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Proposal title: Biology Department Exchange with University of Kent

Country/ies visited: United Kingdom

Institution visited: University of Kent

Dates of travel: March 11-16, 2013

Number of student participants: 0

Previous IP proposals submitted and grants awarded (list titles, countries and dates): None

Have all required reports been submitted?: Not applicable

Other funding for this activity available/applied for: None

Proposal Abstract (75 word maximum): SDSU and the University of Kent (UK) have an exchange agreement. The UK Biosciences Study Abroad Coordinator visited SDSU Biology to initiate an exchange in 2011. The major stumbling blocks are: 1) defining UK courses that would adequately substitute for SDSU Biology courses and 2) initiating research placements for SDSU research credit. My aim is to analyze the UK curriculum relative to SDSU student needs and discuss placements in laboratory research internships.
Travel report:

I. **Opening/overview of intentions/activity**: SDSU and the University of Kent (UK) in Canterbury have an existing exchange agreement. UK Biosciences is very interested in initiating exchange with SDSU Biology. I have been involved with this process, since I have an ongoing collaboration with the former head of Biosciences at UK, I spent a sabbatical there in Fall 2008, and I have sent a Ph.D. student to my collaborator’s laboratory to perform research. Dan Lloyd, the UK Biosciences Study Abroad Coordinator, met with me, the SDSU Biology chair and Dave Rudel from ISC to initiate this process in 2011 and I attended a similar meeting with his colleague, Peter Nicholls, in 2012. UK recently placed an undergraduate Biosciences major at SDSU. The major stumbling blocks to a fruitful exchange of SDSU students are: 1) defining UK courses that would adequately substitute for SDSU Biology courses and 2) initiating research placements that could be used for Biology 497/499 credit for our students. Traditionally students in Biology are reticent to spend a semester abroad, since they think it will increase their time to graduation. However, if the outlined concerns can be overcome, students can be apprised of the availability of the UK program by appropriate announcements in courses, on our web site and through email. My aim in making a reciprocal visit to UK will be to have a detailed look at their curriculum relative to ours, to make suggestions for changes (as they are in the revision process) that might improve transferability, and to discuss how the laboratory research internships that they provide for their undergraduates can be used to receive Biology credit for SDSU students.

II. **In preparation for the trip abroad**: I corresponded with Dan Lloyd (UK Biosciences Study Abroad Coordinator) and he agreed to host my visit. Mike Geeves (my research collaborator) agreed to serve as my scientific host and to arrange accommodations. My schedule was finalized by the department secretary. I also talked with the SDSU Biology faculty undergraduate advisor, Andy Bohonak, about the requirements and obstacles he has encountered regarding Biology undergraduate study abroad. Details as to UK statistics and recognition by the Ministry of Education were unnecessary, since SDSU already has an exchange agreement in place.

III. **Upon arrival/specific activity**: My visit consisted of formal meetings with 1) Dr. Dan Lloyd and Dr. Peter Nicholls of the BioSciences Department. 2) Professor Rosaleen Duffy and Tanya Humble from the Durrell Institute of Conservation and Ecology (DICE). 3) Hannah Ellerby, International Support and Placements Coordinator provided a campus tour, including international student housing. In addition, I had informal discussions with Professor Michael Geeves in regard to research opportunities for SDSU students. He hosted a dinner with Drs. Lloyd and Nicholls to continue these discussions.

IV. **Conclusion, recommendation, and next step**: UK is an excellent university with high caliber biology research. It is thus a valuable partner for SDSU study abroad opportunities. Advantages of exchange between the universities in biology include the presence of faculty members on each campus who are familiar with
the partner institution, a history of research collaboration, high quality course availability and no requirement to speak a foreign language. Students will benefit by learning in a different environment, having the opportunity to expand their course choices and enjoying increased opportunities for laboratory research internships. The major next steps include assessment of UK Biosciences course offerings (https://www.kent.ac.uk/courses/modulecatalogue/sciences.html) and their applicability to the SDSU Biology major, facilitating contacts with UK faculty for student research placement and advertising the availability of the exchange program. Note that some courses from the Conservation and Ecology program (https://www.kent.ac.uk/courses/modulecatalogue/socialsciences.html) may also serve as Biology electives. Some of these courses are more directed at the social sciences, but others may be suitable for the major, e.g., Evolutionary Genetics and Conservation, Primate Behavioral Ecology, Spatial Analysis (GIS), Ecological Statistics (Mathematics Department) and Evolution of Human Sexual Behavior.

Typically a UK student takes 4 modules (classes) per semester. If research is included during a semester, then a student would take 2 course modules and 2 research modules. Either route yields 60 UK credits per semester, which is roughly equivalent to 15 SDSU units. It is important to note that UK offers both “short, fat” modules and “long, thin” modules. The former are offered during a single semester while the latter are offered as a two-semester sequence. This needs to be considered for SDSU students who plan on only a single semester abroad.

After detailed discussions, it was generally concluded that the best situation for SDSU students would be to take advanced courses at UK that could satisfy SDSU Biology elective requirements, rather than attempt to transfer core courses for credit at SDSU. This can be done in conjunction with performing laboratory-based research to receive credit in Biology 497 or 499. Hence, two courses and a laboratory research module would provide a full semester that could count toward the degree.

Next steps include: 1) promotion of the opportunity through email to majors, website listing and announcements in majors courses, 2) assessment of appropriate courses for SDSU credit (perhaps via one-on-one interactions with prospective study-abroad students) and 3) arrangement for research opportunities at UK. I suggest that: the promotion be an effort undertaken by the undergraduate advising office with my input, that the course assessment continue to be done by our faculty undergraduate advisor, and that the research opportunities be handled by me in conjunction with colleagues at UK.

In regard to opportunities for UK Biosciences students at SDSU, it should be recognized that one UK student is currently at SDSU and this should increase interest in the exchange with her fellow students at UK. Further, UK students add an additional year to their three-year degree in order to study abroad. Thus, it takes commitment, money and time for these students to study abroad. In contrast we are making an effort to not extend the date of graduation for SDSU students.
V. **Additional Information:** Due to the 3-year nature of the UK degree and CSU policy, the undergraduate advisor informed me that only courses typically taken during year 3 (the terminal year) at UK may be considered upper division. It should be noted that some courses can be taken during either year 2 or 3, and these certainly should be able to be counted as upper division electives.

Another area for future development with UK is the exchange of graduate students. UK is quite interested in sending their PhD students to SDSU for 16-week rotation projects. Certainly that would make sense for my lab and that of my collaborator, but I am sure there are other collaborations that could occur. In exchange, they would host MS students (or possibly PhD students) from SDSU for a similar period.