal topic and specific aims before a preliminary examination committee can be assigned and an examination date scheduled. Procedures for approval involve several steps carried out in the following order. Students will select a topic or research problem, a title, and develop a tentative set of specific aims. A document containing the specific aims will be required for seeking approval of the thesis topic and must be prepared according to guidelines for preparing the written prelim proposal given in Appendix 13. The specific aims document submitted for the approval process must conform to all formatting guidelines in Appendix 13. The complete document must be no longer than 2.5 pages with 1.5 line spacing, containing a title page (1 page) and the specific aims (up to 1.5 pages).

The student will provide their thesis advisor with the specific aims document so that the thesis advisor can verify that the topic and specific aims/objectives meet the 3 criteria listed above. To certify the specific aims and topic meet all criteria, the advisor will submit a signed Advisor Certification Form (Appendix 14) directly to the Administrative Assistant to the Graduate Program. If the advisor believes the proposal topic or specific aims cannot be certified, the student must select a new topic and/or set of specific aims/objectives. The advisor may explain why the certification was not given, but is not permitted to assist the student in selecting a new topic or modifying the aims so that they are acceptable. It will be the student's responsibility to make the necessary revisions.

Once the advisor certifies the specific aims, the student will submit their specific aims document and Request for Preliminary Examination Form (Appendix 15), to the Administrative Assistant to the Graduate Program. Then, the Preliminary Exam Graduate Chair will review the specific aims and submitted forms (Advisor Certification Form, Request for Preliminary Exam) to verify that advisor certification has been obtained and determine if the proposal is hypothesis-driven, defensible, and suitable for the preliminary examination.

If the proposal is approved, the Preliminary Exam Graduate Chair will assign a preliminary examining committee consisting of four graduate faculty members and set a deadline for holding the preliminary exam. The examining committee may be comprised of members of the student's thesis advisory committee with the exception of the major professor, other Biochemistry faculty members, or appropriate faculty members from other departments at Purdue University.

If the proposal is not approved, the student may meet with the Preliminary Exam Graduate Chair to discuss why the proposal was rejected. The Preliminary Exam Graduate Chair will explain the general reasons for rejection of the proposal but will not provide to the student specific advice on selecting a new topic or developing an acceptable set of new specific aims. The student must submit a second Request for Preliminary Examination Form that will be automatically approved without review by the Preliminary Exam Graduate Chair and result in the assignment of a preliminary examination committee. Thus, students have only one opportunity to receive feedback from the Preliminary Exam Graduate Chair on their proposal.

The specific aims submitted for approval are considered tentative and may be revised prior to submission of the final written proposal. However, a change in topic will require approval by the Preliminary Exam Graduate Chair according to the process outlined above. For guidelines and suggestions on completion of the approval process see Appendix 13.

Before submission to the preliminary examination committee, written proposals must be screened using the iThenticate system to detect potential plagiarism. Students will submit their written proposals to the Administrative Assistant to the Graduate Program, who will conduct the iThenticate screen and send a summary report (PDF format) via email to the chair of the preliminary examination committee and the student. Students will sign the cover page of the written proposal to verify it has been screened (See Appendix 13). The Biochemistry office will also store the iThenticate output file electronically. The iThenticate report must be generated using the final version of the written prelim proposal that will be submitted to the prelim committee. The iThenticate report must be submitted to the prelim exam committee chair no later than two weeks before the examination date, which is the same day the written

proposal is to be distributed to the entire examining committee. Other prelim examining committee members may request a copy of the iThenticate report by contacting the Biochemistry office. After reviewing the iThenticate report, the chair will determine whether the proposal contains substantial evidence of plagiarism and communicate their findings by email to the Administrative Assistant to the Graduate Program, other members of the examining committee, and the student.

1) If the chair finds no evidence of potential plagiarism, no further action will be necessary by the student.

2) If the document contains substantial segments of text that have clearly been inappropriately duplicated from the work of others, the chair may conclude that the proposal contains evidence of potential plagiarism. Upon notification by the chair, the student must arrange a meeting with the chair of the examining committee to discuss the problem(s) found in the iThenticate report at the earliest mutually agreeable date.

    a. If a limited number of sentences or phrases have been improperly copied from other sources, the chair will request that the student modify the problematic text and provide a revised proposal to the committee no later than the date of the exam. The revised proposal must be rescreened by iThenticate as described above.

    b. If large sections of text have been copied and the document will require extensive corrections, the chair has the option to recommend a delay in the oral examination so that the student has sufficient time to revise the proposal. In this case, the student must reschedule the exam no later than six weeks after the original examination date and submit the revised document to the examining committee at least two weeks in advance of the new date. The revised proposal must be rescreened by iThenticate as described above.

3) If the chair finds evidence of flagrant plagiarism in the iThenticate report generated from the screen of a revised proposal, the student will fail the exam forfeiting the opportunity

At least two weeks before the Examination date, the student must file a form (G.S. Form 8) with the Graduate School requesting approval of the Committee. An electronic version of the written Preliminary Examination proposal must be submitted via email to all committee members no later than two weeks in advance of the examination date. If the the written proposal is not submitted by 6 PM on the due date, the student will automatically fail the examination. Students may submit to the Preliminary Exam Graduate Chair a written request for a postponement of the proposal due date or examination date for reasons relating to serious health issues or family emergencies. The student should make this request at the earliest possible date. At least one week prior to the Examination date, the student must meet with the Committee Chairperson. If members of the Examining Committee find that the written prelim proposal contains severe deficiencies, the Chairperson after consultation with other committee members may recommend that the student not proceed with the examination. At the aforementioned meeting, the Chairperson will inform the student of the Committee's recommendation on whether he/she should proceed with the Examination. If there is a recommendation not to proceed owing to severe deficiencies, the student may select one of two options: (1) elect to proceed with the Examination despite the Committee's recommendation, or (2) decide to revise the proposal and take the oral Examination within two months. Failure to reschedule the preliminary exam within two months will obligate the student to enter the Master's degree track. Students who elect to delay the exam can discuss general deficiencies in their proposal during their meeting with the Committee Chairperson.

In the event that one committee member is unable to attend, the preliminary examination can proceed since only three of the four committee members must be present. However, if a committee member is absent, the student has the option to request that the exam be postponed so that the examination can be rescheduled at a time when all four committee members can be present. In the event of a student-requested postponement, the Preliminary Exam Graduate Chair will be notified and the examination must be rescheduled within three weeks.

Three of the four committee members must judge the overall performance in defense of the original proposition to be satisfactory in order for the student to pass the examination. The criteria that the Preliminary Examination Committee will use in assessing student performance are listed in Appendix 16. The student's performance in each of five major categories will be assessed using the Outcomes Rating of the Preliminary Exam form (Appendix 18). The ratings will represent the consensus opinion of the committee, and will be recorded by the committee chair and submitted to the BCHM Graduate Office together with a report that specifies the result of the exam and contains written comments from each of the committee members. A copy of the Committee Report of Oral Preliminary Examination Form (Appendix 17), the Outcomes Rating of Preliminary Exam Form and the Student Feedback Form

(Appendix 19) will be sent to the student and major professor, and a copy of each will be kept in the student file. The student will submit two copies of the written proposal to the Administrative Assistant to the Graduate Program. A copy of the written proposal will be kept in the student file and BCHM main office library.

In the event that a student fails the Preliminary Examination on the first attempt, one reexamination will be scheduled within six months or per the deadline given by the Preliminary Exam Graduate Chair. The Graduate School policy requires a semester (or 4 months) between exams unless the student requests the reexamination sooner. However, the second exam may not be taken in the same semester as the first.

The student will be assigned the same Preliminary Examination Committee for the second exam. However, the student may seek a change in composition of the committee for their second exam by appealing to the Preliminary Exam Graduate Chair. The Preliminary Exam Graduate Chair then has the option to replace some or all of the initial members of the original Preliminary Examination Committee.

The student may change the topic of the second exam. This will require certification of the new topic by the major professor and approval by the Preliminary Exam Graduate Chair using procedures described above. If there is a substantial change in topic for the second exam, the Preliminary Exam Graduate Chair may elect to change the committee membership to better match the expertise of the committee to the topic.

At least two sessions (including summer), but no more than five years, must elapse and be devoted to research between Preliminary Examination and the Thesis Defense.

26. **Final Examination**: Once the Ph.D. thesis has been written, the Ph.D. candidate will present the thesis research in an open seminar of no longer than forty minutes duration. The Final Examination must be held before the last week of classes of the semester. A Ph.D. candidate is required to have met the publication requirement (see #17). Immediately thereafter, the candidate will be examined on the material in the thesis and on related topics by the members of his/her Thesis Advisory Committee. If the thesis is acceptable and if the examination is passed, the candidate will be recommended to the Graduate School for the degree of Doctor of Philosophy. The *Report of the Final Examination* form must be delivered to the Graduate School at least a week before the last day of classes of the semester in which the degree is expected. All thesis are deposited electronically and a bound *Deposit Copy* is no longer required by the Graduate School. The electronic deposit copy, incorporating all changes and modifications requested by the final examining committee, and complying with all University and departmental format requirements, is to be prepared and deposited in the Thesis/Dissertation Office before the last day of classes of the semester. Two additional bound hard copies are to be submitted to the head of the department and the major professor. A *Thesis Receipt* must be delivered to the Graduate School before the last day of classes of the semester.

Notes: A *G.S. Form 8*, requesting approval of the examining committee from the Graduate School, is to be submitted at least two weeks prior to the exam.

A first draft of the thesis should be in the hands of the major professor at least six weeks before the final exam deadline of the session in which conferral of the degree is expected.

A typed copy of the thesis and three duplicate copies must be submitted to the major professor at least three weeks before the end of the session in which the degree is to be conferred. The thesis must bear the written approval of the professor who has directed the research before it is submitted to the final examining committee. Each member of the examining committee must receive a copy of the thesis at least two weeks before the date of the final oral examination. Failure to meet this two-week deadline may result in a member refusing to honor the defense date, which could affect the student's graduation date and financial support.

