

**Summer Undergraduate Research Program  
Faculty Proposed Projects  
2013**

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**1.**

**Research Project Mentors:** Kristina Ackley (Lead), Zoltan Grossman, Laura Grabhorn  
**Junior research partner positions available: 1 Project Title: Indigenous Placemaking**

Description: The junior research partner will assist in a project on Indigenous placemaking. We seek to understand the ways Indigenous people create physical places (buildings, reservation planning, public art) and rhetorical spaces (ideologies of Indigenous nationalism). We are particularly interested in examples that go beyond replicating settler models of erasure, bounded territory, and race. The junior partner will learn skills in ethnographic interviewing, cartography, and community planning to 1.) document and begin a spatial, ethnographic, and visual studies analysis of the 2013 Tribal Canoe Journeys, 2.) closely examine the ways Indigenous people are reclaiming place and decolonizing spaces, particularly through the (re)naming and (re)mapping of place names, and 3.) complete a comprehensive literature review on the ways Coast Salish people have continued to envision the reservation as sustainable and enduring places.

The project is appropriate for students with upper-division critical analysis skills. The junior partner will first build a foundation in understanding the historical and ongoing effects of settler colonialism, as well as gain skills in mapping software and interviewing techniques, and will use visual culture as a way to interrogate an Indigenous sense of place. This is a full-time commitment, with time allocated to review primary and secondary sources as well as complete sequential work in ethnographic interviewing, cartography, and critical analysis. Space will be provided in the Longhouse for work done on campus. The student is expected to travel to the Quinault reservation for approximately five days in late July 2013, where modest accommodations and meals are provided.

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2.

Measuring Oxygen Distributions

1-3 students

Clyde H. Barlow, Ph.D.

Member of the Faculty, Chemistry

The Evergreen State College

Lab I 054

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The goal of this research is to develop polystyrene microspheres and spectrophotometric methods to measure oxygen gradients in tissues. Oxygen concentrations can be measured from quenching of phosphorescence from dyes that have long lived excited states ( $\sim 500 \mu\text{s}$ ). We will develop microspheres that contain mixtures of 3 luminescent dyes, 2 of which are sensitive to oxygen. The combined emission band produced by the 3 dyes will provide information to calculate oxygen concentration, but the light emission can also act as a subcutaneous illumination source to measure absorbance of chromophores in tissues. Therefore, the light emission from microspheres placed under a skin graft could contain information about the oxygen concentration beneath the skin graft and about hemoglobin oxygenation within the skin. In this manner the microspheres would simultaneously measure both tissue  $P_{O_2}$  and hemoglobin saturation. This work is funded by the National Institutes of Health.

The basic tasks involve manufacturing 15- $\mu\text{m}$  diameter polystyrene microspheres using microfluidics, manufacturing microspheres with defined concentrations of phosphorescent dyes, recording emission spectra of microsphere suspensions in the presence and absence of hemoglobin at graded oxygen concentrations. Data analysis will require use of software for matrix-based mathematics. Students working on this project do not need prior experience with all of the methods. Rather, students should have good laboratory skills, and an experimental knack. Backgrounds in chemistry, mathematics, and/or computer-based analysis and experience with spectroscopy will be advantageous.

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### 3.

#### **Biogeochemical cycling in Pacific Northwest ecosystems**

**Faculty (Abir Biswas, Biogeochemistry, Geological Sciences)**

(Project could support up to 3 students.)

This project seeks students working on aligned studies investigating nutrient and trace metal cycling in local ecosystems. Students will have a significant responsibility in conducting fieldwork to collect soils and potentially other ecosystem compartments (eg. wood, rocks, lichens). Student(s) with in-program bench laboratory and/or field sampling experience, preferably with ICP-MS or other analytical experience, will be able to engage in and conduct measurements of nutrient availability and weathering in local soils in connection with biota in forest and prairie systems. Analytical experience using ICP-MS, is highly preferred though experience using other analytical instruments or SEM could also be relevant. Student(s), earlier in their academic career, who are interested in developing biogeochemical sampling and analysis skills over this summer (and hopefully into the future), could develop laboratory skills while focusing on studies of mercury (a bio-accumulating toxin), to quantify its distribution in different ecosystem compartments and working to assess its potential for uptake into local food webs. Students will have the possibility of participating in a field research project at Mt. St. Helens in early September. Potential researchers should have lab or field experience (hopefully both), strong skills in scientific writing and working with primary literature, and be able to commit 20-30 hrs/week to this project. Interested students are strongly encouraged to contact the faculty (Biswas) directly and projects could potentially be modified slightly to account for students' backgrounds or previous research experience.

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4.

**Niche Analysis of *Callipepla* quail species**  
**Faculty Jennifer Calkins**

1) The goal of this project is to generate niche models for each of the four species of *Callipepla* quail; it is part of a study on stochasticity and the evolution of behavioral plasticity.

This project involves a) gathering occurrence data from field records, museum collections, primary sources and ebird records b) mapping these data c) collating vegetation and climatic satellite data for these regions d) modeling the niches of the species using Maxent . Depending upon the number and interest of the students, field surveys, in particular Washington state occurrence of California quail, might be incorporated as a component of the project.

