Biophysics IDP Faculty Meeting
Thursday, Jan. 16, 2014
12:00 – 1:30 p.m.

Present: Chris Meiners, Sara Grosky, Marya Ayyash, Tomek Cierpicki, Janet Smith, Jennifer Ogilvie, Charlie Brooks, Vince Pecoraro, David Ballou, Allen Liu, Matthew Young, Nicolai Lehnert, Ray Trievel, Tom Kerppola, Ari Gafni, Bruce Palfey, Mark Banaszak Holl, Sarah Veatch, Kevin Wood, Qiong Yang, Neil Marsh, Julie Biteen, Nils Walter, Uhn-Soo Cho, Mark Saper, Kristen Verhey, David Lubensky, Zhaohui Xu

Recorded by: Ann Titus

Chris welcomed everyone to the meeting. Since we haven't had a meeting including the IDP Faculty in quite some time, Chris just wanted get together to update everyone on the Biophysics policies.

Mission/Admissions
Chris went over the mission of the Biophysics Program which is to "train students for a life-long career in biophysics and other quantitative life sciences". We currently have 2 mechanisms for admitting students into the program: Direct Admission and PIBS and we typically admit eight students per year. We really need everyone's help with advertising our program to prospective students. We also need to obtain a larger more diverse pool of students to choose from which is one of our biggest challenges right now. Faculty participation at recruiting events and service on the Admissions Committee is crucial to the success of our program. Chris also reminded everyone that it is really important to meet with prospective students during the recruiting weekends, as they may decide not to choose Michigan if the faculty that they would like to meet with are not available so it's really important to be available for all student meetings.

A discussion took place regarding our program. Biophysics programs around the country are typically lumped in with other Biochemistry programs, however, ours is a stand-alone program, which makes us very unique. So we need to interact with our colleagues at other institutions to encourage their students to come to UM.

Curriculum
Chris went over the course requirements, lab rotations, and first year funding policies. Students are now required to take BIOP 550 (Intro to Biophysics Laboratory), which is a hands-on course that teaches essential laboratory skills in Biophysics. Another new course is BIOP 595 (Professional Development in Biophysics) which teaches professional skills such as writing research articles, reviews, grant proposals, and preparing and giving poster presentations at scientific meetings.

Placement Exams
Chris indicated that we have changed the way that we are conducting the qualifying exams, which is the following: All incoming students are required to take 2 placement exams in Physics & Biochemistry. Additional coursework requirements will be determined based on these exams. A discussion took place and different ideas were suggested in regards to the exams. Some thought that maybe we don't need to have them take an exam and just try to determine from their transcripts which areas they are lacking. We currently are now only requiring that they take the exams once. Some faculty thought that our core curriculum should be sufficient to grant someone a Ph.D. and wondered why we are requiring them take other courses outside of our department. Also, if the students need to take those other courses in order to pass, then perhaps we should include them within our core curriculum. These suggestions were noted and will be reviewed by the Curriculum Committee.

Candidacy Exams
With regard to the candidacy exams, they are taken after year two, when all course requirements are satisfied. A proposal for thesis work is then submitted, and a dissertation committee is formed. The final oral dissertation defense is held when the dissertation is completed, typically after year five. A discussion took place in regards to the timing of the exam. It was suggested that maybe we could have the students take the exam earlier, perhaps after 3 semesters.

Chris encouraged the faculty to closely mentor their students and to stay on top of their progress throughout their career to ensure that they are in the correct field or profession.

Lab Rotations
In regards to lab rotations, we require 2 full rotations and discourage half and third rotations, unless it's absolutely necessary (on a case by case basis). Someone suggested that maybe we could have them do a rotation during the summer before they are admitted. Chris indicated that we typically don't have the funding and it is also very difficult to take students for early rotations.

Good Standing Policy
Chris also went over the "Good Standing" policy (based on the Chemistry model). In order for a student to remain in "good standing" they must maintain a GPA of 3.0 or higher; must complete two lab rotations with a satisfactory (S) grade; must find a research mentor generally by May 1 or July 1 at the latest of the first year; must achieve candidacy by May 31 of the second year; must receive satisfactory (S) grades for all terms enrolled in Biop 990 and 995, and satisfactory or marginal progress assessments on the annual progress report; must fulfill any other requirements set forth by the Dissertation Committee and Graduate Program. Students in good standing are eligible for departmental financial support. Failure to maintain good standing will result in dismissal from the program.

Graduate Student Funding Model
Biophysics funds the students during the first year and they are not required to teach so that they can get acclimated with the program. Once the student chooses a mentor, that faculty member is responsible for supporting the student until they defend. A discussion took place in regards to the graduate student funding model and it was mentioned that in some cases, depending on the lab

the student is in, they have been required to teach term after term. Chris indicated that although the students are encouraged to teach, they are certainly not required to teach year after year and all of the faculty present at the meeting agreed.

