

The IGERT Program Evaluation:

A Survey of Promising Interdisciplinary Practices in the Classroom

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Introduction

This report is the result of one assessment in a larger study designed to evaluate Maryland's Integrative Graduate Education and Research Traineeship (IGERT) program in language science. The evaluation seeks to determine the effectiveness of the program in meeting its goals. It also aims to obtain information about the program's most beneficial components and those that could be refined to enhance IGERT's impact. The ongoing program evaluation is led by the Director of Assessment in Institutional Research, Planning, and Assessment (IRPA) and a graduate assistant.

This report summarizes the results of a web-based survey administered to all students who were participating in the IGERT program in April of 2012. The survey sought to assess IGERT students' perspectives on courses and particular instructional practices that were effective in enhancing their development as interdisciplinary researchers. The survey also requested that respondents provide suggestions for specific practices instructors could implement in the classroom to enhance students' ability to conduct interdisciplinary research. See Appendix A for survey items.

Data provided in this report represent participants' perceptions of their experience with courses associated with their IGERT curriculum, regardless of whether the perceptions are based on fact. As always, caution should be used not to generalize qualitative data beyond this survey.

Methods

Program evaluators formed the research team responsible for the questionnaire development, data collection, and analyses. The questionnaire was vetted by IGERT program leadership to ensure questions were: (1) clear and understandable, (2) broad, non-leading and open-ended, and (3) capable of capturing a range of responses about the topics. The survey was designed to require approximately 10-20 minutes for completion. Survey items were formatted for web-based distribution and data collection and the instrument was pretested by a graduate assistant and an IPRA undergraduate student.

Data Collection

Program evaluators obtained a list from IGERT administrators of all active IGERT students. These students were invited by e-mail on April 5, 2012 to participate in the survey. IGERT students who had not yet completed the survey were reminded about the opportunity to participate in three subsequent follow-up e-mails from the program evaluators (April 11, 13, and 17, 2012). All IGERT students received one final e-mail reminder about the survey from IGERT administration (April 19, 2012). To verify their identity, survey participants were required to log into a secure University of Maryland website using their directory ID and password.

Participants

Twenty-two of the 37 active IGERT students (59%) completed the survey. Respondents were relatively evenly distributed in terms of how many years they had been in the IGERT program: five reported being in the program for one year or less; seven for two years; five for three years; and five for four or more years. Twelve of the 22 respondents were students in the Linguistics department; four were in the Second Language Acquisition program; two were in the Philosophy department; and one was in each of four additional departments. Fourteen survey participants were funded by IGERT at the time of the survey whereas seven others were previously funded by the program and one respondent had not received IGERT funding. See the *Demographic Table* below for a summary.

The respondents' ongoing participation in IGERT, and the fact that some were at least partially funded by the program, may have resulted in a participant bias. It is important to keep this potential bias in mind as the results reflect a group of students with a vested interest in the IGERT program.

Analysis

After the survey closed on April 24, 2012, IRPA program evaluators analyzed the data using quantitative and qualitative methods. Frequencies for the close-ended items are available in Appendix B. One evaluator analyzed responses to the open-ended items by generating a list of common themes and assigning a code to each theme. The following report is organized according to those themes. To ensure that the report accurately reflects the survey results, a second evaluator audited the analyses at multiple stages of the analysis and reporting process.

Demographic Table

	Frequency
Years affiliated with IGERT program	
1 or less	5
2 years	7
3 years	5
4+ more years	5
Home academic department	
CMSC	1
EDHD	1
HESP	1
LING	12
PHIL	2
PSYC/NACS	1
SLA	4
IGERT funding status	
Unfunded	1
Previously funded	7
Currently funded	14

n = 22

Results

The following survey results are presented in two sections, each of which summarizes the findings from one segment of the free response items. The first segment asked respondents to identify courses that were particularly effective in encouraging their development as interdisciplinary researchers and to describe successful features of these courses. The second segment asked respondents for recommendations for what faculty members might be able to do in the classroom to improve students' abilities to conduct interdisciplinary research.

Features of Effective Interdisciplinary Courses

We asked respondents to name two to three courses they have completed during their doctoral coursework at UM that were effective in their development as an interdisciplinary researcher, then to describe the classes' particularly successful features. Participant responses aligned with three broad types of courses: (1) discipline-based courses in which the student

served as the interdisciplinary agent who connected the course material to his/her research interests; (2) courses designed to be interdisciplinary in their method of instruction and/or course requirements; and (3) courses that were interdisciplinary by virtue of broad participation among students from various academic disciplines.