27. **Ph.D. Completion Policy**: A graduate student must defend their Ph.D. thesis within six years of entering graduate school at Purdue University. The student may request an extension of the time limit through their Thesis Advisory Committee that must be approved by the Head of the Department or his/her designate. The student will meet yearly with the Thesis Advisory Committee. At meetings starting one year after passing preliminary examinations the committee will discuss with the student and major professor the time table for completion of the thesis. The committee's report will include a statement as to when it can be expected that the student will be ready to write a thesis.

28. **Grievances**: Grievances that arise can be transmitted to the Graduate Career Chair by submitting them in writing to the BCHM Graduate Office. Matters, which are deemed to be of a policy nature, will be forwarded to the Department Head with a recommendation from the Graduate Career Chair.

APPENDIX 1

MISCELLANEOUS INFORMATION

1. **Change of Name, Address, and Telephone Number**:

   A. Change of Name:

      1. If a female student marries after she is admitted and registered at Purdue she may wish to change her name on her Purdue records. To do this, the marriage certificate should be presented as evidence to the Registrar's Office in Hovde Hall.
      2. The Biochemistry main office and Biochemistry business office should also be informed of the name change.

   B. Change of Address and Telephone Number:

      1. Permanent – Students should inform the Registrar's Office and the Biochemistry main office of any permanent address change. The Biochemistry main office also request the name, address, and telephone number (if possible) of a parent or other relative, friend, attorney, or bank who will always know the whereabouts of the student and will forward mail in the years after leaving our program. If the fee statements should be sent to another address (i.e., the student's local home address), the address should be supplied to the Registrar's Office.
      2. Local – Students should inform the Registrar's Office, the Biochemistry main office and business office of any change in local address and telephone number.

2. **Resident Status**: An emancipated student shall be classified as a resident if the student is domiciled in the State of Indiana prior to the first day of classes of the academic session for which resident classification is sought. An unemancipated student shall qualify for resident classification if a parent or guardian of the student has been domiciled in the State of Indiana prior to the first day of classes of the academic session for which resident classification is sought. To be considered domiciled in Indiana, a person must reside continuously in the state for a predominant purpose other than attending an institution of higher education for at least twelve months immediately preceding the first day of classes of the term for which resident classification is sought.

   A. Changes from Non-resident to Resident Status: Application for classification as a resident shall be submitted in writing on a form supplied by the Registrar's Office any time after the domiciled requirement, including one year of residence, has been met, but no later than fifteen days after the day on which classes begin for the academic session for which reclassification is sought. The Registrar shall render a decision no later than 30 days after the application is filed.

3. **Automobile Parking Permits**: Permits are necessary for all students owning and operating automobiles on campus. Registration forms may be obtained from Parking Facilities Office located in the Visitor Information Center (VIC) on Northwestern Avenue.

4. **Clerical Assistance**: Graduate students may obtain clerical assistance in the Biochemistry main office for any official university-related business approved by a faculty member.

5. **Seminar Series**: The biochemistry program has a weekly Tuesday seminar series. Presentations are given by Purdue faculty as well as externally invited speakers. All graduate students are strongly urged to attend.

6. **Graduate and Postdoctoral Seminar Series**: The biochemistry program has a weekly Friday seminar series organized by graduate students and postdocs. Graduate students and postdocs will present their research and all are expected to attend.

7. **Insurance (student)**: Graduate research and teaching assistants with appointments of 50% or greater are covered under Purdue's insurance program for graduate student staff.
   a) Each graduate staff member pays an annual premium (currently $394) via payroll deduction and the University covers the remaining cost.
   b) A graduate staff member has the option of insuring his or her spouse and dependents under the same plan. The graduate staff member is responsible for 100% of these premiums.
   c) Eligible graduate staff who have medical coverage through other sources can "opt out" of the coverage.

   Graduate students not covered by the graduate staff policy can obtain student coverage. Information and directions are available from the Office of the Bursar and the Student Hospital. International students are required to obtain health insurance. Information is provided by the Bursar's Office at registration time.
   Worker's compensation covers accidents occurring while on the job in the lab.

8. **Keys**: Keys will be issued for the outside door and necessary laboratories of the building in which the student will be working.

9. **Mail**: Mailboxes are located in BCHM room 110A. Before receiving permanent laboratory assignments, mailboxes will be shared with other incoming graduate students. It is important that the mailbox be checked daily. After assignment to a major professor, mail will be delivered to that lab mailbox.

10. **Email**: All students will have an @purdue.edu address. Instructions for setting up accounts are distributed the summer prior to arrival and in graduate orientation packets.

11. **Vacation and Illness**: Graduate student staff earn vacation time at the rate of 22 days per year. The student may not take any vacation until the end of the first semester of the first year. Graduate students may take sick leave as needed for illness up to 10 working days per year. When taking sick leave or vacation, the student must complete the form *Request for Absence from Campus Duty*, available in the Biochemistry business office. The form should be signed by the major professor and submitted to the business office.

12. **Holidays**:

Independence Day	July 4, 2012
Labor Day	September 3, 2012
Thanksgiving Holiday	November 22-22, 2012
Christmas Holiday	December 24-25, 2012
President's Designated Holiday	December 31, 2012
Observance of New Year's Day	January 1, 2013
Martin Luther King, Jr. Day	January 21, 2013
Memorial Day	May 27, 2013

13. **Class Breaks**: Classes are not in session, but graduate students are in work status.

Fall Break	October 8-9, 2012
Winter Break	December 15, 2012-January 6, 2013
Spring Break	March 11-16, 2013

14. **Paychecks**: Paychecks are distributed by the business office. Payday is the last working day of each month. Your first check will be issued August 31, 2012 or September 15, 2012.

APPENDIX 2

FRINGE BENEFITS AND PRIVILEGES OF
GRADUATE ASSISTANTS AND GRADUATE INSTRUCTORS

Accident Insurance	Worker's compensation
Social Security	No
TIAA No	
Group Medical Insurance	Yes, if funded by a graduate research, teaching or Purdue fellowship appointment of 50% or greater, the graduate staff member is covered under Purdue's insurance program for graduate student staff.
Group Life Insurance	No
Fee Reduction	Tuition is waived. Current graduate fees are $252 per semester 1. Regular summer session fees are $126.. 2. If student holds a fellowship responsible for both tuition and fees in conjunction with employment, full tuition and fees will be assessed to the grant. 3. Student's employment is certified each semester with the Registrar's Office by Kristi Trimble.
Staff Dependent Fee Reduction	Yes, staff spouse/staff child reduction
Purdue Village	Student rate
Parking Privileges	Yes, C permit A/B permit if employed 75% or more
CityBus	Free with ID
Co-Rec Gymnasium	Included in fees
Tenure	No
Sabbatical Leave	No
Leaves of Absence	Appendix 3
Athletic Tickets	At staff rate
Purdue University Hospital	Included in fees

Purdue University
Human Resources - 33ABSENCE
Revised 2/12

Select One: ○ New ○ Revised

REQUEST FOR ABSENCE FROM CAMPUS (Non FMLA)

Employee: Complete Sections 1 and 2, then sign and route the form for approval (Section 3).

Section 1. COMPLETED BY EMPLOYEE (Consult with Business Office or Human Resources if information is not known)

A. Name: _____ **E. PUID/PERNR:** _____

B. Position Title: _____ **F. Pay Area:** ○ AY ○ FY ○ BW

C. Org Unit Name(s): _____ **G. CUL:** _____

D. Org Unit Number(s): _____ **H. Hire Date:** _____

I. Type of Leave: (For leaves not qualifying as FMLA leave) Check all that are being requested.

If more than one leave type is being requested, list priority order of use and number of hours for each type of leave in Section 2.

- ☐ Vacation[1] (V)
- ☐ Personal Holiday (Non-Exempt)[1] (PH)
- ☐ Personal Business Day(s) (Exempt)[1] (PBD)
- ☐ Unpaid Personal Leave (22 days or less. Provide explanation in Section 2) [2] (ABUP)
- ☐ Unpaid Personal Leave (More than 22 days. Provide explanation in Section 2) 3 (ABUP)
  Must complete item J (Source of Funding While on Leave) to properly charge Benefits
- ☐ Illness (When employee is not eligible for FMLA leave)[1] (SE)
- ☐ Illness in Family (For leave not qualifying as FMLA leave)[1] (SF)
- ☐ Jury Duty/Witness Duty (attach copy of summons)[1] (OL)
- ☐ Military (Attach copy of orders)[3] (MIPD [Paid]) (MIUP[Unpaid])
- ☐ Bereavement (Specify the relationship of the deceased in Section 2.)[1] (BV)
- ☐ Paid Parental Leave (When employee is not eligible for FMLA leave) [4] (PPL)
- ☐ Leave Allocation When Both Parents are Eligible Employees:
- ☐ Outside Activity Leave (five consecutive working days or less)[2] (OL)
  Reportable Outside Activity Form submitted on _____ MM/DD/YY

J. Leave Compensation: ☐ With Pay ☐ Without Pay - First Day Without Pay: _____

K. Days Absent:

First Day: _____ MM/DD/YY through Last Day: _____ MM/DD/YY

Number of Work Hours Absent: _____ (Note: **Exempt Staff** record in increments of no less than one-half workday)

L. Source of Salary Funding While on Leave:

(For Paid Parental Leaves, Military Leaves, Sick Leaves of more than 10 workdays, or unpaid personal leave for more than 22 days:)

_____ Fund/Cost Center _____ Percent _____ Fund/Cost Center _____ Percent

M. Graduate Student Summer Internship: (additional information REQUIRED for grad school)

1. **Company/Organization name:** _____
2. **Company Address:** _____
3. **Summer contact information: (including phone number)** _____
4. **Name of Supervisor:** _____

Section 2. Business Office Contact

Name and Phone #

ADDITIONAL COMMENTS (Provide required explanation as noted above)
If more than one leave type or a partial day is requested, indicate number of hours for each type of leave.

Section 3. SIGNATURES (Provide approved copy to Business Office and Employee)

All org units must provide signatures or initials.

