DISSE MINATION ASSESSMENT REPORT, Biology PhD Program, APRIL 2015

Committee composition: The Program’s Graduate Deputy Chairs (representatives from all participating CUNY campuses) were asked to identify faculty and students at their campuses willing to serve on this assessment committee. The Executive Officer contacted those whose names had been put forward and identified four faculty members and two doctoral students who were willing to serve. The committee members were:

Arenas-Mena, Cesar (CSI), MCD/EEB faculty member  
Ikui, Amy (BC), MCD faculty member  
Kottmann, Andreas (SOPHIE) MCD/NS faculty member  
Ogunwobi, Sean (Hunter) MCD faculty member  
Benun, Frieda (BC) EEB student  
Starikov, Lev (SOPHIE) MCD student

The committee convened on February 25, 2015 and then worked together through email correspondence.

A) Statement of the learning goals for the assessment that we reviewed:
The Biology Program’s Third Exam (thesis defense) serves as an assessment of all of the Program’s learning goals. The third exam is an oral defense of the student’s written thesis. The student provides a five-member exam committee with a thesis document one month before the exam (note: at least one examiner must come from an institution outside of CUNY and its affiliated institutions). The student also presents a public seminar on the subject of the thesis during that month. Finally, the student is examined by the committee and is questioned both about the student’s original work and about its broader significance to the field as a whole.

During this process, the student must “demonstrate broad and specialized knowledge in the chosen biology subprogram” (Goal #1), provide evidence of having made “a substantial and original contribution to the field” (Goal #2), “organize, format and present data effectively in both written and oral form (Goal #3), and “interact effectively and collegially with others in the field (Goal #4).” In addition, this exam forms the basis for the student’s efforts to find a post-doctoral position in the field of Biology. Most doctoral students will go on to present their thesis seminars as part of the application process for post-doctoral research positions in universities, museums, research institutions, etc. As such, the thesis defense contributes in no small measure to the student’s professional development.

We considered what we presently do to prepare students for writing and defending their thesis, what we presently require for successful completion of the thesis and thesis defense, and what, if anything, we need to do to improve the process and outcomes.
B) Resources used for our assessment:
- Biology exit questionnaire Sp2015.pdf
- Biology Tables – 2008-2013 entrants –complete.pdf (GC Spring 2014 survey of Biology student experience – all questions)
- DSES Tables Bench Sciences 2014LE notes.pdf (GC Spring 2014 survey of bench science student experience – selected questions)
- Exit Survey Data – 2005-06, 2011-12, 2012-13, 2013-14.xls (GC exit survey data on Biology students graduating in the years indicated)
- GC Exit survey.pdf (Content of GC exit survey)
- Grad positions grads 2012-2014.xlsx (Data we had prior to requesting current CVs)
- Folder: Alumni CVs (of Alumni who graduated 2008 or in years 2012-2014.)

C) Methods of Analysis: We reviewed or attempted to review
(1) Subjective measures of outcome: (i) student experience and exit surveys, (ii) graduation rate.
(2) Objective measures of outcome: (i) job placement (ii) publication (iii) grant success
(3) Comparative analysis of other graduate programs.

D) Our findings:
The committee found un-anticipated variance in levels of satisfaction with the program and program outcomes among program students and alumni. The program has students who like everything the program offers and requires, but there are those who voice unhappiness with various aspects of the program (72% of 112 respondents in the survey of Spring 2014 current students would recommend the program to others, 28% would not). Some students are able to compete successfully for positions at the world’s best labs upon exiting from the program, however, about half (50%) do not have jobs lined up right after graduation. Also, students at different campuses and in different subprograms fair differently in many aspects of program process and outcome. The disparities do not correlate with student GPA. The mentor/sponsor is the prime source of advice during preparation for defense and for the transition to a post-graduation career.

The greatest concern is that only 50% of students enter a new job immediately after graduation. Further analyses are required to determine the cause for this low post-graduation placement. Of particular interest is whether this is due to lack of successful placement or failure to look for post-graduate positions prior to the thesis defense.

E) Proposed Changes:
1) Collect and correlate data of individual teaching load and Ph.D. duration
2) Identify the source(s) of variation in Ph.D. duration with modified survey questions
3) Collect CV from PhD students at time of thesis deposit (publications, awards, grants)
4) Make annual requests for updated CVs from alumni
5) Enter CV data into a searchable database
6) Evaluate if the current structure, scope of offerings, and/or location of Career Advising Center is useful for students.
7) Provide clear information to prospective and entry-level students about average time of graduation and proper preparation for securing jobs (post-doc positions) after graduation
8) Institute a “mentoring Mentors” program to make sure that Mentors are aware of changing job markets, are effectively advising students about job prospects and preparation for job interviews, with an emphasis on job placement at time of graduation.

F) Next steps:
1) Full Assessment report and Executive summary will be read and approved by Program Executive Committee.
2) New policy of obtaining CVs from students at time of graduation will be instituted
3) CV database will be established
4) Discussions will take place with the GC office administering the GC Survey to see if we can better assess the effectiveness of the Career Planning Center for Biology PhD students. Make adjustments, as necessary.