Student as Interdisciplinary Agent

When survey participants were asked to recall specific courses that influenced their development as interdisciplinary researchers, they most frequently described discipline-based classes in which the student learned new foundational information, research methods or methodologies, or measurement instruments/tools. Although respondents described these courses as challenging, they also described them as particularly beneficial because they required students to "stretch to understand concepts" and/or to "explain [their] ideas to people who are totally unfamiliar with [their] field."

Respondents noted that some discipline-based courses broadened their theoretical, historical, or conceptual understanding of issues within and beyond language science.

[...] this class provided a great opportunity to get outside of my home department, to interact with other students in a different discipline. Participating in this course allowed me to gain a better understanding of a wide range of psychological models of memory, and in short, it allowed me to gain a better understanding of how psychologists proper think about memory. Overall, this course helped to broaden my scope and understanding of the core concepts of memory research, not necessarily just in language.

One respondent described how the foundational knowledge one discipline-based course provided increased his/her comfort level working with a particular research population of interest.

This course covered issues that are of interest to second language acquisition researchers. Although I was interested in working with [...], I was not terribly familiar with the existing literature on [that topic]. It was extremely helpful in building my background knowledge about [the topic] and I now feel more qualified to work with this population.

In addition to increasing their background understanding of unfamiliar areas of language science research, some discipline-based courses provided students with the language and understanding to better communicate their personal research with a broader audience.

[...] It was very helpful for me to explain my ideas to people who were totally unfamiliar with my field and the motivations for all my assumptions. I had to justify every part of every argument.

It required me to think of how I would present my work such that it would be understood and useful for people in a closely related field. Respondents also noted that although challenging, study in an academic department other than their own enabled them to better comprehend lectures and articles from that discipline and in that respect, improved their capacity for interdisciplinary research.

It provided me with the necessary background to be able to converse with my colleagues from the neuroscience-related fields and understand scientific papers better, both in my own field and in other fields.

This course gave me a broad overview of basic areas in neuroscience (auditory, sematosensory, vision, etc). I didn't apply this necessarily to my own research, but it put me in a position where I can go to a neuroscience talk and be able to follow. It enhanced my interactions with researchers from other areas.

Some respondents described how discipline-based courses pushed them into unfamiliar domains that eventually widened their awareness of the "interdisciplinary overlap" of some language science topics. Though all three of the comments below characterize the courses as demanding, one respondent noted that the exposure to another discipline "inspired" him/her to learn more about the field.

I feel like this course was the most challenging course for me in my entire Ph.D. experience, so I had to make quite a stretch to understand the concepts from [different fields] and relate/transfer the knowledge to my own research interests. That made me aware about the interdisciplinary overlap between the fields that are seemingly unrelated, but yet the topics that are being examined are very common.

This course provides a very good introduction to a completely new area for me; although I didn't completely understand everything, it opened the door to the computational field for me, and inspired me to learn more in this field.

This course was outside of my comfort zone in several ways. The first was that in psychology, our usual motivation for asking a research question is an observation about behavior, whereas in linguistics, the motivation is usually linguistic theory. Because I was not particularly well-versed in linguistics, I learned a lot just while trying to understand the motivation for a study. [...]

Two respondents also emphasized how a particular course challenged them to consider the "big picture" of their research and to "situate [their] area of interest among other domains." The course prompted students to consider how their specific research questions fit within the broader issues in the field of language science.

This course is really outside my comfort zone because I have no background in the field of computer science and neuroscience. However, this course really broadened my knowledge and introduced me to topics such as the turning machine and neural networks (i.e. how the brain encodes events in memory and retrieve them when needed). This course also inspired me to think about the big picture of my research: how does my research in language acquisition relate to important issues such as how the brain works? How does the brain process the auditory signal received through the ears and use those signals to look up information in the memory? I think the most effective feature of this course is that it motivates me to think about the big picture questions.

This course helped me to situate my area of interest among other domains which make up the cognitive sciences and helped me to see the commonalities and differences among them.

Many respondents reported benefiting from classes that exposed them to new research methodologies and experimental paradigms they can employ in their own research.