Expectations of the IDP Faculty

Expectations of the IDP faculty were discussed. Chris indicated that we have started to initiate dry appointments for 5 year terms to new faculty who have joined the program, however, we would also like to offer dry appointments to existing faculty as well. So for those of you who would like to continue being affiliated and desire to have a dry appointment, please see Ann and she will assist you with this process. Also, if you no longer wish to be affiliated, please let us know that as well so that we can update our website and email groups.

Training Grant

Charlie indicated that the results of our Training Grant Site Visit was extremely disappointing. Charlie went over some of the critiques from the committee. Unfortunately, they were still not happy with the tables but we really didn't get any direction as to how they could be improved. Another thing that they mentioned is that we really need to push the students to publish more and that they should be the first author of the publication. We currently do not have any requirements for publishing, however, we might need to start being more selective with who we decide to fund on the Training Grant. We shouldn't be funding students just because they are in need of funding, but we really need focus on selecting the top students. In the past the Training Grant was utilized to fund 1st year Biophysics students, however, the quality has not always been sufficient. Also, going forward, we need to ensure that the students are keeping their entries updated in the M-Train database. The committee also noted that they would like to see that the students are obtaining the training that they otherwise wouldn't receive from Biophysics, so we really need to have a broad pool of students and a broad pool of faculty.

The overall consensus from the committee was that they are not recommending funding for an additional 5 year period. The committee might consider funding the grant for a reduced period of 3 years and to reduce the number of slots to 6 students. At the end of the third year, they would re-evaluate the program to see where it stands at that point. Charlie will be contacting the Project Representative at NIH to find out what the next steps are, so the program is currently on hold and we hope to come to some type of resolution in the near future.

Charlie indicated that BIOP 801 and is still meeting, even though the grant is on hold and the students have planned a Training Grant Symposium which will take place on January 24, 2014. They have a great line-up of speakers so he encouraged all to attend. They will also be having a poster session so he encouraged the faculty to have their students present posters. Also, the students received $6,000 from Rackham in support of this symposium, so we need to do everything that we can to support this effort.

Mission

To train students for a life-long career in biophysics and other quantitative life sciences.

Getting Students into the Program

Two routes into the program: Direct Admission and PIBS
About four students through each mechanism per year.

Advertising, Admissions, and Recruiting
NEED YOUR HELP!

Advertising at conferences and other institutions
Service on our Admissions Committee
Participation in recruiting events and follow-up

Course Requirements

Biophysical Chemistry I & II (Biop 520 / 521)
Biophysics Laboratory (Biop 550)
2 Biological Electives, 2 General Electives
Responsible Conduct of Research and Scholarship course
Additional Coursework as determined by the Placement Exam

Lab Rotations

Typically two full-term rotations in first year.
Half-rotations and third rotations should remain exceptions.
Mentors must submit a rotation evaluation at the end of each rotation.

First-year Funding

First-year students are funded in the fall and winter term through departmental fellowships.

Exams

All incoming students take two placement exams (Physics & Biochemistry). Additional coursework requirements will be determined based on these exams.

A single Candidacy Exam is taken after year two, when all course requirements are satisfied, a proposal for thesis work submitted, and a dissertation committee is formed.

The final oral dissertation defense is held when the dissertation is completed, typically after year five.

Other Requirements

Departmental Seminar in year three or four
Submit annual evaluation
Maintain good standing in the program

Good Standing Policy

To remain in good standing, a student must:
- Maintain a GPA of 3.0 or better
- Must complete to lab rotations with a satisfactory (S) grade
- Must find a research mentor generally by May 1, or July 1 at the latest, of the first year.
- Must achieve candidacy by May 31 of the second year.
- Must receive satisfactory (S) grades for all terms enrolled in Biop 990 and 995, and satisfactory or marginal progress assessments on the annual progress report.
- Must fulfill any other requirements set forth by the Dissertation Committee and Graduate Program.

Only students in good standing are eligible for departmental financial support.

Failure to maintain good standing will result in dismissal from the program.

Graduate Student Funding

Once a student is accepted into a research group, the mentor is expected to provide funding for the student.

A funding plan for the student must be developed prior to officially accepting a student into a lab.

Some GSI support is available through the Department, but this cannot be counted on as the primary funding mechanism for a graduate student.

Students are encouraged to actively seek fellowship funding.

Faculty Expectations

Train and mentor graduate students professionally and appropriately in accordance with the rules of the Program, Rackham, and the University. Assume responsibility for student funding.

Contribute to recruiting students into the program.
Advertise the program, talk to and meet prospective students, serve on the admissions committee, etc.