Individual Requesting Leave: _____ Signature _____ Date

Department Head / Supervisor: _____ Signature _____ Date

Dean or Administrative Officer or Business Office: _____ Signature _____ Date

Human Resources Director or Designee: _____ Signature _____ Date

APPROVED
PRESIDENT'S OFFICE
Purdue University

_____
Not valid unless dated and signed by Authorized University Officer

BUSINESS OFFICE/HUMAN RESOURCE SERVICES/PAYROLL USE ONLY

PPL Eligibility based on 100% CUL:
240 Hours: _____
120 Hours:

Policies regarding absence from University duty are found at www.purdue.edu/policies/pages/human_resources/human_res.html

[1] Required approval: Supervisor

[2] Required approval: Department Head

[3] Required Approvals: **Clerical/Service** - Department Head and Campus Human Resource Services Director or Designee; **Faculty, Continuing Lecturers and Administrative/Professional** - Department Head; Dean or Director; and employee's Vice President, Chancellor, or designee; Human Resources distributes completed copies to Business Office (provide copy to employee) and HR Data Entry. Central Files retains original in employee's personnel file.

[4] Required Approval: Supervisor and Department Head; Business Office or Human Resource Services. Send approved form to West Lafayette, HRS-Employee Relations, or appropriate regional campus Human Resources. Provide medical documentation, adoption paperwork, or birth paperwork to West Lafayette, HRS-Employee Relations, or appropriate regional campus Human Resources.

LEAVES OF ABSENCE

All leaves of absence greater than 10 consecutive work days, for any reason except vacation or Family and Medical Leave Act of 1993 (FMLA) related leave, require the approval of the dean of the Graduate School. To obtain approval, a *Request for Absence from Campus* (*HRS Form 33ABSENCE*) must be processed. All other leaves require approval by the appropriate vice president or dean or designee on the same form *(HRS Form 33ABSENCE).* Questions regarding leaves of absence should be directed to Human Resource Services, Employee Relations.

Fiscal year graduate staff, employed at least half-time, may qualify for unpaid Leaves of Absence (and retain Graduate Staff Medical Insurance) during the Summer (only) when their graduate program enables them to hold an off-campus internship, participate in Study Abroad, or engage in other academic or professional development activities (not part of their graduate staff employment.) Graduate staff members who receive approval for a leave of absence via a *Request for Absence from Campus (HRS Form 33ABSENCE)* will continue to receive Graduate Staff Medical Insurance coverage, without interruption. Upon the graduate student's return to the graduate staff position, the Summer health insurance premiums will be deducted from the student's pay. If the graduate student does not return, the insurance will be cancelled back to the separation date. For more details, please contact Staff Benefits at 765.494.2222.

A. Vacation and Holidays

1. Academic-Year Staff: Graduate student staff employed on an academic-year basis are in vacation status without pay during the periods of the academic year when classes are not in session. The seven-calendar-day period prior to the first day of classes each semester and the periods between the end of classes and the final date for submitting grade reports are not considered vacation. Official University holidays falling within the vacation periods are treated as vacation except when classes are in session.

2. Fiscal-Year Staff: Members of graduate student staff employed on a fiscal-year basis may be granted a maximum of 22 working days of vacation at the same rate of pay they normally receive (i.e., those employed full time, 22 days at full pay; those employed one-half time, 22 days at one-half pay, etc.). Vacation allowance is accrued from the date of employment but may not be taken before the completion of three months' employment. A maximum of 22 vacation days may be maintained. Vacation must be requested on *HRS Form 33 ABSENCE.*

Graduate student staff employed on a fiscal-year basis terminating their employment with the University may not be paid for any unused vacation allowance nor may their appointments be extended to cover any unused vacation.

Graduate student staff transferring to any other employment classification (i.e., faculty, administrative/professional, etc.) cannot transfer their unused vacation balance to the new position.

Graduate student staff employed on a fiscal-year basis also are eligible for the 10 official University holidays.

The vacation policy for graduate student employees is detailed in *Executive Memorandum C-31*.

B. Leave

1. Sick Leave: Graduate student staff are eligible for two weeks (10 working days) per year of paid sick leave for illness. "Illness" is defined as a staff member's own illness, disabling injury, or pregnancy. This includes childbirth and complications of pregnancy, miscarriage, abortion, and confined recovery therefrom, for the period during which the employee is unable to perform normal duties as determined by a physician.

2 Family and Medical Leave Act of 1993 (FMLA): The "Family and Medical Leave Act of 1993" provides provision for time off for an employee's own serious health condition, to take care of a family member with a serious health condition, to give birth, to adopt, or to place a child in the employee's home for foster care. FMLA states that up to 12 work weeks of leave per year is available. If the leave is taken for an employee's own serious health condition or a family member's serious health condition, and the employee has accrued unused paid sick leave and qualifies for paid sick leave, the employee must use the paid sick leave during the FMLA leave. In order to be eligible for leave under FMLA, graduate student staff must have been employed at Purdue for 12 months, consecutive or non-consecutive, and have worked at least 1,250 hours in the 12 months preceding the date leave commences. Further information on FMLA is available by contacting Human Resource Services, Employee Relations, or by accessing *University Policy IV.10.1* at the following Web site: http://www.purdue.edu/oop/policies/pages/human_resources/iv_10_1.html .

C. Illness in Family

Graduate student staff are eligible for three working days per fiscal year paid leave for immediate family illness. “Immediate family” is defined as spouse, same-sex domestic partner, parents, children, grandparents, grandchildren, sisters, brothers, and corresponding in-laws and step-relatives. Family members not included here, but who reside in the employee’s home, are considered immediate family. Leave related to family illness must be requested on *HRS Form 33 ABSENCE*.

D. Bereavement Leave

Graduate student staff are eligible for one to three working days per occurrence of paid bereavement leave for a death in the immediate family. “Immediate family” is defined above under “Illness in Family.”

E. Jury and Witness Duty

Graduate student staff are eligible for paid leave of absence as a juror or court witness. Jury duty or duty as a court witness is the service and time spent away from a University job as a result of a subpoena issued by a court. Service as a volunteer expert witness or other volunteer court duty is not included in the provisions in this leave of absence.

F. Military Leave

Graduate student staff who are members of the Indiana National Guard, or members of the reserve components or retiree personnel of the naval, air, or ground forces of the United States, and who are under authority to report for 15 days or less, are entitled to a leave of absence for military duty. Such leave is available without loss of benefits, time, or pay not to exceed 15 regular work days in any calendar year. Travel time required for reporting to the place of military duty is included in the 15-day allowance. This policy is further outlined in *University Policy IV.10.2* and in the “Policy Concerning Graduate Assistants or Fellows Called to Active Military Service,” issued to vice presidents, deans, and department heads by Robert L. Ringel, executive vice president for academic affairs, dated October 31, 1990.

G. Paid Parental Leave Policy

Since October 1, 2008, Purdue University has provided Paid Parental Leave to benefits eligible employees, including graduate student employees. To qualify, graduate staff must have been employed by the University for at least one continuous year (12 months), half-time or more, in a benefits-eligible position. Based on full-time employment, birth mothers may receive up to 240 hours; other eligible employees who become parents may receive up to 120 hours of Paid Parental Leave. The University provides Paid Parental Leave during the first 12 months following birth or adoption. If the need for Paid Parental Leave is foreseeable, an Eligible Employee must give his or her supervisor at least 30 calendar days advanced notice of the need for leave, or as soon as is practicable. (This information comes from Human Resources IV.10.3, which may be accessed via http://www.purdue.edu/policies/pages/human_resources/iv_10_3.html). Questions regarding Paid Parental Leave Policy should be directed to Human Resource Services.

APPENDIX 4

REGISTRATION

1. Register through MyPurdue portal located on Purdue homepage www.purdue.edu. Information and instructions about registration will be given each semester by Kristi Trimble.
2. Courses taken on a pass/no pass option cannot be used on a *Plan of Study*.
3. Candidacy - If a student expects a degree at the end of the semester for which he/she is registering, he/she must check the appropriate box on the registration *Form 23*.
4. Visiting a Course - Anyone desiring to "visit" a course on a non-credit basis must obtain a *Visitor Permission Form* from the Office of the Registrar. These courses should not be entered on the course request.
5. Course Loads - Students are expected to make certain that the requested academic load is compatible with any appointment held under regulations and rules of the Graduate School.
   A. If a student holds a half-time graduate assistantship in research or a graduate teaching appointment, they may register for up to 12 credit hours for coursework plus a minimum of 6 hours of research ("698 or 699").

      Example:

BCHM 659	1 credit
BCHM 660	1 credit
BCHM 663	1 credit
BCHM 601	2 credits
BCHM 699	13 credits
TOTAL	18 credits

   B. If a student holds a 1/4-time teaching appointment and a 1/4-time research appointment, they may register for up to 15 credit hours of coursework plus a minimum of 3 hours of research ("698" or "699").

6. If registering for "degree only" or "exam only," the Form 23 will be submitted by the BCHM Graduate Office to the Graduate School for approval and system entry.

   A. Degree Only: A student who has been registered for a minimum of three credit hours in the preceding session and who has finished all degree requirements except depositing the thesis and for whom a positive *Report of the Final Examination* has been received in the Graduate School prior to the first day of the academic session of graduation but has not been awarded the degree may request registration for “Degree Only” at a reduced fee. This registration will remain valid only if a Thesis Receipt is received in the Graduate School by the eighth week of the semester (fourth week of a summer session). Otherwise, the registration for the current session will revert to normal registration.

   B. Exam Only: If all academic requirements have been completed except the Final Examination and depositing the thesis prior to the first day of the academic session of graduation request for registration for “Examination Only” at a reduced fee. This registration will remain valid only if both a positive Report of the Final Examination and a Thesis Receipt have been received in the Graduate School by the eighth week of the semester (fourth week of a summer session). Otherwise, the registration for the current session will revert to normal registration.

APPENDIX 5

RESEARCH IN ABSENTIA

After a Ph.D. candidate has finished all course work, passed the Preliminary Examination, and reached the point where the remaining work on the research problem and thesis may be completed off campus, the department may request permission from the Graduate School to register the student for research in absentia.

Steps in the Process of Approval and Registration for Research in Absentia.

1. The student should complete a G. S. Form 12 (Request for Ph.D. Degree Candidate Research in Absentia), obtain major professor's signature, and submit to the BCHM Graduate Office.