[...] We were also introduced to a variety of experimental methods that we can use to examine these topics and issues in phonology. I think the features that are particularly useful for my development as an interdisciplinary researcher are using examples of different languages to demonstrate the phonological issues and exploring different experimental paradigms that can study these issues.

[...] We also discussed different experimental paradigms used in L2 research such as priming, eye-tracking, brain-imaging, etc. I think the most effective feature that contributes to my growth as an interdisciplinary researcher is the variety of languages and research methods that we discussed. I learned to employ these experimental methods into my own research.

Many survey respondents also described how courses that taught specific analytic skills improved their development as interdisciplinary researchers. Some students reported seeking out exposure to specific statistical, programming, or computational skills that would aid in their own research.

I wanted to learn how to understand and build computational models. This class taught me that. This is a tool that adds depth and breadth to my work on first language acquisition.

Another goal of my IGERT research program is to incorporate computational methodologies into my research on the interaction between memory and language. This involves building, developing, and working with computational models of memory access in sentence comprehension. Through this class [...] I was introduced to the core concepts of computational theory, information processing, and I was able to acquire the necessary programming skills to work with advanced computational models.

Beyond learning new skills and research methods, survey respondents also commented on the benefits of courses that provided practical opportunities for "hands-on engagement" with the tools and techniques through class exercises and projects. For some students, these opportunities expanded their awareness of and appreciation for different methodological approaches to their research questions.

[...] The weekly labs gave me hands-on experience with processing signals, in a simplified environment (we worked with very simple signals).

Learning to program in Python and to solve the homework problems gave me a better understanding of what's possible in terms of computational linguistics and statistical learning. I really tended to underestimate the potential of statistical learning before, not understanding how it could represent some of the nuanced and abstract distinctions I associated exclusively with human cognition. I still think human cognition and language use is fundamentally different from what computers can do, but I have a better appreciation for how machine learning can lend perspective into some of the same questions we ask with behavioral experiments. I'm just generally less intimidated by programming now, as well. I can automate some of the tasks I used to do tediously by hand, and this helps with all areas of my research.

This class provides a very broad overview of how computational modeling work can inform our study of Cognition, and our class project allows us to focus on a topic related to our own research and learn specific techniques that are useful for our research from other disciplines (e.g., statistics, computer science and engineering).

In sum, when asked about classes that were particularly effective in aiding their development as interdisciplinary researchers, many respondents described courses that may not have been designed to be interdisciplinary but that nonetheless served an interdisciplinary function by exposing students to new material, research methods, and practical skills outside their home discipline. Many students reported that these courses were difficult, but that they enriched their understanding of interdisciplinary research and/or their technical repertoire for addressing their own research questions.

Courses Designed to be Interdisciplinary in Content or Mode of Delivery

In addition to discipline-based courses, survey respondents noted many courses in which the readings, assignments, and discussions were designed to be accessible to students from various academic backgrounds.

More specifically, respondents described how instructors in two courses provided background information and examples from multiple disciplines in order to illustrate the common problems and questions researchers face when approaching the same research topic. The second quote below notes that the instructors not only enumerated examples from their own work, but leveraged the students' experience by drawing examples from them as well.

The course was well organized to bring out foundational issues in a variety of domains. We began by dissecting certain basic computational concepts (e.g. symbols, procedures, memory, etc.) at a fairly abstract level. Then we looked at a broad variety of research areas in cognitive science (e.g. modularity, language, social cognition, navigation...). It was very interesting to see how the same unresolved basic questions affected the assumptions underlying research in every domain.

The instructors attempted to both give examples that they had experienced in their own field but also to elicit potential examples from students in the class, to give us an idea of the range of challenges that are faced by individuals in different disciplines.

Respondents described instructors' use of cross-disciplinary projects and experiments in class as particularly effective in furthering their understanding of interdisciplinary research. Students appreciated when instructors offered the opportunity for practical experience with the course material "in a simplified environment."

The psycholinguistics seminars were always designed with an eye towards interdisciplinary integration; the most effective component was the focus on getting the students to develop interdisciplinary projects and experiments in class.

The course was a signal processing course and it was oriented towards people who didn't have previous experience with the contents but had worked with biological signals (EEG, MEG, etc.) The weekly labs gave me hand-on experience on processing signals, in a simplified environment (we worked with very simple signals).

Respondents also noted that frequent opportunities for discussion and clarification were especially beneficial in courses where students had various levels of exposure to the course topic and discipline.

