

## **UCSC Disciplinary Communication Improvement Grants DC Call for Educational Grants**

The Vice Provost and Dean of Undergraduate Education and the Academic Senate Committee on Educational Policy are pleased to announce the availability of funds to assist with instructional improvement initiatives for grants focused on Disciplinary Communication.

For 2014-15, we seek to fund about 10-20 projects for a total expense of up to \$150,000. The program is expected to continue for 4 years, depending on the rate of use of funds.

DC Grant Proposal deadline: **November 22, 2013 and March 20, 2014**

**at 5 p.m. sent via email to Susanna Wrangell (swrangell@ucsc.edu)**

Funding available: **July 1, 2014**

Report required: **July 1, 2015**

### **Purpose:**

The purpose of Disciplinary Communication Grants (DCG) is to enhance writing proficiency and accomplishment within majors by promoting innovation and assessment of new approaches to DC education.

Example projects:

- Undertake a formal analysis of the existing DC offering to inform plans for the future
- Facilitate collaborations with the writing program
- Launch a writing tutoring program
- Create an online or technology-assisted course
- Develop a new course or DC pathway in the major
- Support graduate students assisting underprepared or ESL students

### **Decision Making:**

The Senate Committee on Educational Policy (CEP) will recommend to the Vice Provost and Dean of Undergraduate Education proposals receive funding based on the priorities listed above and the department's justification for the request. Proposals that are submitted after the due date will be considered as long as funds are available. An application form is attached.

## **Application for UCSC DCG Funds**

**Submit to the Academic Senate Office, c/o Susanna Wrangell**

**(swrangell@ucsc.edu) by November 22, 2013 and March 30, 2014.**

Proposals must be approved by the department or program chair and Dean. They are due in the Academic Senate Office by November 22, 2013 and March 30, 2014 at 5 p.m. and may be submitted by email to swrangell@ucsc.edu.

1) Proposed title for Disciplinary Communication Grant (DCG)?

Development of a course on "Technical Writing and Communication in Computer Science"

2) Department/Program:

Computer Science Department

3) Amount requested:

\$11,188

4) Number of students affected:

Approximately, 50 students each time the course is offered (up to 150 students per year, if the course is offered every term). Every student majoring in the BS in Computer Science degree program or in the BA in Computer Science degree program will be eligible to take this course.

5) Overview of the program's DC requirement:

Currently, Computer Science majors satisfy the DC requirement by taking one of the following courses: CMPS 115; CMPS 132 and 132W; CMPS 180 and 180W; CMPS 195 (Senior thesis); or CMPE 185. However, CMPE 185 is only open to Computer Science majors by permission of instructor.

6) What is proposed?

The aim of this proposal is to design and develop a new upper-division course on writing and communication in computer science. This course will be available to all students majoring in the BS or in the BA degree programs in Computer Science. The primary goal of this course will be to help students acquire writing and communication skills when addressing a technical audience. At the same time, the course will be particularly geared towards students planning to pursue an advanced degree in computer science. As such, it will span a range of topics, from preparation of a statement of purpose for graduate school applications to critical readings of published research papers and synthesis of these readings in a comprehensive survey.

Phokion Kolaitis requests one course release, so that he can design and develop this course during Fall 2014. The course will be further developed and refined during Winter 2015, and then offered for the first time in Spring 2015 with Kolaitis as the instructor of

record. To this effect, Kolaitis has already submitted the required course approval paperwork, which is currently under review by CEP.

As part of the development of this course, Kolaitis will peruse and analyze the content of similar courses in other institutions. Based on a preliminary investigation earlier this term, it appears that very few computer science departments in research universities offer such courses; one notable exception is the School of Information and Computer Science at UC Irvine, where a course on “Critical Writing on Information Technology” (ICS 139W) is offered every term by different instructors.

During Fall 2014, Kolaitis plans to produce a detailed outline for the proposed course and develop a series of assignments for each part of the course. He also proposes to hire one or two undergraduate students who will have to complete the assignments, after they have been developed, and provide feedback to Kolaitis, so that the assignments can be improved. In addition, Kolaitis and the student assistants will compile a comprehensive list of resources about writing and communication in computer science. This list will be posted at the webpage of the course, after the course has been fully developed.

#### 7) What problem will this proposal solve?

At present, the Computer Science Department does not have a course exclusively dedicated to writing and communication in the discipline. As stated above, computer science students satisfy the disciplinary communication requirement by taking one of the following courses: CMPS 115; CMPS 132 and CMPS 132W; CMPS 180 and CMPS 180W; CMPS 195 (Senior thesis); and CMPE 185. However, in reality, almost all students satisfy the disciplinary communication requirement by taking CMPS 115, which is a software engineering course. This is so because only a handful of students have opted to take one of the other CMPS courses, while enrollment in CMPE 185 is currently “restricted to majors in Computer Engineering, Electrical Engineering, Bioengineering, Bioinformatics, Robotics Engineering, or Network and Digital Technology, or by permission of instructor”.

The proposed course will offer all students majoring in the BS or the BA in Computer Science degree programs the opportunity to satisfy the disciplinary communication requirement by a taking a course exclusively dedicated to this purpose. Moreover, the proposed course will alleviate enrollment pressures on CMPS 115.

#### 8) How does the DC fit within your program’s learning outcome goals?

The ability to write and communicate effectively is of paramount importance to all computer professionals, as they are asked routinely to produce technical reports or give presentations in front of a technical audience. The main learning outcome goal of this course to help computer science students develop the necessary skills for effective writing and communication in computer science across a broad spectrum of topics, from preparing resumes to preparing proposals, and from preparing user documentation to surveying the literature and synthesizing the material into a technical report.

9) Detailed budget: (you may attach additional spreadsheet)

One course release for Professor Phokion G. Kolaitis:	\$9,788
Funds to hire two undergraduate students on work study to assist with the development of the course (100 hours x \$14/hour):	\$1,400
Total amount requested:	\$11,188

10) Assessment plan. How will the effectiveness of this change be measured?

A midterm teaching survey will be carried out during the first offering of the course. After this, a follow-up teaching survey assessing the effectiveness of the course will be distributed to the students who took the course the year before. This will be repeated for three years. Based on the analysis of these surveys, changes to the syllabus and the content of the course will be made to improve the course.

11) Sustainability. How will this innovation be continued without DCG funding?

Once CMPS 185 has been developed and taught for the first time, it is anticipated that it will become a standard course offered by the Computer Science Department on an annual basis. As such, CMPS 185 will be included in the Curriculum & Leave Plan of the Computer Science Department each year, without the need of continued DCG funding.

Recommended by (or attach dated email approval):



3/17/14

\_\_\_\_\_  
Dept. Chair or Program Director Date



3/17/14

\_\_\_\_\_  
Dean Date

**Approved by CEP May 22, 2013**