Contribute to teaching our graduate courses (particular 521 and 801/802, and specialty courses).

Dry Appointments in Biophysics

With Biophysics being a Departmental Doctoral Program, the faculty will have to have an appointment in the unit.

We will convert IDP membership into 5-year dry appointments, subject to review.

Biophysics Program

Good Standing Policy

A graduate student in the Biophysics Program at the University of Michigan will be considered in "good standing" if he/she complies with all rules and regulations of the University, the College and the Biophysics Program and performs the duties of his/her appointment as a GSI, GSRA or fellow in a professional and timely manner, and if the following conditions are also met:

1. The student must maintain an overall GPA of greater than or equal to 3.00 for all academic courses taken, including cognates, throughout their residence in the program. *A student whose cumulative GPA falls below a "B" in a given term or half-term will be placed on probation for the following term or half-term, or may be denied permission to register. See the Rackham Handbook for more details.*

2. The student must take two terms of the Graduate Research rotation course (Biophysics 890) and receive a satisfactory grade (S) in both terms.

3. The student **must** find a mentor who will agree to oversee their Ph.D. research (including financial support) by the beginning of the spring term (May 1) of their first year in residence. **Under special circumstances, and with the approval of the Graduate Chair, the student may elect to enroll in a third research rotation during the Spring term. If so, the student **must** finalize the choice of their mentor **by July 1 of their first year in residence. Failure to find a PI by July 1 may result in dismissal from the program.***

4. The student must achieve Ph.D. candidacy by May 31 of his/her second year in residence. This will involve the following sequence of events:
    a. The student **must** assemble a suitable dissertation committee (faculty will sign a form agreeing to serve on said committee) **by February 15** of the second year. **Please note that those students who are doing early candidacy (during the Fall term of their second year) must assemble their committee by October 15.**
    b. The student must fulfill all minimum course requirements for a Ph.D. degree by the end of the Winter term of their second year.

c. The student must prepare a written proposal for his/her Ph.D. research, and disseminate to his/her dissertation committee by the end of the Winter term of his/her second year. The student must then meet with his/her dissertation committee no later than May 31 of their second year and take the required Oral Prelim Exam. In the event that the student does not pass the Oral Prelim Exam on his/her first attempt they will then not be in good standing. The student will have until August 31 of that year to re-take the exam, pass and regain good standing status.

5. The student must receive satisfactory (S) grades for all terms enrolled in Biophysics 990 and Biophysics 995. In addition, the student must receive a "Satisfactory" *or* "Marginal" assessment of progress by their Ph.D. mentor on their annual progress report (Yearly Evaluation) that is to be prepared by the student and mentor each Spring term.

   If a student receives an "Unsatisfactory" assessment in Biophysics 995 and/or on the yearly progress report, this will trigger an immediate meeting of the dissertation committee to review the student's progress, and report back to the Graduate Chair. Based on this report, the Graduate Chair and Graduate Committee may determine that the student is not in "good standing" and may recommend that the student find a new mentor, or they will recommend dismissal from the program.

6. In addition to the general requirements cited above, the student must also fulfill all requirements (e.g. seminars, etc.) set by the program.

It is critical to maintain a record of Good Standing within the Biophysics Graduate Program. Only students who are in Good Standing are considered for financial support. Failure to maintain/remain in good standing will result in dismissal from the program.

Biophysics Graduate Curriculum

General

- Students are admitted to the Biophysics program either directly or through the PIBS (Program in Biomedical Sciences).
- All first year students receive full financial support (stipend, tuition and benefits) through either program.
- Students 2nd year and beyond receive full financial support via a combination of sources (GSRA, GSI or fellowships).
- Students who come through PIBS usually have more of a biology/biolchem background. Students who come directly usually have a physics background.

Curriculum

- Average time to complete Biophysics PhD = 5.20 years
- Students do 2 lab rotations before choosing a lab/mentor. Students may only do half or third rotations in special circumstances.
- Course requirements; 4 core (520, 521, 550 & 595), 2 electives and 2 courses in Biochemistry or Cell Biology PLUS additional coursework as needed.
- Responsible Conduct of Research & Scholarship: **required** completion of research ethics course for all students supported on federal grants (including training grant); Effective F14 Rackham will require this of ALL graduate students. ***RCRS requirement must be completed before advancing to candidacy***.

Latest Program Implementations

- Biophysics Graduate Student Council
- Good Standing Policy
- Seminar Requirement: students in 3rd or 4th year must give a seminar as part of the regular Biophysics Seminar Series in the fall or winter
- Yearly Evaluations w/faculty mentors
- Two placement exams: BiolChem, Physics (to help students choose courses needed to bolster knowledge of a particularly weak area).
- ONE prelim (candidacy) exam