The course leveraged my intermediate-level psychology background as a backdrop for teaching me the parts of linguistics that are relevant to my interests. There was also ample room during the class for discussion and clarification for those of us who perhaps weren't familiar with some underlying principle.

Beyond checking in to make sure everyone was following the material, one respondent noted how a particular instructor leveraged students' different disciplinary preparations to illustrate the spectrum of research opportunities in cognitive science.

One of the first few weeks of class was dedicated to each student presenting a brief summary of their research, and the last week was dedicated to a general review in which we focused on drawing relevance from course material to our own work. This served to highlight the range of research undertaken in the cognitive science domain, and to help me put in perspective the lines of research I could pursue related to my specific interests.

Respondents also described the instructional benefits of two courses that were co-taught by faculty members from different departments. Having co-instructors allowed students to see how researchers from differing disciplines might approach a common problem. One great thing about this course was having [two professors from different fields] teach the course together, because they were able to pace the course in a way that everyone stayed informed and engaged, and it was inspiring to watch them cross-pollinating ideas as they taught. The content was useful as well - thinking about the different ways languages conceptualize events at the semantic level, and the features that children attend to in order to learn them, gave me a clearer lens on the adult language acquisition questions I research. [...]

Co-taught by [professors from different departments], the course is interdisciplinary in nature. The course focuses on different perspectives on language acquisition, and the corresponding methodologies. It is interesting to see how people from different backgrounds ask different questions when look at language acquisition.

Whether taught by one or multiple instructors, survey respondents appreciated when faculty designed course readings, discussion, and projects to accommodate and incorporate students' varying academic backgrounds. They also noted the benefits of instructors' use of examples and readings from multiple disciplinary viewpoints.

Courses with Diverse Student Enrollment

The third type of course respondents described as being effective in developing interdisciplinary researchers was courses which enrolled students from varying disciplines and provided ample opportunity for discussion and interaction. Respondents emphasized that having classmates with academic preparation in an area other than their own enriched classroom discussions by allowing for multiple viewpoints on common issues of interest.

These courses also appear to increase students' engagement in course material. One respondent said that having classmates from different but related areas "facilitated thinking" about class topics. Another noted that having a discussion-based course with students from multiple disciplines who were willing to participate in class discussion was "extremely fulfilling." Still another respondent said a particular seminar was "very stimulating" because it "[brought] together people from completely different viewpoints on the role of computational methods in the language sciences." Other students described similar benefits to having classmates from disciplines other than their own:

[...] The class has students from diverse backgrounds and as such is very stimulating for critical thinking. Moreover, the issues we deal with in class are perhaps common ones for all students; however, the different perspectives of those same issues that we cover in class, the different possibilities of approaching and researching them, is what makes us delve into the interdisciplinary realm.

[The class provided the] opportunity to discuss central questions in cognitive science with students from different disciplines (biology, neuroscience, psychology, etc.). The topics covered in this class are broad but are all central themes in cognitive science.

The course assumed little in the way of prior background and was run in a Socratic style, allowing students from different backgrounds to discuss the various ways we each conceptualized the general problems that were presented in class.

Summary

Survey respondents described a variety of course features that aided in their understanding of conducting interdisciplinary research. Often, students were called upon to make connections between coursework they completed in disciplines other than their home department and their own research. Although challenging, taking classes in an unfamiliar area helped respondents to broaden their theoretical, historical, or conceptual understanding of problems in language science. These courses also increased some respondents' ability to communicate their own research to different audiences and to better understand research from another domain. In many cases, students learned valuable statistical or methodological skills from classes in other departments that they could apply to their own research.

Respondents also highlighted the benefits of courses that were designed for an interdisciplinary audience. They found courses that incorporated examples and course content from multiple disciplines, as well as cross-disciplinary course assignments, to be particularly helpful. Some students also appreciated when instructors recognized that not everyone had the same level of exposure to the course topic and thus, created opportunities for discussion and clarification.

Many respondents described how courses co-taught by instructors from different disciplines and courses with an interdisciplinary student enrollment were particularly effective in their development as interdisciplinary researchers. Having the opportunity to discuss common problems with individuals from different backgrounds improved students' engagement with course material, as well as their understanding of cross-disciplinary problems.

