

ACS Interdisciplinary Mini-Grant Proposal

Title: Interdisciplinary Quantitative Data Colloquium

Faculty Submitting Request:

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Category of submission: new interdisciplinary course/teaching and learning opportunity

Date of submission: October 5, 2006

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Summary of Proposed Interdisciplinary Quantitative Data Colloquium

We propose implementing a non-credit interdisciplinary learning opportunity in the form of a Quantitative Data Colloquium. The colloquium will meet in a computer lab every three weeks during the course of the academic year, for a total of ten times. Each meeting one faculty member or student will be responsible for making a data set ready for analysis and making it available on a server linked to the computer lab. At the colloquium that person will describe the data set to the participants and share his or her ideas for analyzing it. Participants will then have a chance to explore the data set themselves, offering their own suggestions for how it might be analyzed.

The colloquium will be promoted to students by campus-wide advertisements and by the participating faculty through their contact with students in classes and advising, and with other faculty that might be interested. Advertisements will promote the colloquium as a fun way to learn quantitative analysis, a good way of getting advice on their own projects, and a means of learning about faculty research interests and projects on which they might want to collaborate. The advertisements will mention the fact that refreshments will be served, but hopefully more of a draw will be the data itself. With that in mind, the first few meetings will feature data sets that we think will be especially popular, such as those related to movies, music, romantic relationships, sports, alcohol, grades, the job market, etc.

Most of the funding provided by the grant will be used for faculty stipends to support their time preparing for their turn hosting the colloquium, when they will have to organize and clean the data, prepare an introduction, and create any handouts or online resources that will be useful. The grant will also support the purchase of statistics software for the computer lab and any faculty members who do not already have it. A small portion of the funds will be used for refreshments.

Project Description

Goals and objectives:

1. To provide a regular opportunity for students to observe and participate in a form of interdisciplinary collaboration.
2. To provide a regular opportunity for students to observe and participate in planning and conducting quantitative data analyses.
3. To provide a regular forum for faculty that share interests in quantitative data analysis to collaborate across disciplines and model such collaboration for students.
4. To provide a regular forum for faculty and students to get advice and suggestions on quantitative data analyses for their own research.

Background and campus context.

Interdisciplinary study lies at the heart of Centenary's mission to offer an educational environment where one can "explore, invent, and connect." All students are introduced to interdisciplinary study through the First-Year Experience (FYE). During the second semester of this year-long course, students approach a common topic from a variety of perspectives. Teachers for the spring class are drawn from different departments, and students are assigned randomly to a section. All sections meet at the same time during the week, and come together for scheduled convocations featuring speakers whose expertise and experiences illustrate various aspects of the common theme. All FYE students present their research on the topic at a year-end forum.

Centenary faculty often collaborate with students who share their research interests. The College encourages these collaborations through endowed professorships dedicated to supporting faculty-student research collaborations during the summer months.

Activities such as this proposed colloquium complement the College's mission to provide opportunities for interdisciplinary study and faculty-student research collaborations.

Detailed interdisciplinary plan, demonstrating adequate planning and preparation for faculty/staff/student collaboration.

The colloquium will take place on Friday afternoons at 3:00, a time when there are no classes scheduled on campus. All faculty participants in the colloquium have agreed to keep that time available to be able to attend. It will meet at the College's primary statistics teaching computer lab in the campus library, Magale Library Lab Room 10. The layout of the lab makes it easy for people to circulate in the room to view each other's computer monitors, and the room also has an instructor's computer screen image projected on a large screen at the front of the room.

Prior activities or research related to proposal.

With regard to the training and research experience of faculty, this colloquium will use and reinforce participants' basic understanding of statistics and quantitative analysis techniques. It will provide a forum for applying and refining such knowledge. Five of the participating faculty have taught statistics, and the remaining faculty use quantitative methodologies in their own research.

The prior experience of many students on campus is also relevant. A basic course in statistics is required for many of majors on campus, including Biology (the largest major

on campus), and most of the Social Science majors. It is also common for students to take statistics as a means of fulfilling the mathematics portion of the core curriculum. Finally, many students use quantitative methodologies in their independent research, such as honors projects; this colloquium will be an excellent forum for sharing their analysis ideas for such projects.

Projected timetable.

Assuming we are awarded the mini-grant to implement the colloquium, we plan to use next summer to organize and prepare for it, then implement it the following academic year (2007-2008). We will meet five times per semester for about an hour and a half.

Requested budget, with justification for each line item: reassigned time, equipment, supplies, travel, etc.

Faculty stipends.....	\$5,000 (\$833 per person)
Software/Datasets	\$3,000
Refreshments.....	\$300 (provided by the Office of the Provost at Centenary College)

The faculty stipends will support faculty's time preparing for the colloquium during the summer. The software purchased will be SPSS for those faculty who do not own it. Any remaining funds will be made available for purchasing access to datasets. The Provost will provide \$300 for buying light refreshments to entice students, faculty, and staff to attend.