2. After approval of the request by the Graduate School, the Registrar will automatically register the student for each spring and fall semester if fess were paid in the previous semester.

3. The student must be registered for every regular semester (spring and fall, but not summer) until the degree has been granted, until the absentia privilege is rescinded, or until the student withdraws from the university.

4. The Bursar will automatically send the student a bill. Late registration will be subject to the usual additional $200 fee. Non-payment of the absentia fees will terminate the student's registration and cancel the absentia privilege.

5. Summer session registration is not required unless the student expects to receive his/her degree at the end of a summer session. Summer registration is not automatic and must be processed through the home department if the student expects to receive his/her degree at the close of the session.

6. Once a student stops registering in absentia, that student cannot register in absentia for a later session. If a candidate who was previously registered in absentia and is currently registered for 'Examination Only' or 'Degree Only' does not meet the mid-session deadline, the registration will be changed to 3 credit hours of absentia registration. This will maintain the required continuous absentia registration and will make the student eligible to register for Examination Only or Degree Only in a future session. If a student registers during the summer session a registration Form 23 must be submitted.

More details about Research in Absentia can be found in the Policies & Procedures for Administering Graduate Student Programs guidebook located on the Graduate School website:
http://www.gradschool.purdue.edu/downloads/Graduate_School_Policies_and_Procedures_Manual.pdf

APPENDIX 6

THESIS PREPARATION, APPROVAL, AND DISTRIBUTION

All candidates must meet certain requirements in thesis preparation. Thesis format requirements have been separated into two categories: a) departmental format requirements that will be reviewed by the student's department, covering such matters as how figures are prepared and numbered; style of references; placement of notes; headings; chapter headings; etc., and b) University format requirements that will be reviewed by the Thesis/Dissertation Office, covering paper requirements; typeface and quality; spacing; margins, page numbering; title page; and abstract. General guidelines for completing the Final Examination and thesis are:

1. When ready to begin writing, plan to attend the next thesis format/deposit workshop offered. Workshops are scheduled once a semester and may be attended as often as needed.
2. Register as a Candidate the session the degree is expected.
3. Obtain the departmental guidelines.
4. Use the Manual for the Preparation of Graduate Thesis published by the Graduate School: http://www.gradschool.purdue.edu/thesis.cfm
5. Submit a first draft of the thesis to the major professor six weeks prior to the end of the session in which conferral of degree is expected.
6. At least two weeks before the Final Examination date, work with BCHM Graduate Office to submit an approval request for the Final Examination *G.S. Form 8*. Final examinations must be held before the last week of classes. When the *G.S. Form 8* is approved by the Graduate School, an approved copy of the form will be sent to the BCHM Graduate Office. Doctoral candidates will receive these additional materials.

    a) *Report of the Final Examination* (*G.S. Form 11*);
    b) *Research Integrity and Copyright Disclaimer* (G.S. Form 20);
    b) Exit questionnaire;
    c) Copy of an agreement with the University Microfilms, Inc.;
    d) Survey form of Earned Doctorates Awarded in the United States (conducted by the National Research Council).

7. After the Final Examination, deliver the *Report of the Final Examination* to the Graduate School at least a week before the last day of classes of the semester.
8. Prepare a final copy of the thesis. This *Deposit Copy* will incorporate all editorial changes and modifications requested by the members of the Examining Committee and will comply with both University and departmental format requirements. Once a committee member has signed the *Thesis Acceptance*, the document is approved by that individual.
9. All theses are submitted electronically. Contact the Thesis/Dissertation Office located in 170 YONG to make an appointment to deposit the thesis. Appointments need to be made at least 24-hours in advance. Deadlines for deposition are established by the Graduate School for each term and are normally the last day of classes prior to final examination week. Formatting compliance will be checked at that time. No changes may be made to the thesis after it has been deposited. Reference the Manual for the Preparation of Graduate Thesis.http://www.gradschool.purdue.edu/downloads/thesis/graduate-thesis-manual.pdf
10. Submit a *Deposit Receipt,* the exit questionnaire and National Research Council questionnaire to the Graduate School Student Records office (also located in Young Graduate House) before the last day of classes of the semester the degree is expected.
11. Students should provide a bound copy of the thesis to the BCHM Graduate Office, their major professor and each member of their thesis advisory committee. Binding services are available at Boiler Copy Maker or University Printing Services.

Candidate Fees: The degree candidate must pay a thesis microfilm fee at the Office of the Bursar in a timely manner prior to commencement. The candidate will receive no direct billing or reminder from the Bursar relative to the payment of these fees.

APPENDIX 7
Guidelines for Preparation of the Annual Progress Report

To document your progress towards the Ph.D. degree, you will report annually major achievements and milestones that are crucial to the completion of your thesis research and development of a successful scientific career. This Annual Progress Report will be attached as an appendix to the written summary that is presented to your Thesis Advisory Committee at your annual Thesis Advisory Committee Meetings. This will be placed on file along with other material pertaining to your progress toward the degree objective.

The content and organization of this Progress Report is outlined below and an example is attached. The report will be organized by academic years in the program. For the purpose of this document, an academic year extends from September 1 to August 31 of the following year (*e.g. Sept 01, 2007 to Aug 31, 2008*). For each academic year, you will list your major academic, professional and scientific accomplishments as described below.

The first section of the document will list your name, your thesis advisor's name, the date in which you entered the program, and the date when you expect to complete your thesis research. For each academic year, you should list the following information documenting major achievements and milestones:

1. Give **Courses** completed with grades earned.
2. Include **Formal Oral Presentations** of your research along with dates when they were given. These may include rotation talks, formal presentations given at lab group meetings, talks presented at the annual Biochemistry retreat, presentations given at journal clubs or other seminar series on campus, and presentations given at professional meetings.
3. **Poster Presentations** given at local meetings on campus or at national or international meetings should be listed. Include the name of the meeting, location, and dates. Be sure to list any special awards or recognition that your poster may have received.
4. Include all peer-reviewed **Publications** that you author or co-author. You should list publications that have been submitted to a journal, are in press, or have been published. Do not list publications that are "in preparation". You may also list book chapters, published presentations from academic conferences, scientific publications on the World Wide Web, or special technical reports, but they must be clearly distinguished from standard peer-reviewed articles.
5. List any competitive **Fellowship Applications** submitted whether funded or not. Include the date submitted, the funding agency, and the outcome (pending, not funded, or funded).
6. List any special recognition or **Awards** you receive that are related to your scientific endeavors. Include the name of the award, the organization bestowing the award, and the date received.
7. Include the date when you complete the **Preliminary Exam**.
8. List your service as a **Teaching Assistant** and include the course, semester, and instructor of the course.
9. You may include your service as a **Mentor** for an undergraduate student or a beginning graduate student in your laboratory. To list such service you must play a substantial role in guiding and instructing the mentored student that is acknowledged by your major professor.
10. There may be other professional achievements that are suitable for inclusion. Please consult with your major professor to determine whether an activity or achievement is appropriate for this document.

An example of an Annual Report (included on the next two pages) illustrates an appropriate format. Variations of this format are acceptable provided the font is 10 pt or greater and the organization according to academic year in the program is maintained.

Annual Progress Report ***Example***

Jane Doe (*Student Name*)

Major Professor: Boris Badenov

Date of Entry into Graduate Program: Fall 2003

Proposed Year of Graduation: Spring 2008

Year 1 Sept 2003 - August 2004

Courses Completed: BCHM 659 A; BCHM 660 B; BCHM 663 A; BCHM 665 A; BCHM 668 B; BCHM 667 A; BCHM 593 A; BCHM 693 B; BCHM 695M A; BCHM 601 A

Oral Presentations: 4 Rotation Presentations

Year 2 Sept 2004 - August 2005

Courses Completed: BCHM 664 A; BIOL 541 B; MCMP 625 A; ENTM 612 A; BCHM 690 (1) A

Oral Presentations: 1st Annual Thesis Committee Meeting
Lab Group Meetings (3): Oct 2004, Feb 2005, May 2005

Fellowship: NSF Predoctoral Fellowship, Nov 2004 - Not Funded

Year 3 Sept 2005 - August 2006

Courses Completed: BCHM 690 (2) A

Passed Preliminary Exam Nov 2005

Oral Presentations: 2nd Annual Thesis Committee Meeting Lab Group Meetings (4): Sept 2005, Dec 2005, Feb 2006, May 2006

Poster Presentations: Biochemistry Annual Retreat, October 2005 *Characterization of the MP2 kinase*, Doe, J., and Badenov, B.

ASBMB 2006 Annual Meeting, San Francisco, CA, April 2006 *The MP2 kinase regulates the nuclear localization of the YFG protein.* Doe, J., Jetson, G., and Badenov, B.

Publications: Spacely, A., **Doe, J.**, Jetson, G., and Badenov, B. (2006) MP2 binds the Xxz activator in a hormone-dependent manner. *J. Biol. Chem.* **282**: 1601-1606.

Fellowship: American Heart Association Predoctoral Fellowship, January 2006-Dec 2008

Mentoring: Supervised *Maxwell Smart*, undergraduate student, Summer 2006

Year 4 Sept 2006 - August 2007

Teaching Assistant: BCHM 561, Spring 2007, Dr. Kirchmaier

Oral Presentations: 3rd Annual Thesis Committee Meeting Lab Group Meetings (4): Sept 2006, Nov 2006, Feb 2007, April 2007 Biochemistry Annual Retreat, October 2006

Poster Presentations: Purdue Cancer Center Retreat; Sept 2006; *Identification of Substrates for the MP2 kinase;* Doe, J., and Badenov, B.

FASEB Summer Research Conference; Protein Phosphorylation; July 13- 18, 2007; Snowmass Village Conference Center Snowmass Village, CO; *Mechanism of Regulation of the MP2 kinase.* Doe, J., Smart, M., and Badenov, B.

Publications: **Doe, J.** and Badenov, B. (2007) The MP2 kinase is Regulated by the AMP kinase in Cardiac Myocytes. *EMBO J.* **26**: 2635-2640. **Doe, J.**, Fatale, N., and Badenov, B. (2007) The Dynamic Subcellular Localization of the MP2 Protein Kinase Governs Its Access to Substrates. *Mol. Cell. Biol. manuscript submitted*.