Suggestions for Classroom Practices

The second free response survey question asked respondents for specific suggestions regarding what faculty members could do in the classroom to make them better interdisciplinary researchers. Presented in no particular order, respondents provided five main recommendations: (1) encourage students from various disciplines to enroll in their courses and participate in class discussion; (2) assign students from different backgrounds to participate in group work; (3) employ "comprehension checks" and formative assessments to make sure everyone is on the same page; (4) incorporate practical experience with data analysis and; (5) adjust course materials to incorporate readings from various perspectives on the same topic and attempt to make connections between the material and students' interests.

First, as detailed above, students reported benefitting from class discussions and group projects with classmates from academic disciplines other than their own. In line with those comments, some respondents suggested that faculty members could encourage individuals from

various disciplines to enroll in their courses and to actively participate in discussions. One respondent suggested that faculty employ a more "Socratic" question and answer format to enhance discussion and facilitate the development of a "common vocabulary."

The most important part of any class is having good discussions. This seems to work best when the instructor acts as a well-informed but non-partisan moderator. It's also crucial to have good readings from multiple perspectives. The classes that have been most broadening for me have been in other departments (i.e., not linguistics) and NOT focused on language. That's partly because we seem to have difficulty attracting non-linguists to courses in the linguistics department. I would love to have the opportunity to have more intensive discussions with students from other departments on language-related topics.

I think a more Socratic style is essential here. Not only does this expose the students (and the faculty!) to new ways of thinking brought in by students of varied disciplines, but it facilitates the creation of a common vocabulary that participants can use to talk about shared issues. I think a strong common vocabulary allows us to express the nuance of our views, whereas most of the time the nuance gets lost when a view crosses disciplinary boundaries.

Second, in order to enhance the benefits of a multidisciplinary course enrollment, many respondents stressed the potential of group work. In particular, three students suggested that instructors assign students from different disciplines to work together to promote interdisciplinary collaboration and communication.

I find group work very helpful in getting insights from different perspectives. So if the faculty member would assign more group work, there might be more opportunity for students from different departments to work together.

Another thing that I imagine would have helped immensely would have been to do some kind of in-class small group work with deliberately mixed small groups (i.e. pairing linguists up with computer scientists to do in-class assignments).

Facilitate collaboration among students so that people don't just work in the same groups all the time and mix more.

Most courses that I've taken at Maryland have involved a variety of students from different research backgrounds. Professors can take advantage of this diversity by assigning students from different areas to work together on a class project. These experiences are particularly helpful if the project involves using a methodology that is unfamiliar to a number of the students.

Third, respondents noted that faculty could assess students' familiarity with the course topic or discipline and employ frequent "comprehension checks" and formative assessments as needed to ensure everyone is following the material or discussion.

When a course is cross-listed between groups with really different backgrounds, such as computer science students and linguistics students, it would be hard to over-emphasize the importance of frequent comprehension checks and formative assessments. I think that computational linguistics course would have gone more smoothly if we'd started out a little slower, getting everybody on a similar page first.

Sometimes a better explanation of what may be basic in one field, but foreign in another would be useful, but not all the time, because too much of this would make the whole topic too diluted to be productive.

Fourth, respondents noted that faculty could incorporate opportunities for practical experience with data into their courses. One student noted that practical experience enriches students' understanding of unfamiliar material.

I think that having labs and homework are essential. I don't find it useful to just talk about concepts and topics. Having people get dirty with the type of data from other fields is crucial to give them a feel of both the fields *and* the type of problems that arise.

Finally, survey respondents suggested that instructors could adjust their course materials and class discussion to reflect a more multidisciplinary emphasis. More specifically, students recommended that faculty incorporate readings from various disciplinary perspectives on the same topic to illustrate the topic's interdisciplinary nature. They also suggested that faculty connect theories from multiple disciplines to broader language science questions so as to help students see the "big issues and questions."

I think faculty members can discuss how theories in other disciplines can help us think about our research questions in language learning and processing. For example, theories in computer science such as how the computer encodes and retrieves information may inform us about how the human brain encodes and retrieves information (including linguistic information).

Students need to be aware of the big issues and questions that motivate research in intersecting disciplines and how these may result in differences in perspective. Often we assume that other researchers working on related areas share the same background, or care about the same issues, when instead their focus is on another issue.

One respondent also noted the benefit of having an instructor make connections between the course topic and its implications for other disciplines or other language science problems.

Slightly adjust the classes so as to accommodate different students' profiles. For instance, it is not always useful to attend a class in another department if no connection is made with other areas. Attending a course on first language acquisition may not be as appealing if discussions do not involve some implications for second language acquisition.