Context of the interdisciplinary offering in curriculum and /or faculty's research agenda or context of the co-curricular offering in campus life:

Our enthusiasm for creating and participating in this colloquium comes from our belief that it will be quite useful for students and faculty. As noted above, a quantitative data analysis colloquium will allow faculty who teach statistics and/or use quantitative methods to share knowledge and ideas; it will also allow the many students who have taken statistics for their major or core curriculum requirements to apply their knowledge to the analysis of real data.

We should also note that the colloquium obviously serves the part of the College's mission where it seeks to educate its students to "analyze information quantitatively..." as written in the College's Purpose Statement.

Anticipated impact on the discipline, the institution, and the students:

One important consequence of the colloquium will be to connect faculty that use similar research techniques. At a small college with small departments such as Centenary, faculty hires are usually made with minimal specialty overlap by department. Because of that faculty can feel isolated from others conducting similar research in their discipline. This colloquium will facilitate research oriented communication between quantitative researchers at Centenary. Although these researchers will likely not pursue the same research questions, they use the same or similar techniques, and a forum for sharing their knowledge of those techniques is one way that a collegial campus environment promotes research.

However, we fully expect that the colloquium will facilitate more than simply sharing technical knowledge. Many discussions will likely range into theoretical or substantive research issues. Pedagogical ideas about how to teach statistics or research techniques will likely also be generated. The colloquium may also stimulate some faculty

and students to discover shared interests and lead to collaborative interdisciplinary research, or interdisciplinary, team-taught courses.

However, over and above the benefits for faculty, the most important and predictable benefit of the colloquium should will be modeling for students how interdisciplinary collaboration occurs, and how the stimulating and engaging nature of intellectual exchange is pursued for its own sake. In other words, students sitting in on the colloquium will see faculty playing with ideas and intellectually engaging with each other for the sheer fun of it. And, as those students interact with each other, and with faculty inside and outside the colloquium, they will develop their own affinity and skill for intellectual play. Students will also practice an aspect of professionalism modeled by faculty, where arguments can be made energetically, but without vested emotion or personal attacks. Certainly the colloquium will benefit all students taking courses in statistics and research methods, as well as those many students using quantitative methods in their independent research. For example, each spring many students present their independent research to the campus community as a whole at the Annual Student Research Forum; we expect many of the students conducting quantitative analyses in preparation for the forum to benefit from this colloquium.

In general, we will note an interdisciplinary colloquium such as this will demonstrate the utility of Centenary's liberal arts orientation. Faculty and students combining their diverse interests and specialties to advance an analysis shows the value of gaining diverse skills through a liberal arts education.

Evidence of institutional support.

Centenary encourages interdisciplinary study and student/faculty research in various ways, including

- **First-Year Experience**
This two-course sequence introduces students to the liberal arts in an interdisciplinary context.
- **Multi-Discipline Majors**
Students not wishing to concentrate in a single discipline may elect to major in Liberal Arts or design an Interdisciplinary Major. Courses for both of these majors must be selected from more than one of the Colleges academic divisions.
- **Student/Faculty Endowed Professorships in Humanities, Natural Science and Social Science**
In 1998 and 1999, the Louisiana Board of Regents provided funds to match a gift by an anonymous donor to establish an endowment to support student/faculty research at Centenary College of Louisiana. To enhance the research and creative activity of our faculty and students, earnings from this endowment support faculty/student teams who work together, as mentor and apprentice, on research or creative activities during the summer.
- **Annual Student Research Forum**
Students from all departments present to the campus community data from research projects conducted under the direction of faculty advisers. The April 21, 2006, forum included 7 poster presentations involving 10 students; 15 presentations in the social sciences; 13 presentations in the natural sciences; and 7 presentations in the humanities.

- Support for this particular colloquium includes funding from the Provost's Office for refreshments.

Evaluation, Dissemination, and Continued Support

Success of the colloquium will be measured, in part, by attendance of students, and of faculty not directly participating in the grant. A number of non-participating faculty have already expressed interest in attending the colloquium to get ideas and feedback for their own research; and, as noted above, we expect a number of the students conducting independent quantitative research to use the colloquium for assistance on those projects. We would consider an average attendance of between 20 and 30 to be a success.

Success will also be measured using an open-ended questionnaire distributed to attendees at the final colloquium of the year. Attendees will be asked to articulate to the colloquium's strengths and weaknesses as they perceive them, and to suggest any changes they would like to see in its structure or content. We will consider it an indicator of success if at least 50% of the students and faculty responding to the questionnaire say the colloquium was generally positive and should continue.

Finally, success will be measured by the degree to which participating faculty are willing to continue the colloquium the next year, and indefinitely into the future. Each of the participating faculty are from departments that teach statistics and quantitative methods courses and will be considering making the colloquium a regular means helping students learn those methods through hands-on experience in an open, interdisciplinary context. Means of institutionalizing it more fully will be considered, such as offering a course credit to students for full participation.

A paper describing the colloquium will be presented by at least one of the faculty participants at an ACS conference, or some other conference on interdisciplinary studies. The paper will detail what we learned through the process of implementing this colloquium, including its successes, failings, and amendments for the future.

Please find the C.V.'s of participating faculty attached to this document.

Disclosure statements are not applicable; no other on-going grant activities coincide with this proposal.