

# Undergraduate Research

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## Table of Contents

<b>Executive Summary</b>	<b>2</b>
<b>Background</b>	<b>2</b>
Existing Programs within the College	2
<b>Recommendations</b>	<b>3</b>
Defining Expectations	3
Accountability	4
<b>Research Methodology</b>	<b>4</b>
Field Analysis (Advisor Feedback)	4
<b>Acquired Data and Discussion</b>	<b>5</b>
External University Models	5
<b>Conclusion</b>	<b>5</b>
<b>Sources</b>	<b>5</b>

## Executive Summary

One need not examine the latest studies or seek an interview with a career advisor to intuit that undergraduate students benefit hugely from opportunities to conduct or participate in research. A survey conducted in 2004 by the US National Library of Medicine found that over 83% of 1,135 participants “began or continued to plan for postgraduate education” as a result of their opportunities to experience post-undergraduate scholarship. Participants also “indicated gains on 20 potential benefits and reported on career plans.”

2010 Campus Undergraduate Research Mentor of the Year Dr. Nan Ratner at the University of Maryland wrote an essay delineating the mutual benefits to be enjoyed by both mentor and mentee in a research partnership that was published in the February 2013 issue of *Access Academics and Research*. “Increasing student involvement in faculty research is a win-win proposition from many perspectives” Ratner writes. “Student assistance can greatly speed a faculty member's ability to conduct research. It can encourage students to explore research careers for themselves. It builds student-faculty interaction, thereby improving the undergraduate educational experience and allowing students to develop one-on-one relationships with faculty that aid them in securing important graduate school recommendations.”

Across the nation, students and faculty alike agree that engaging in such a mentorship program is hugely beneficial for all involved, and the Undergraduate Research committee for the Student Advisory Board for the Office of the Vice Provost for Undergraduate Education would like to bring such a program to Indiana University with a single essential modification: rather than instating a system to pair undergraduates with faculty, undergraduates will be paired with graduate students, so that the two individuals may experience a sort of mutual education that is unique, efficient, and innovative.

## Background

### Existing Programs Within the College of Arts and Sciences

#### 1. Studio Art

The Studio Art program within the College of Arts and Sciences does not currently have a formal mentorship program in place; rather, such relationships are forged by the curriculum and the format of classes: their small size organically encourages close partnerships and mentor-like dynamics between undergraduate students and graduate MFA AIs.

#### 2. Theatre, Drama, and Contemporary Dance

The department of Theatre, Drama, and Contemporary Dance is unique in its encouragement of collaboration between undergraduates and graduate students because it is integrated intuitively into the actor, director, designer, technician, and crew trainings and roles. Each production given by the department involves students at all stages in their educations, and collaboration is inevitable in this environment.

#### 3. Linguistics

The Linguistics department possesses an the beginnings of a mentorship arrangements in their division of students into two organizations based on

academic standing, “Underlings” being undergraduates and the “IU Linguistics Club” being graduates. The two organizations have events together and are invited to departmental seminars, coffee hours, and other opportunities to forge relationships with faculty. However, the advisor expressed interest in adding a more officially sanctioned mentorship program between the two organizations rather than using them as a way to connect them with professors, so a margin for improvement toward the vision still exists.

#### 4. Mathematics

The Mathematics department possesses a program entitled “Research Experiences for Undergraduates,” or REU, that matches undergraduate students with faculty members for a semester or a summer, one of the oldest programs of this nature in the country.

#### 5. History

The History department, according to its advisor, recently passed curriculum to enhance opportunities for original research, but no concrete collaborative relationship between undergraduates and graduates is currently in place.

#### 6. Religious Studies

Jacob Boss, a current graduate student within the department of Religious Studies, just presented his plan for a mentorship program between URSA, the Undergraduate Religious Studies Association, and GRSA, the Graduate Religious Studies Association. His proposal was approved, and the department is adopting his plan for the coming school year. Boss’s objectives include a research-assistant relationship between graduate students and undergraduate majors or minors that will encourage them to pursue the composition of their own intensive research project: an Honors thesis.

## Recommendations

Based on the feedback provided by over twenty advisors and faculty members throughout the College of Arts and Sciences, the following framework is our ideal vision for a mentorship program between graduate and undergraduate students to be established for all departments within the College that do not currently possess such an opportunity.

### Defining Expectations

As President of the Bloomington Academic Advising Council Will Smith pointed out in an interview, demands on graduate students have escalated exponentially in recent decades; expectations have risen sharply and their time has become more stringently dictated, which results in less time and energy available to be channeled into a mentorship relationship with an undergraduate student. We are certainly cognizant of these demands and restraints, and do not intend to structure this program in a way that translates into additional extracurricular work for graduate students. On the contrary, there are several ways in which receiving support from an undergraduate will likely reduce the graduate student’s workload.