Mentoring: Helped Supervise *Nell Fenwick*, new graduate student, Fall 2006

APPENDIX 8

BIOCHEMISTRY PROGRAM

Thesis Advisory Committee Report of
FIRST Research Conference

Name of Student: _____

Name of Major Professor:_____

Meeting Date:_____

*Advisory committee's comments are recorded below.

Signature	Comments
	(This section to be completed by the Examining Committee)

Research Conference:
_____ Satisfactory
_____ Unsatisfactory

Will reconvene during Spring semester

APPENDIX 8a

BIOCHEMISTRY PROGRAM

Advisory Committee Report of
SECOND Research Conference

Name of Student: _____

Name of Major Professor:_____

Meeting Date:_____

*Advisory committee's comments are recorded below.

Signature	Comments
	(This section to be completed by the Examining Committee)

Chairperson completes the appropriate part in EACH section.

Research Conference:
_____ Satisfactory
_____ Unsatisfactory

Reconvene within
_____ months as per
above comments

Eligible for Preliminary Examination:

Vote Summary:

____ Yes
____ No

Committee Recommendation:

____ Preliminary Exam next Fall
____ Preliminary Exam following Spring

Split vote: Major professor has prerogative of deciding whether the student can take the Prelim Exam.

APPENDIX 8b

BIOCHEMISTRY PROGRAM

Thesis Advisory Committee Report
ANNUAL Research Conference

Name of Student: _____

Name of Major Professor: _____

Meeting Date:_____

*Advisory committee's comments are recorded below.

Signature	Comments
	(This section to be completed by the Examining Committee)

Research Conference:
_____ Satisfactory
_____ Unsatisfactory

Reconvene within
_____ months as per
above comments

APPENDIX 9

BIOCHEMISTRY PROGRAM
Student Progress Feedback Form

Student: _____
Major Professor: _____
Meeting date:_____

Process (This text will be deleted once the document is finalized)

- Major professor will complete form and send to Kristi Trimble electronically.
- Kristi will route to all committee members and GAC chair for their agreement and feedback.
- Kristi will format and print the form and give to the student.
- Student will obtain signatures of committee members and GAC chair and return the form to Kristi.
- Copies will be distributed to the student, committee members, GAC Chair and the original will be placed in the student's file.

Summary of comments from the Thesis Advisory Committee (to be prepared by the major professor):

Committee Member Signatures:

_____ _____

_____ _____

Additional feedback from major professor:

Major Professor's Signature:_____

Grad Career Chair's Signature:_____

Copy to student and file.

APPENDIX 10

Thesis Advisory Committee Meeting

Rating of Student Performance

Please rate the student's performance in each of the six categories listed below. These ratings will be used to indicate whether the student's scientific development in these categories is commensurate with expectations for this stage (year) of their graduate training. These ratings are intended to indicate the student's strengths as well as those areas where improvement is warranted. These ratings will also be used by the Biochemistry Grad Program to identify areas where our students display the greatest shortcomings and will be important in devising changes in instruction and program policies that will enhance our student's scientific development and progress toward graduation.

Student _____ Date _____

	Outstanding	Very Good	Satisfactory	Improvement needed	Fails to meet minimal expectations
Overall Depth and Breadth of Knowledge	☐	☐	☐	☐	☐
Research Progress	☐	☐	☐	☐	☐
Contribution to Experimental Design and Project Development	☐	☐	☐	☐	☐
Critical Thinking and Interpretation of Data	☐	☐	☐	☐	☐
Communication Skills (Written)	☐	☐	☐	☐	☐
Communication Skills (Oral)	☐	☐	☐	☐	☐

Major Professor's Signature _____

Date _____

APPENDIX 11

Guidelines for Avoiding Plagiarism, Self-Plagiarism, and Questionable Writing Practices

The following guidelines are taken directly from "Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing" by Miquel Roig.

Guideline 1: An ethical writer ALWAYS acknowledges the contributions of others and the source of his/her ideas.

Guideline 2: Any verbatim text taken from another author must be enclosed in quotation marks.

Guideline 3: We must always acknowledge every source that we use in our writing; whether we paraphrase it, summarize it, or enclose it quotations.

Guideline 4: When we summarize, we condense, in our own words, a substantial amount of material into a short paragraph or perhaps even into a sentence.

Guideline 5: Whether we are paraphrasing or summarizing we must always identify the source of your information.

Guideline 6: When paraphrasing and/or summarizing others' work we must reproduce the exact meaning of the other author's ideas or facts using our words and sentence structure.

Guideline 7: In order to make substantial modifications to the original text that result in a proper paraphrase, the author must have a thorough understanding of the ideas and terminology being used.

Guideline 8: A responsible writer has an ethical responsibility to readers, and to the author/s from whom s/he is borrowing, to respect others' ideas and words, to credit those from whom we borrow, and whenever possible, to use one's own words when paraphrasing.

Guideline 9: When in doubt as to whether a concept or fact is common knowledge, provide a citation.

Guideline 10: Authors who submit a manuscript for publication containing data, reviews, conclusions, etc., that have already been disseminated in some significant manner (e.g., published as an article in another journal, presented at a conference, posted on the internet) must clearly indicate to the editors and readers the nature of the previous dissemination.

Guideline 11: Authors of complex studies should heed the advice previously put forth by Angell & Relman (1989). If the results of a single complex study are best presented as a 'cohesive' single whole, they should not be partitioned into individual papers. Furthermore, if there is any doubt as to whether a paper submitted for publication represents fragmented data, authors should enclose other papers (published or unpublished) that might be part of the paper under consideration (Kassirer & Angell, 1995). Similarly, old data that have been merely augmented with additional data points and that are subsequently presented as a new study can be an equally serious ethical breach.

Guideline 12: Because some instances of plagiarism, self-plagiarism, and even some writing practices that might otherwise be acceptable (e.g., extensive paraphrasing or quoting of key elements of a book) can constitute copyright infringement, authors are strongly encouraged to become familiar with basic elements of copyright law.

Guideline 13: While there are some situations where text recycling is an acceptable practice, it may not be so in other situations. Authors are urged to adhere to the spirit of ethical writing and void reusing their own previously published text, unless it is done in a manner consistent with standard scholarly conventions (e.g., by using of quotations and proper paraphrasing).

Guideline 14: Authors are strongly urged to doublecheck their citations. Specifically, authors should always ensure that each reference notation appearing in the body of the manuscript corresponds to the correct citation listed in the reference section and vice versa and that each source listed in the reference section has been cited at some point in the manuscript. In addition, authors should also ensure that all elements of a citation (e.g., spelling of authors' names, volume number of journal, pagination) are derived directly from the original paper, rather than from a citation that appears on a secondary source. Finally, authors should ensure that credit is given to those authors who first reported the phenomenon being studied.

Guideline 15: The references used in a paper should only be those that are directly related to its contents. The intentional inclusion of references of questionable relevance for purposes of manipulating a journal's or a paper's impact factor or a paper's chances of acceptance is an unacceptable practice.

Guideline 16: Authors should follow a simple rule: Strive to obtain the actual published paper. When the published paper cannot be obtained, cite the specific version of the material being used, whether it is conference presentation, abstract, or an unpublished manuscript.

Guideline 17: Generally, when describing others' work, do not rely on a secondary summary of that work. It is a deceptive practice, reflects poor scholarly standards, and can lead to a flawed description of the work described. Always consult the primary literature.

Guideline 18: If an author must rely on a secondary source (e.g., textbook) to describe the contents of a primary source (e.g., an empirical journal article), s/he should consult writing manuals used in her discipline to follow the proper convention to do so. Above all, always indicate the actual source of the information being reported.

Guideline 19: When borrowing heavily from a source, authors should always craft their writing in a way that makes clear to readers, which ideas are their own and which are derived from the source being consulted.

Guideline 20: When appropriate, authors have an ethical responsibility to report evidence that runs contrary to their point of view. In addition, evidence that we use in support of our position must be methodologically sound. When citing supporting studies that suffer from methodological, statistical, or other types of shortcomings, such flaws must be pointed out to the reader.

Guideline 21: Authors have an ethical obligation to report all aspects of the study that may impact the independent replicability of their research.

Guideline 22: Researchers have an ethical responsibility to report the results of their studies according to their a priori plans. Any post hoc manipulations that may alter the results initially obtained, such as the elimination of outliers or the use of alternative statistical techniques must be clearly described along with an acceptable rationale for using such techniques.

Guideline 23: Authorship determination should be discussed prior to commencing research collaboration and should be based on established guidelines, such as those of the International Committee of Medical Journal Editors.

Guideline 24: Only those individuals who have made substantive contributions to a project merit authorship in a paper.

Guideline 25: Faculty-student collaborations should follow the same criteria to establish authorship. Mentors must exercise great care to neither award authorship to students whose contributions do not merit it, nor to deny authorship and due credit to the work of students.

Guideline 26: Academic or professional ghost authorship in the sciences is ethically unacceptable.

Roig, M. Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing. St Johns University. 03/12/2009.

http://ori.hhs.gov/education/products/plagiarism/

http://ori.hhs.gov/education/products/plagiarism/Plagiarism_Guidelines.pdf

Check Yourself: A self check service for plagiarism screening
Purdue University
Graduate Student Policy

Purdue University is committed to the highest standards of ethical behavior with respect to writing and reporting. Authors are expected to express their thoughts in their own words and acknowledge contribution by others in their writing, in accordance with established referencing conventions. Work that is taken verbatim from another source should be enclosed in quotes and appropriately referenced. Violation of these principles is called plagiarism. University policy is strict in addressing cases of such violations. Whether by deliberate action or through carelessness, many students have been sanctioned for plagiarism over the last few years. Students submitting written documents to dissertation committees, reports to departmental exam committees, manuscripts to publishers, or papers to journals and conferences should take special care to assure that all work is presented properly. The attachment, authored by Miquel Roig, can serve as a useful guide in avoiding plagiarism.