However, as I said, for this to be achieved, professors will need to adjust their courses, which may be too much to ask.

Summary

When asked to identify courses and course features that aided in their development as interdisciplinary researchers, respondents described courses that took on a variety of formats. Although students highlighted some unique benefits of discipline-based courses, interdisciplinary courses, and courses with students from multiple disciplines, they also enumerated some effective features that crossed class formats. For example, respondents found opportunities to engage with individuals from academic backgrounds other than their own, either through class discussion or specific interdisciplinary class projects, to be particularly valuable. On a similar note, they appreciated when instructors incorporated the variety of students' disciplinary backgrounds into the classroom, both by encouraging them to make connections between course content and their own research and by providing frequent opportunities for discussion, clarification and collaboration. Additionally, respondents emphasized the importance of opportunities for practical engagement with course material, especially in classes where they are learning new research skills.

In addition to highlighting specific design features of effective courses, multiple respondents noted another important benefit to taking challenging courses in an unfamiliar discipline. These courses not only exposed students to the broader history and research surrounding interdisciplinary problems, but also forced them to sharpen their abilities to digest research from another discipline and to better communicate their own research interests and motivations to multiple disciplinary audiences. In this respect, many respondents emphasized how classes that *were not* designed for an interdisciplinary audience could be especially effective in sharpening their ability to conduct interdisciplinary research.

Appendix A

Promising Practices Questionnaire

- 1. How many years have you been affiliated with the IGERT program?
 - a. 1 year or less
 - b. 2 years
 - c. 3 years
 - d. 4 + years
- 2. As part of your IGERT training, you have taken some courses that were designed to be interdisciplinary and others that were disciplinary in nature but required you to study in an unfamiliar area. Think about 2-3 courses you have taken during your UM doctoral coursework that were particularly effective in your development as an interdisciplinary researcher.
 - a. Course 1: What was the course's department and its name and/or course number?
 - b. Course 1: Why did you register for the course? (check all that apply)
 - i. It was a requirement (IGERT or academic program).
 - ii. It was an elective.
 - iii. It was suggested by a friend.
 - iv. It was suggested by a faculty member.
 - c. Course 1: What features of this course do you think were most effective for your development as an interdisciplinary researcher?
 Repeat for courses 2-3
- 3. What could faculty members do in the classroom to make you a better interdisciplinary researcher?

Appendix E	3
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Taple	1-	Course	Frec	iuencies

Department/Course	Frequency
	Frequency
Computational Linguistics L(CMSC722)	1
Computational Linguistics I (CMSC723)	1
Computational Linguistics II (CMSC/73)	1
Machine Learning (CMSC/26)	1
EDHD	
Input and Output in Language Acquisition (EDHD779A)	3
HESP	
Psychoacoustics (HESP722)	1
LING	
Syntax (LING610)	2
Phonology II (LING621)	1
Psycholinguistics (LING640)	5
Psycholinguistics II (LING641)	3
Computational Linguistics (LING723)	1
Seminar in Computational Linguistics (LING848)	1
Seminar in Psycholinguistics (LING849)	3
Seminar in Language Acquisition (LING859)	2
Introduction to Computational Modeling of Language (LING889A)	3
Computational Psycholinguistics (LING889B)	1
NACS	
Research Ethics (NACS600)	1
Introduction to Neuroscience (NACS641)	1
Cognitive Neuroscience (NACS642)	2
Quantitative Processes of Biological Data (NACS728B)	1
Introduction to Cognitive Science (NACS728Y)	7
DHII	
Metanhysics Mind and Language (PHII 660)	1
PSVC	Ŧ
Topics in Language and Cognition (PSYC789L)	1
The Seven Sins of Memory (PSYC798M)	1
Development of the Social Brain (PSYC798R)	1
Developmental Cognitive Neuroscience (PSYC889J)	1
SLAA	
Phonological, Semantic, and Morphological Issues in Second Language	1
Bilingual Language Processing (SLAA749Y)	2
Doctoral Independent Study (SLAA888)	1
STAT	
Applied Probability and Statistics (STAT400)	1
Applied Probability and Statistics II (STAT401)	1

	Frequency
It was a requirement (IGERT or academic program).	21
It was an elective.	32
It was suggested by a friend.	3
It was suggested by a faculty member.	21

Table 2- Reasons Why Students Enrolled in Course

n = 52