Undergraduate students will be assisting graduate students in any and all ways that best suit their mutual interests; their relationship will include whatever responsibilities may be tailored to

accommodate the work being done. If the graduate student applies to have an undergraduate serve as a research assistant on work for class, that student will require signed permission from the professor teaching the course. Because the graduate student will be spending a significant portion of time and effort demonstrating proper research strategies, instructing the undergraduate in the lifestyle of producing a large body of work, and having insightful discussions with the undergraduate about their personal questions, concerns, and visions for their careers, the exchange for research assistance is quite balanced.

### **Accountability**

Each department will appoint three to five members of the faculty who will receive applications to participate in the mentorship program from both graduate and undergraduate students. The screening process for each half of this relationship will include a submitted resume, written responses on why the student feels well-equipped to participate and what their expectations are for the other participant, and an interview. In this way, it may be assured that both parties enter into this mentorship dynamic with every intention of working clearly, fairly, and productively. Once an undergraduate is matched with a graduate student, the two will have a meeting with the faculty member to develop a timeline and concrete set of expectations for the semester or year ahead. The faculty member will keep in touch with both individuals throughout their work together to ensure all expectations are being met. When the project is complete, both graduate and undergraduate will participate in its presentation and complete a post-experience survey so that data may be collected and mapped to identify aspects that require improvement and track benefits.

## **Research Methodology**

### **Field Analysis and Advisor Feedback**

Many advisors expressed trepidation or outright disapproval of such a program because they are of the opinion that such collaboration is most beneficial between undergraduates and professors, with graduate students excluded from such a relationship.

Advisors in the Political Science department conveyed that expectations for faculty included a mentorship relationship with students, which is executed better by professors due to their extensive experience and sustained presence on campus, which allows them to oversee long-term projects. Graduate students inevitably matriculate into other educational programs or employment, which limits their availability as mentors.

Advisors in the Philosophy department were of the opinion that their major does not intuitively lend itself to research or inter-student collaboration on large projects, and highlighted independent studies programs and honors theses as the ideal framework within which to gain special experience in the field, citing the position that students are more productive under faculty supervision.

In the Physics department, advisors shared that the research group environments in which most students participate contain a member of the faculty, a graduate student, and one or two undergraduate students all working and learning together on long-term projects. This arrangement, they said, was ideal because all three educational branches were involved and a professor was present to hold the graduate and undergraduate students accountable to each other.

## Acquired Data and Discussion

### External University Models

Below are brief overviews of university models that provide insight into the innovative measures that are being implemented to promote student success around the nation.

1. Northern Illinois University  
At NIU, their Office of Student Engagement and Experiential Learning offers undergraduate research opportunities for all students in every major, from English to biology. A visit to their “Program Map” page reveals over 25 different options tailed to meet the needs of each major organized by those best suited to freshmen, sophomores, juniors, seniors, and transfer students. Their programs all encourage undergraduates to select a faculty member by reviewing their profiles and bodies of work so they may be paired with someone conducting research in their area of interest. While this relationship includes undergraduates and faculty members, our aim is to map this structure on to an undergraduate-graduate relationship here at IU.
2. University of California - Berkeley  
The University of California - Berkeley offers a program entitled the Undergraduate Research Apprentice Program, or URAP, that looks very similar to that found at NIU. The application to the program allows an advisory committee to match students to faculty members so they may embark upon a semester- or year-long research project together. Again, the aspect of the program that makes it unique from other universities is that it is structured for all majors, not just those that intuitively lend themselves to research.

## Conclusion

Benefits for the College-wide implementation of a graduate-undergraduate mentorship program abound. Firstly, undergraduate participants would earn internship credit through either career services or their individual departments so they may see valuable quantitative results beyond the implicit advantage of declaring such experience on a resume or in an interview. Secondly, graduate students would benefit from the opportunity to guide and instruct a younger student, which will enrich their educational experience and provide them with teaching experience should they choose to remain in a university environment as a faculty member. Finally, both students would very likely experience an advantage when applying to their next academic or professional phase due to their participation in such a unique, innovative program: data shows that individuals with research and/or teaching experience, as referenced in the summary, experience greater retention and higher post-graduation placement.

## Sources

<http://www.niu.edu/engagedlearning/research/faq.shtml>  
<http://research.berkeley.edu>  
[http://www.asha.org/Academic/questions/Encourage-Undergraduate-Research/?utm\\_source=asha&utm\\_medium=newsletter&utm\\_campaign=accessar020713](http://www.asha.org/Academic/questions/Encourage-Undergraduate-Research/?utm_source=asha&utm_medium=newsletter&utm_campaign=accessar020713)  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC533131/>