To further assist Purdue students, the Graduate School, in partnership with the Office of the Vice President for Research, has initiated this voluntary self check service. Through a contract with the company iThenticate, the Graduate School and Office of the Vice President for Research now offer Purdue students electronic document screening as a safeguard to check work for plagiarism. The iThenticate software checks submitted documents against thousands of articles that are published in journals and conference proceedings as well as text that appears on internet Web sites. At the conclusion, a similarity report is generated that highlights excerpts in the submitted document that match similar text in documents found in print and on the Web. Similarity reports can be helpful in detecting occurrences of inadvertent replication and neglect in referencing.

Rules Governing Usage
Check Yourself is expressly for use as a tool for checking documents before submission to committees, journals, publishers, and archives, to help students prevent incidences of unintended plagiarism. The service is free for Purdue graduate students and is only for individual use.

Use of the service by students is limited to individual work authored or co-authored by the student for the purpose of screening for potential plagiarism violations prior to submission. The screening service is not to be used for checking the work of others; screening articles of any kind *previously* submitted for publication; or screening documents of any kind *previously* submitted for deposit with the Graduate School, for review by an academic committee, or for archiving within the University.

Since the report generated by iThenticate only provides citations of language similarity, judgment on the part of the student is often necessary as to whether the submitted text is substantively different from similar text found in the literature. Students are encouraged to seek assistance from their advisors and to consult the Graduate School resources— http://www.gradschool.purdue.edu/RCR/
including the attached article—for help in properly citing prior work and in properly summarizing the relevant literature.

Procedure for using Check Yourself

Each department has been asked to identify a Check Yourself administrator who will receive electronic copies of student work, run an iThenticate similarity report, and return the report results to the student. A list of the Check Yourself administrators for each school and college can be found at http://www.gradschool.purdue.edu/programs/contacts.cfm.

Check Yourself is a courtesy provided by the University and is only to be used for the purposes described herein. Documents for screening should be sent to the Check Yourself administrator by email, along with a completed submission request form (appended below), which should be included in the body of the email. Acceptable submission document formats include Microsoft Word, searchable pdf, LaTex, postscript, and plain text. Scanned documents converted to pdf or encapsulated in Word or LaTex are not acceptable.

After submission, the Check Yourself administrator will initiate the iThenticate check and typically will return the similarity report by email within a few days. The Check Yourself administrator will not examine or review the similarity report. Rather, the role of the administrator is simply to run the report and monitor usage to assure that governance rules are being followed. Should the administrator identify improper usage of Check Yourself, violators will be denied access to the service in the future and will be subject to disciplinary action.

It should be recognized that no system is perfect. Certainly the effectiveness (comprehensiveness of the screening) is limited by the databases searched by the software. Thus, students should *only* treat the software as a tool, recognizing that not all databases and Web sites are included in the search.

Questions may be directed to Professor Peter Dunn at pedunn@purdue.edu .

--submission form for Graduate Students—

To submit a document for screening, send it as an email attachment to your department screening administrator. Complete the form below and copy it into the body of the email.

A. Name:

_____

B. PUID:

_____

C. Department and name of degree program:

_____

D. Campus location: West Lafayette, IUPUI, Fort Wayne, North Central, Calumet

_____

E. Is the submitted document
   1) a thesis that has not yet been submitted to the thesis committee
   (if so, provide anticipated title)

_____

2) an unpublished journal article (if so, provide anticipated title)

_____

3) an unpublished conference paper (if so, provide anticipated title)

_____

4) an unpublished manuscript, such as a book or monograph
   (if so, provide anticipated title)

_____

5) a preliminary exam report (if so, provide anticipated title)

_____

6) other, such as clinical report, directed study report, etc. (if so, specify)

_____

F. If the submission is a co-authored document (e.g. a journal paper, conference paper, manuscript), list all co-authors.

_____

All co-authors are to be copied by email upon submission. Each will receive a copy of the similarity report.

APPENDIX 13

GUIDELINES FOR THE PRELIMINARY EXAMINATION

(revised Jan 2012)

The following includes procedures for obtaining approval of your Preliminary Examination topic and guidelines for preparing the written prelim document including mandatory formatting requirements. A brief outline of the agenda and time restrictions for the oral examination are also given.

The preliminary examination is primarily an oral defense of your proposal. However, you should be aware that the written description of your proposal is very important to the committee who will use it to prepare for the examination. The written document gives your examining committee their first impression of your proposal and the scientific quality and merit of your ideas. When it is first received, the Examining Committee will screen your written proposal and may recommend that you not proceed with the exam if there are serious deficiencies. It is important to remember that the evaluation of your preliminary examination performance includes a rating of your ability to communicate scientific ideas in writing. Thus, a poorly prepared document might lead to the committee having an initial negative view of your proposal and might result in the delay your prelim exam and/or affect the overall evaluation of your exam.

A. Preliminary Examination Topic and Approval:
You are required to defend a hypothesis-driven research proposal as the basis for your preliminary examination. Proposals that are discovery-based or involve primarily characterization and description of a biological system or macromolecule will generally not be acceptable. The proposal must be original, and designed to advance the current state of knowledge in the topic area. The proposal cannot be based on your own thesis research project or include objectives from your thesis research.

Although your topic must not be directly derived from or overlap with your thesis research, you may address a distinct problem in an area closely related to your research. However, regardless of the topic, the specific aims or objectives of the proposal may not include any part of the your own Ph.D. research or that of graduate students, postdoctoral fellows, and technicians in your advisor's laboratory. The aims must not overlap with the work of any other laboratories having active collaborations with your thesis advisor. The detailed rules and requirements for prelim exam topics and specific aims are listed under the Requirements For The Biochemistry Program, section 22, in the *Biochemistry Graduate Program* booklet.

Scope of proposal– There are no specific policies delineating the breadth and scope of preliminary examination proposals. Typical proposals have three specific aims, but from two to five may be appropriate depending on the proposal topic and the hypotheses to be evaluated. Most grants prepared for NSF or NIH, two major federal funding agencies, are designed to be completed in three to five years and it may help to keep this timeframe in mind when developing your research plan. Assuming all aims are successfully executed, a proposal of reasonable scope should yield sufficient findings to publish a manuscript in biochemical journals such as the *Journal of Biological Chemistry* or *Biochemistry.*

Before your preliminary examination committee can be assigned and a preliminary examination scheduled your topic must be approved by the *Preliminary Exam Graduate Chair* (**PE-Chair**).

The Specific Aims of Your Proposal are Required for Approval of the Preliminary Exam Topic–To start the preliminary exam topic approval process, you must have prepared the specific aims section of the written prelim proposal. Thus, you should start by carefully selecting your preliminary examination research problem/question bearing in mind the requirements and rules regarding the preliminary exam topic. Once you have settled on a topic or research problem, you will begin to develop the specific aims/objectives and research plan of your proposal.

You do not necessarily have to write the entire prelim proposal before submitting your specific aims document for the approval process. The specific aims section should be a concise list of what you plan to achieve or learn in your proposed project, whereas the research plan has the details and can be fully developed later after you devise the aims or objectives. The specific aims you submit are viewed as tentative and may be revised or modified after the approval process is complete. However, any significant change in your topic will require that you restart the approval process.

Timeline for Proposal Preparation and Approval– Since the specific aims document is required to initiate the approval process, it is important to remember that it is never too early to begin planning your proposal, selecting an appropriate topic, and devising your objectives. It would be wise to initiate the research and reading required to select the proposal topic in the 2nd year of your graduate studies or earlier. Topic selection should begin no later than the end of the fall semester of the 2nd year. Once the topic is selected, development of the specific aims should take place during the spring semester of the 2nd year. An outline of the major steps for getting your proposal approved is given below. This process will take place during the spring semester of the 2nd year. The deadline for submitting the Request for Preliminary Exam to the PE-chair will be near the end of the spring semester thus advisor certification of your specific aims should be initiated shortly after the middle of the semester.

The Guidelines for preparing and formatting requirements for the specific aims are discussed below. *The specific aims will not be accepted for consideration if they do not precisely conform to formatting guidelines.* Your final specific aims document should be a Microsoft Word or PDF document that can be submitted and handled electronically.

The following is an outline of the major steps for getting your proposal approved:

***Step 1*:** You must provide your thesis advisor with a copy of the specific aims document along with the Advisor Certification Form with all appropriate information on the form filled in. After examining the specific aims, the advisor will determine whether the topic is different from your current or past research project(s) in their lab and verify the specific aims/objectives of the proposal meet the criteria for acceptable prelim topics. If the advisor confirms that the specific aims fulfill these criteria, she/he will sign the Advisor Certification Form (electronically) and send it via email to the Administrative Assistant to the Graduate Program, Kristi Trimble.

After the advisor verifies that the topic and specific aims fulfill the appropriate criteria, you will be responsible for ensuring your advisor submits the approved Advisor Certification Form in a timely manner.

If the advisor believes that your proposal does not meet all necessary criteria, you may discuss the reasons for this decision with your advisor. This will be important so that you have a clear understanding of why your proposal is viewed as being based on or derived from your thesis project. However, it is your responsibility to redesign your proposal so that it complies with the criteria for acceptable proposals. Your advisor is not permitted to help you redesign your proposal, and you should not ask or expect your advisor to assist you.

To avoid wasted effort, a student proposing a topic that is related to their research should discuss the possibility of any overlap in topic or research objectives with their advisor early in the process of proposal development. However, the advisor may not assist the student in designing or developing the proposal and specific aims.

Step 2: When the thesis advisor has certified the prelim topic, students should submit the specific aims document and a Request for Preliminary Exam form to the Administrative Assistant to the Graduate Program, Kristi Trimble. The specific aims should be prepared as a PDF file or Word document so that it can be submitted electronically via email along with the Request for Preliminary Exam form (PDF document).

Step 3: The Administrative Assistant to the Graduate Program will forward the appropriate documents to the PE-Chair for final approval of the preliminary examination proposal topic. Prior to topic approval, the PE-Chair may request transferring students provide a brief description of any projects they pursued in another laboratory before transferring. The PE-Chair may request that a student that has transferred have

their previous advisor verify that their proposal is not based on a project developed in the lab of the former advisor.

