

INTERNATIONAL CONNECTIONS FACULTY GRANT PROPOSAL

Faculty Member: Linda Lowe-Krentz
Professor, Biological Sciences

Date Submitted: March 12, 2012

Trip Dates: September or October 2012

Project/Professional Goals:

My goals with this proposal are to develop a student exchange program that will serve students in the Biological Sciences areas at Lehigh and the Microbiology (and possibly the Biochemistry program) at NIU Galway. I will work with faculty at Galway to explore course exchange options that students could use. I have met briefly with the head of the Microbiology program (Vincent O'Flaherty) during his visit to Lehigh last year, and interact with him regularly in Lehigh supervision of students in the Ireland summer program who are doing microbiology research during their summer study abroad. I have been involved in this supervision since we began regularly allowing students to do research in the Microbiology labs in Galway. I believe the exchange program will be a win/win for the students from both institutions, and I would like to use some of my time (while on sabbatical in fall 2012), to bring preliminary discussions to fruition.

Expected Outcomes:

Outcomes for Lehigh Biological Sciences: Students who major in Biological Sciences, and particularly those who are pre-med (or have some other pre-professional goals) find it very difficult to study abroad. Their senior years are complicated by on-site interviews at professional schools. These are typically scheduled at the convenience of the medical school and require the students to schedule costly trips. In their first three years students must complete the courses required for MCAT or other pre-professional exams (as well as studying specifically to take those exams – during junior year). The required courses include the year of English, Math (1 – 1.5 years), a year of General Chemistry, a year of Organic Chemistry, a year of Physics, a course in Biochemistry, and now specific social science background (Psychology and Sociology). Besides these required collateral courses, students must complete at least the core Biology sequence before taking the MCAT (or other) exams and find that more Biology usually improves their performance on these exams. So, to make study abroad a realistic possibility for most students requires the opportunity to transfer credit for specific science courses and to have those courses (including upper level courses taught in a language in which they are fluent). It is my expectation from my preliminary evaluation that courses at Galway would be appropriate for a number of the specific requirements, making study abroad in Galway a realistic possibility for most of our pre-med and other pre-professional students. It will be important to be able to attend classes and talk directly with faculty teaching these classes to determine the science courses that will work best for Lehigh students. The variety of courses taught outside of the sciences will provide a nice opportunity for Lehigh students to also gain cultural exposure in their studies. I have been involved as the Lehigh supervisor for undergraduate Biology majors who participate in the summer program at Galway for approximately six years, and have thus communicated with many of the Microbiology faculty and read about their work. This has been a great opportunity for Lehigh students, but it is a limited period of time and the cultural exposure is also limited. I am eager to expand these opportunities for our students. While Professor O'Flaherty interacted with a number of Lehigh faculty members while he visited us, establishing scientific collaborations and an exchange beyond simply the level of students studying abroad will take additional interactions by more Lehigh faculty members. I also anticipate looking into options for research collaborations between our two faculties by interacting with faculty from both Microbiology and Biochemistry during my visit.

Outcomes for NUI Galway Microbiology and/or Biochemistry Majors: Because the financial cost for college in Ireland is supported by the state, opportunities for Galway students to study abroad is largely dependent on exchange programs. Lehigh has strong course opportunities across the board in Biology, and should be able to provide sufficient Biology coursework in areas required of NUI Galway students in Microbiology and Biochemistry. My contact is in the Microbiology department, but my preliminary evaluation of the programs based on information on their web site suggests that students in either program could find appropriate courses at Lehigh. By seeing their programs first hand, I will be better able to help students from Galway select appropriate courses in content and level of material. In addition, I will be better able to identify their collateral preparation.

Curriculum Development: I hope that this experience of learning more about the programs in Biology at NUI Galway will provide some ideas to me as a member of our Biological Sciences undergraduate program committee, and I understand that the Galway faculty in Microbiology are looking at some program redesign from their end. Thus, my trip can also help me learn and then share with my colleagues how a university which has a much more focused program (almost all of the coursework is in the major) trains students and what our students miss on the one hand and gain on the other.

Professional Contact:

Vincent O’Flaherty, Professor and Head of Microbiology, NUI Galway

Trip Preparation: I have participated in pre-med advising and BIOS program development, management and evaluation at Lehigh since 1995. I have talked with several individuals familiar with the overall student issues at NUI Galway and I have carefully explored the program web sites for the Biochemistry and Microbiology programs at NUI Galway. From those explorations I have an understanding of the general content and organization of their programs. We will continue to communicate electronically before my trip to optimize what we can accomplish while I am in Ireland. I cannot tell, however, much about the level of detail, incorporation of laboratories, methods of presentation, etc. without visiting, seeing the classes in action and interacting directly with some of the Galway students. I have also interacted with Prof. Cathy Ridings, from the College of Business. She has developed one such exchange, and therefore the institutional interactions have been developed and are in place to make the exchange I propose work.

Proposed dates: We will determine a time in September or October 2012 that works well for the faculty at NUI Galway and fits with my ongoing laboratory commitments at Lehigh if the proposal is approved.

Proposed Budget:

Item	Amount (USD)
Airfare: Newark-Shannon round-trip economy September/October 2012 time frame	\$ 1000
Airport Parking in the US (one week)	\$ 132
Transportation to Newark Airport (mileage approx 130 @51 cents/mile)	\$ 65
Lodging: Single room at Inn in Galway For 10 nights (\$150/night) Includes breakfast	\$ 1050
Ground Transportation in Ireland Between Shannon Airport and Galway	\$ 300
Occasional taxi	\$ 150
Meals At \$50/day for 10 days	\$ 500
Total	\$3,197