Creative Approaches to Fostering Interdisciplinarity in Graduate Programming

Open Graduate Education

Peter M. Weber
Brown University

CGS Annual Meeting
Washington, D.C.
December 5, 2014
Interdisciplinary Challenges in Doctoral Education

Permeate disciplinary silos
Cross-train students
Enable students to be independent thinkers
Develop new areas of knowledge
Graduate Studies at Brown

50 Doctoral Programs:
- **Humanities:** 19 – from Africana Studies to Theatre and Performance Studies
- **Life Sciences:** 15 – from Biotechnology to Pathobiology
- **Physical Sciences:** 10 – from Applied Math to Physics
- **Social Sciences:** 6 – from American Studies to Sociology

27 Master’s Programs:
- 8 – from Acting/Directing to Classics and Literary Arts
- 7 – from Biomedical Engineering to Public Health
- 5 – from Computer Science to Innovation Management
- 7 – from Education to Public Humanities
Open Graduate Education

The program* enables doctoral students to pursue a master’s degree in a secondary field, which may be far from the doctoral field.

Unique combinations of study enable students to . . .
- Broaden academic experience without sacrificing depth of PhD study
- Write a unique dissertation, drawing from both areas
- Bring a wider base of expertise to the job market
- Lead in catalyzing interdisciplinary pursuits

*A pilot project, supported in part by the Mellon Foundation
Which Programs Participate?

**Doctoral Programs:**
All programs participate

**Master’s Programs:**
- All terminal, on-campus programs
- All master’s programs associated with doctoral programs
Participant: Christian Casey

PhD Program: Egyptology & Assyriology
Master’s Program: Applied Mathematics
Research: Mathematical analysis of ancient languages

“I've always known that I want to incorporate math and computer science into the study of ancient Egyptian language, but I had no idea how I was going to study both in only five years. This program provides the extra time I need to devote individual attention to each subject and to bring them together for my dissertation.”
Participant: Susan Herriger

**PhD Program**: Engineering

**Master’s Program**: Archaeology

Research: Neutron diffraction applications in cultural heritage research

Experiments at Oak Ridge National Laboratory

“I find my program peers to be an extended support network. Balancing time and commitments between two departments has its difficulties, but being able to share our experiences with each other has been helpful.”
The First Three Cohorts

The 2012 Cohort

The 2013 Cohort

The 2014 Cohort

Three cohorts so far.
- 2012: 9 students
- 2013: 9 students
- 2014: 11 students
<table>
<thead>
<tr>
<th>2014: Cohort 3</th>
<th>2013: Cohort 2</th>
<th>2012: Cohort 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PhD Program</strong></td>
<td><strong>MA Program</strong></td>
<td><strong>PhD Program</strong></td>
</tr>
<tr>
<td>Cognitive, Linguistic, &amp; Psychol. Sciences</td>
<td>Computer Science</td>
<td>Egyptology</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>PRIME</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Music: Computer Music</td>
<td>Modern Culture and Media</td>
<td>Computer Music &amp; Multimedia</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Applied Math</td>
<td>German Studies</td>
</tr>
<tr>
<td>Music: Ethnomusicology</td>
<td>Computer Science</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Economics</td>
<td>Applied Math</td>
<td>Modern Culture and Media</td>
</tr>
<tr>
<td>Italian Studies</td>
<td>Theater Arts and Performance Studies</td>
<td>Sociology</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Mathematics</td>
<td>Neuroscience</td>
</tr>
<tr>
<td>Sociology</td>
<td>Biostatistics</td>
<td>Sociology</td>
</tr>
<tr>
<td>Pathobiology</td>
<td>Public Policy</td>
<td>Life Sciences</td>
</tr>
<tr>
<td>Pathobiology</td>
<td>PRIME</td>
<td>Physical Sciences</td>
</tr>
</tbody>
</table>
Parameters of the Program

Admission based on an application

- Thoughtfulness of the combination
- Feasibility of the plan of study
- Enabler of career pathways

Financial Parameters

- An additional year of guaranteed funding
- Enhanced support during the summer months
Successes…

- Students love it!
- Most programs embrace it
- Many faculty write about it in grant proposals
- Now part of the University’s strategic plan
- Outcomes – so far – are excellent
… And Challenges

- Preparedness of the students
- Acceptance by some of the faculty (a small minority)
- Funding models
Program Evaluation

- Time to degree
- Attrition Rate
- Receipt of External Fellowships and Publications
- Career after Graduation
- Comparison to peers in PhD program
- Exit Survey
Lessons Learned – So Far

Students: Happy; but heavy course load (+ teaching assistantships)

Faculty Research Advisors: Might need better incentives

Doctoral Programs: Starting to use OGE as recruitment tool

Master’s programs: No problems reported
Thank you!

For more information, see

www.brown.edu/academics/gradschool/opengraduateeducation or

contact me at

graduate_dean@brown.edu