If the PE-Chair approves the proposal, a preliminary examination committee will be selected and a schedule for holding the examination will be set up. If the proposal is not approved, the student may discuss the reasons for rejecting the proposal with the PE-Chair. It will be your responsibility to contact the PE-Chair to make the necessary arrangements for this discussion. You should expect to have an understanding of the reasons why your proposal was not accepted, but you should **not** expect the PE-Chair to advise or assist you in developing a new proposal or making the changes necessary for the proposal to be acceptable. It is your responsibility to develop an acceptable proposal and your advisor and the PE-Chair are not permitted to assist you.

If the proposal is not approved, a second request for topic approval must be submitted. The second submission will automatically move forward and result in the assignment of a prelim examination committee. *Thus, you will have only one opportunity for your proposal to be evaluated by the PE-chair to determine whether it is hypothesis-driven and has reasonable potential to be defended.*

As noted above, the specific aims used for proposal approval are tentative and may be revised or modified as you further develop and prepare the written proposal. However, any changes in topic or any major alterations in aims/objectives that affect the topic of the proposal must be approved by the PE-Chair. This approval may require that you reinitiate the approval process as described above.

B. Preparation of the Written Proposal:

The purpose of the written proposal is to provide the examination committee with adequate background and details to understand the current state of the relevant area of research and to conduct an initial evaluation of your proposed experiments. The quality of your writing and attention to detail is important. Your ability to clearly communicate the background information for your proposal, explain its significance, and outline your research plans is an important component of the exam that will be evaluated by the examining committee.

Content and Organization of the Written Preliminary Examination Document

Guidelines for preparing the written prelim document are outlined below. Your document must conform to the organization, page limits, and formatting instructions listed below. The Chair of the Preliminary Examination Committee may refuse any document that exceeds page limitations and does not conform to the guidelines. The specific aims through the research plan sections of the proposal can be no longer than 12.5 pages. There is no page restriction on references or figures and tables.

1. **Title Page** (1 page)
   This page should include: student name, proposal title, list of Thesis Advisory Committee Members including major professor, the date, time and location of the exam, and a section where you can sign to verify iThenticate screening (see AVOIDING PLAGIARISM and the Example Cover Page below).
2. **Specific Aims** (1.5 page)
   The specific aims page should contain a concise and succinct list of the specific objectives/aims of the research proposed. Typical proposals have three aims or objectives. However, there is no minimum or maximum number and from two to four objectives/aims would be reasonable.

   The specific aims pages may begin with a short opening paragraph that provides a brief and concise description of key background information, states the hypotheses or model that underlies the proposal, explains what will be learned when the research is complete, and gives the rationale for the experimental approaches and/or aims listed.
3. **Introduction** (2 pages)
   This section provides a brief introduction to the key background information required to understand your hypotheses and proposal. Describe current knowledge in the field that relates to your proposal. Try to stick to the significant findings, and describe any issues that are controversial or unclear in the area you propose to study. The introduction should provide the

information that was used to formulate and support your hypotheses. It is very important for you to use literature citations wisely. The literature citations can help your examining committee should they want to learn more about the area of research relevant to your proposal. The introduction may conclude with the formulation of the hypothesis or model that you will test for your proposal.

4. **Significance** (1 page)
   State concisely the expected outcome(s) of the proposed research. Clearly explain the impact that the results of your proposed research will have on the field. It should be clear why you expect the proposed studies will advance the field. For example, explain where there are gaps in fully understanding the field and how your proposed work will overcome this lack of knowledge. This section is extremely important for your committee to grasp and you should do your best in conveying the significance of your proposed research.

5. **Research Plan** (8 pages)
   This section should concisely describe the experiments that will be performed to achieve the goals of each aim you list on the *specific aims* page. Thus, this section should be organized so that research plans are presented for each aim.

   Give the rationale for selecting the methods and analyses that will be utilized to achieve the specific aims. Several major experimental approaches may be used for each aim. For each approach, outline the experiments that will be performed. Briefly, explain how data will be collected, analyzed, and interpreted. It is crucial to understand that you will not be able to provide detailed procedures in the written report. You may also want to list alternative approaches, should your original proposed experiments fail or yield ambiguous results.

   Although they cannot be accommodated in the written proposal, details are likely to be important in the oral exam where you will be expected to understand the mechanics of experiments, underlying physical and chemical principles, and the basic operation of any instrumentation required. You will also be expected to understand and evaluate the strengths and limitations of the methods selected.

6. **References**: (no page limit)
   In the text of your proposal, you should cite references for important work in the field. This is essential for the committee to obtain supplemental information as well as to evaluate whether your proposal is novel or derivative.

   References must be formatted according to the style used for the journal *Molecular and Cellular Biology.* Most personal bibliography programs (e.g. Endnote) have this style set up. See example shown below.

   18. **Clute, P., and J. Pines.** 1999. Temporal and spatial control of cyclin B1 destruction in metaphase. Nat. Cell Biol. **1**:82–87.

7. **Tables and Figures** (no page limit)
   Figures and tables if used properly can greatly enhance your document by making it easier for the committee to follow and understand your proposal. Figures can contain models and diagrams that enhance presentation of background material. Figures and/or tables may also be employed to illustrate the data and results you expect to obtain from the proposed experiments.

   Figures and tables must be legible and of publication quality. Each figure or table must have a title and should be accompanied by a suitable legend. Place the text for the legend on the same page as the figure. As long as the figures are legible, more than one figure and accompanying legends can be on a single page. If data is plotted, all axes must be properly labeled. If figures are taken from the literature, they must be appropriately acknowledged and the source cited. Make sure that all figures and tables print properly. We recommend using the *Journal of Biological Chemistry* as a source of examples illustrating high quality figures and tables.

Formatting:

Fonts - Use only 11 pt Arial or Helvetica fonts for the text. 10 pt Arial or Helvetica fonts are acceptable only for legends accompanying tables or figures. Other fonts may only be used for Greek characters, symbols, or other special characters

Margins - use 1-inch margins at the top and bottom of pages; 0.8 to 1 inch margins are acceptable on the left and/or right.

Line Spacing - 1.5 lines; 20 pt

Page Numbers - number all pages including those containing figures and tables

Avoiding Plagiarism

It is essential that your written preliminary examination document conform to commonly accepted standards of scientific integrity and to Purdue University policies on academic dishonesty. A major concern in writing your proposal is to avoid unintentional plagiarism. Plagiarism occurs when you use or incorporate the writing of someone else in your own work without appropriate acknowledgement or citation. Plagiarism is not tolerated in academic institutions or in the scientific community. In many cases, plagiarism can also lead to copyright infringement. For more information on plagiarism, you may want to examine the "Avoiding Plagiarism" section of the Purdue Online Writing Lab (OWL) website. It is essential that you understand what plagiarism is and how it can be avoided before you begin writing your proposal. In addition to OWL, there are many online resources to help with this. You may also discuss plagiarism with your advisor, but remember that your advisor is not allowed to assist in any way with creating, designing, and writing your proposal.

Before submitting your written proposals to the preliminary examining committee, they must be screened for potential plagiarism using the iThenticate system. This system compares your document to a huge database of scholarly articles from journals, magazines, and web pages and will detect similarities between your work and that of others. You will submit your written prelim proposal as a Word document to Kristi Trimble via email or jump drive. She or an office assistant will run the iThenticate program and generate a PDF file of the summary report. This report will be sent to you and your prelim exam chair. The iThenticate scan can be carried out within one day or less. However, you must contact Kristi at least one week in advance of the deadline for submission of your document so that you can arrange a date and time to have the document scanned. It will be best to schedule the iThenticate scan at least two days in advance of the due date to allow time for corrections or unexpected problems. The document that you submit to Kristi for screening must be final. No further revisions will be allowed after screening.

On the title page of your proposal, you should include a place for your signature verifying your document was submitted for screening. Please see the example cover page at the end of these guidelines and use the exact text shown in the example cover page for your signature.

As noted above, a report outlining the results of the iThenticate screen will be sent to the chair of your examining committee by Kristi or designated office staff. It is your responsibility to send your written prelim proposal to the chair and all other members of the committee. It is essential that the version of the written proposal scanned by iThenticate be identical to the version that is sent to the committee. The iThenticate report and the written proposal must be transmitted to the appropriate parties no later than two weeks before the examination date. By coordinating with Kristi it should be possible for you to send out the written proposal on the same day the iThenticate report goes to your committee chair.

D. Agenda for Oral Preliminary Exam

You will be responsible for reserving the examination room for 3 hours.

The exam will begin with your presentation of a short talk. This presentation should be no longer than 25 min. This talk should provide a concise discussion of the background information relevant to the proposal, the model or hypotheses underlying the proposal, and a brief description of the experiments planned for each aim. Generally, there should be 15-20 slides for this talk. You may bring additional slides for clarification during other parts of the exam. The committee may interrupt this presentation with questions of clarification, thus the talk may last longer than 25 min. Nonetheless, you should make sure your talk is prepared to be no longer than 25 min.

After your presentation, there will be a period of general questioning by the examination committee. There is no restriction on what may be asked by the committee. A rough guide for your preparation would consist of mastery of the content of any major upper-level biochemistry textbook (e.g. Stryer, Lehninger, etc.) and Genes X. Accordingly, many questions may probe basic knowledge of biochemistry, molecular biology and other relevant topics and may not be directly related to the proposal. ***The exam will last no longer than 2.5 hours.***

In advance of the examination date, students should make arrangements to consult with the Chair of the Preliminary Examination Committee to discuss the agenda in further detail.

E. Proposal Critique and Pre-prelim:
You may have other students or postdoctoral fellows read and critique your written proposals, but faculty members are not allowed to provide input or assistance. It is best to seek the help of senior graduate students who have passed their preliminary exams or postdocs. You should select those colleagues who are willing to give direct and thorough criticism if needed. Please remember that you should seek input well in advance of your exam date (at least several weeks) so that those reviewing the proposal have sufficient time to read your proposal and provide thoughtful feedback, and you have enough time to respond to the input you receive.

You may practice the oral defense of your proposal as a "pre-prelim." It is important to make sure you include experienced senior grad students or postdocs in the audience of your pre-prelim. You should hold the pre-prelim at least 2 weeks prior to the actual exam so that you have time to make any needed adjustments in the proposal. Use your own judgment in reacting to the suggestions of other students. No one is perfect and omniscient.

F. Seeking outside help:
While originality in design of the experimental approach is essential, seeking outside help on details of experimentation and analysis is encouraged. For example, if you do not understand the principles behind fluorescence energy transfer, you are permitted to seek the advice of an expert. As long as you seek advice on specific technical issues you may consult with faculty members. However, please remember faculty members are not permitted to give general advice on your proposal or help you design and develop your proposal.

G. Examination deadlines:
Individual examination deadlines are assigned randomly. In special circumstances, deadlines can be postponed, but only with the approval of the PE-Chair. Students and prelim committees do not have the authority to set deadlines.

Remember that prelim policy requires that an electronic version of your written proposal must be submitted via email to all committee members no later than two weeks in advance of the examination date. If you do not submit the proposal by 6 PM on the exact date it is due, the proposal will be late and a late submission results in failure of the exam.

SAMPLE COVER PAGE

TITLE

Student Name

Thesis Committee

Major Professor: Dr. xxxxxxxxxxx

Dr. xxxxxxxxxxx

Dr. xxxxxxxxxxx

Dr. xxxxxxxxxxx

Preliminary Exam

November 15, 2012

2:30 PM

BCHM 101

This document has been submitted for screening by iThenticate and a PDF report generated from this screen will be sent to the prelim examining committee chair.

_____

(Student Signature - typing your name above will serve as your signature on electronic versions of the written proposal)

Advisor Certification of Preliminary Examination Topic

Students should fill in the following section and provide this form and their specific aims document to their major professor for the certification process.

Student _____

Proposal Title _____

_____

Major Professor _____

Major Professor:

Students are not permitted to base their preliminary examination proposal on their thesis research projects. However, they may select a topic or research problem that is closely related to their area of research as long as the central issues addressed and specific aims or objectives of their proposal clearly differ from their current or past thesis projects in your lab.

As part of the process for approving preliminary exam topics, major professors are asked to verify that their student's prelim proposal topic and specific aims or objectives fulfill the criteria listed below. The student should provide you with the specific aims for their preliminary exam proposal along with this form. After examining the specific aims document, please decide whether your student's aims or objectives satisfy these criteria and indicate your decision by checking the appropriate box. In making your decision, you may discuss the proposal with your student. However, you are not permitted to assist your student in developing their proposal or preparing for the preliminary examination.

Regardless of the topic, student proposals must satisfy all of the following criteria:

1. No specific aim/objective can be identical to or overlap with objectives of current or past research projects that the student has performed in their advisor's laboratory.
2. No specific aim/objective can be identical to or overlap with any goal(s) of ongoing research projects in the advisors lab including those conducted by the advisor, post docs, graduate students, undergraduates, or technicians.
3. The specific aims/objectives must be different from those of research groups actively collaborating with the advisor's laboratory.

☐ The proposal topic and specific aims satisfy all the criteria above.

☐ The proposal topic and specific aims do not meet the criteria for an acceptable preliminary exam proposal. I have informed my student of my opinion.

If you decline to provide certification, then you should inform your student why you believe their proposal and/ or specific aims/objectives are not appropriate. However, please do not give the student specific advice on how to redesign their aims/objectives. This is the responsibility of the student and it is imperative that their proposal be original and of their own design.

_____ _____

(Advisor Signature) (Date) (*mm/dd/yyyy*)

Typing your name in the signature box above and/or typing your name at the end of an e-mail message used to transmit this form will serve as your signature.

Please send the completed form to Kristi Trimble via email (trimblek@purdue.edu). This form must be returned by the major professor. Forms submitted by students will not be accepted.

APPENDIX 15

Request for Preliminary Examination Form

Student Name _____

Thesis Advisory Committeee Members:

Major Professor _____

_____

_____

_____

_____

Title of Preliminary Examination Proposal

_____

_____

Have the topic and specific aims for your proposal been approved by your advisor? ☐ Yes ☐ No

Has the specific aims document for your proposal been attached? ☐ Yes ☐ No

Please indicate if any of the following apply to you:

- ☐ I transferred to the Biochemistry Program from another graduate program at Purdue.
- ☐ I transferred to the Biochemistry Program from a graduate program at another institution.
- ☐ I have changed thesis advisors within the Biochemistry Program.

If you transferred to the Biochemistry Program or changed advisors as indicated above, did you develop or initiate a thesis research project before transferring? ☐ Yes ☐ No

If you answered yes above, is your preliminary exam proposal focused on a field or area of research closely related to the project initiated before transfer? ☐ Yes ☐ No

Student Signature _____ Date _____

For this document, typing your name in the signature box and/or typing your name at the end of the e-mail message used to transmit this form will serve as your signature.

Send the completed form to Kristi Trimble by email (trimblek@purdue.edu)

APPENDIX 16

Guidelines for Evaluation of Preliminary Exam Performance

1-2012

The criteria listed below are presented as a guide to assist in evaluating the student's overall performance on the preliminary examination. Committee members may use their own discretion in determining the relative weight assigned to these criteria. All students preparing to take the preliminary exam have received a copy of these guidelines.

Overall Breadth of Knowledge

- Student exhibits knowledge of pertinent literature and underlying theoretical concepts
- Student understands and can discuss the data supporting the major concepts/hypotheses/models in the field
- Student understands principles and/or theory underlying proposed experimental techniques
- She/he is able to synthesize knowledge from multiple fields or disciplines

Originality and Significance of the Proposal

- Proposal is original and addresses important issues within the field where there is a gap in understanding or a reason to challenge existing hypotheses or dogma
- Student can articulate the significance of the anticipated findings and can explain how they would advance the field
- Proposal does not simply involve the application of a standard or well-established experimental paradigm to a new system or organism; creative and innovative ideas and approaches will be viewed favorably
- The student independently developed at least one aim/objective

Analytical and Critical Thinking

- Student understands the scientific method and has critical thinking skills expected of a PhD candidate
- Student can rigorously evaluate and interpret experimental results or observations
- Student questions the validity of scientific conclusions, hypotheses, and models based on experimental results and can recognize and identify any invalid assumptions, inconsistencies, or alternative explanations
- Student formulates testable hypotheses or models

Experimental Design

- Student can explain how and why the proposed experiments will provide an adequate test of the hypotheses or models
- The rationale for the experimental approaches employed in each aim/objective are strong and clearly articulated
- Student explains how expected results will be interpreted, and defines conditions under which data will support or contradict the hypothesis
- Student understands the limitations of proposed experiments and includes potential alternative approaches

Communication Skills (Written)

- Document is organized in a concise and logical manner
- Writing style is scientifically rigorous and precise; the text contains no jargon or vague terminology
- Writing is of a quality adequate for publication
- There are few errors in grammar, punctuation, spelling and word use
- Literature is adequately cited
- Figures have properly labeled axes; figures and tables contain clear and concise legends

Communication Skills (Oral)

- Background information is presented in a logical, clear and coherent manner
- Slides/overheads are clear, properly labeled, not crowded with text or data, and well organized
- Student exhibits no distracting mannerisms or nervous habits when speaking
- Responses adequately address the questions/issues posed by committee members
- Responses to questions are clear and reveal depth of knowledge and command of subject
- Student exhibits confidence, is comfortable fielding questions and performs well on her/his feet

APPENDIX 17

BIOCHEMISTRY PROGRAM

Committee Report of
Oral Preliminary Examination

Name of Student: _____

Name of Major Professor:_____

Name of chairperson of the Examination Committee:_____

Meeting date:_____

*Committee's comments are recorded below.

Signature	Comments
	(This section to be completed by the Examining Committee)

Chairperson to complete.

Vote Summary:	Committee Recommendation:
____ Yes ____ No	____ Pass ____ Fail

*A passing performance will be one in which no more than one member of the committee casts a vote of "fail".

Outcomes Rating of the Preliminary Exam

Please rate the student's performance in each of the six major categories listed below. These categories will not necessarily be ranked equally in making the overall pass/fail evaluation. Thus, depending on the competency displayed in other areas, a poor evaluation in a single category will justify an overall failing evaluation.

These ratings will also be used by the Biochemistry Grad Program to identify areas where our students display the greatest shortcomings and will be important in devising changes in instruction and program policies that will improve our students preparation for this exam.

Student _____

	Outstanding	Very Good	Satisfactory	Improvement needed	Fails to meet minimal expectations
Overall Depth and Breadth of Knowledge	☐	☐	☐	☐	☐
Originality of the Proposal	☐	☐	☐	☐	☐
Analytical and Critical Thinking	☐	☐	☐	☐	☐
Experimental Design	☐	☐	☐	☐	☐
Communication Skills (Written)	☐	☐	☐	☐	☐
Communication Skills (Oral)	☐	☐	☐	☐	☐

Examining Committee Chair _____

Date _____

APPENDIX 19

BIOCHEMISTRY PROGRAM
Student Feedback Form for Preliminary Examination

Student: _____
Major Professor: _____
Meeting date:_____

Process (This text will be deleted once the document is finalized)

- Kristi Trimble will provide this form electronically to committee chair prior to meeting.
- Committee chair will complete electronic form within 2 working days and send to Kristi.
- Kristi will route to all committee members and GAC chair for their agreement and feedback.
- Kristi will format and print the form and give to the student.
- Student will obtain signatures of committee members and GAC chair and return the form to Kristi.
- Copies will be distributed within 2 weeks to the student, committee members and GAC Chair. Original will be placed in the student's file.

Summary of comments from the Preliminary Examination (to be prepared by the committee chair):

Committee Member Signatures:

_____ _____

_____ _____

Grad Career Chair's Signature:_____

Copy to student and file

APPENDIX 20

Points to Remember

1. Plan to register early each semester for best course selection.

2. Undergraduate course work in excess of degree requirements can be used only if approved by your Thesis Advisory Committee, the Graduate Career Chair, and the Dean of the Graduate School.

3. Solicit advice about procedural problems from the BCHM Graduate Office who has access to the latest Graduate School regulations.

4. Incomplete course grades must be cleared during the semester following the session in which the incomplete grade was awarded.

5. Students must be registered in the semester in which they intend to receive their degree, either for graduate course work, for research hours, or for "exam" or "degree" only. To register for "degree only" or "exam only" all academic requirements must be completed before the first day of classes.