We are conducting this research in collaboration with Drs. John McCormack and Amanda Zellmer of Occidental College in Los Angeles.

2) Students will be responsible for all major aspects of data collection and for collaborating with the faculty advisor and Drs. McCormack and Zellmer on the data analysis. They would be expected to commit at least 12-15 hours weekly to the project.

3) Currently, external funding is not available for the niche analysis of this group although funds are dedicated to aspects of the broader project.

4) Much of this work can be done remotely. Students will need to meet weekly in Olympia or Seattle and to travel to UW's Burke Museum in Seattle and to any included field sites.

5) Intermediate/Advanced

6) Faculty meet at least once a week with students and will teach data collection methods and analysis.

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5.

**The Evergreen State College Summer Undergraduate Research Program**

Research on Phytoplankton Ecology in South Puget Sound

Gerardo Chin-Leo

This research seeks to understand the factors that control seasonal changes in phytoplankton species composition, abundance and biomass in South Puget Sound. This research is significant because the occurrence, distribution and severity of harmful algal species (HAB) have been increasing worldwide including Puget Sound. It is important to identify the natural and anthropogenic factors that cause HAB events. Information on phytoplankton species diversity and their ecology is lacking in South Puget Sound particularly during the summer when HAB events are more severe. Students involved in this project will conduct weekly monitoring to determine phytoplankton species composition, biomass and abundance of dominant species. They will also measure water quality parameters that are relevant to phytoplankton ecology. Related work may include determining small-scale patchiness of plankton accumulations, refining sampling methods and microscopy studies of individual species using light and electron microscopes. Two students would be involved in this project. They will share the weekly sampling responsibilities and data analysis, and also have an additional project in the field or in the lab. Experience with microscopes (light and or electron) is desirable.

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6.

Hirsh Diamant, PhD  
The Evergreen State College,  
[diamanth@evergreen.edu](mailto:diamanth@evergreen.edu)  
360-867-6736

Dear members of The Evergreen Undergraduate Research and Creative Scholarship Committee,  
Please accept the proposal for Summer 2013 Undergraduate Research project in:

**Silk Roads- Media, Arts, Business, and Culture**

1) A project description and faculty responsible:

For centuries, the ancient Silk Roads moved ideas and goods between the great civilizations of Asia, Pacific Rim, the Middle East, and the New World. From the time of Marco Polo and Genghis Khan to Yo Yo Ma, the Silk Roads have connected people and cultures and fostered the development of music, art, religion, and commerce. The research project will examine historical Silk Roads and will focus on contemporary global connections. Looking through the lenses of Media, Arts, Business, and Culture the project will address the question: How can the good will of cultural and economic exchange be developed and sustained? Particular focus may be in areas of health, consciousness studies, education, cultural studies, and film. Selected students will work with Hirsh Diamant as primary faculty. Evergreen faculty members Thuy Vu and Bob McIntosh will provide support and assistance in the areas of Business and Economics.

2) Primary role of students in this work (type of work, weekly level of commitment):  
Selected students will develop a Plan of Research and Study.

3) Is any external funding available to support the study?  
External funding may be available to support the study.

4) Study location (Is travel required?)  
Travel is optional and is not required. The research can be done abroad and/or in the US.

5) What levels of students (Beginning – Advanced) are most appropriate for this experience?  
Any levels of students would be appropriate. Students must be prepared to carry independent work, be self-directed, have good time management skills, and feel passionate about the focus of their research.

6) How the faculty will be available for mentoring.  
Faculty will be available at all stages of research in person or via email.

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## 7.

### Plant Community and Ecosystem Ecology Research in Western Washington Ecosystems Dylan Fischer, PhD

Intended for 1-2 sophomore-senior students

In this project, students will evaluate responses of prairie plants to prescribed fire using a multi-year experiment in western Washington prairies. The project will use twelve large-scale paired experimental plots established in 2011, where fire was either excluded or introduced as part of ecological restoration. Students will measure differences in plant communities between burned and unburned prairie early in the season. This work will require experience with taxonomy and use of dichotomous keys, as well as statistical approaches to community analysis. Late in the season the students will transition to measuring soil carbon and nitrogen differences among treatments using a new elemental analyzer purchased for the college in 2012. Applicants should have some experience in laboratory techniques. Finally, students in this project will have the opportunity to work on two additional projects. First, students will evaluate differences in soil carbon flux among permanent forest plots with differ in tree biodiversity in The Evergreen State college Forest Reserve. This project will involve the use of a field infra-red gas analyzer. Second, students will have the opportunity to participate in a new project at Mount St. Helens (WA) comparing recovery of vegetation in old growth forests versus clear cuts following the 1980 eruption. This shorter project will take place in early September. Students should have access to their own transportation or be able to drive a manual transmission.

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8.

**Faculty:** Karen Gaul

**Disciplinary Fields:** Anthropology, Sustainability Studies

**Project Description:** *Sustainability from the Inside Out: Applied Yoga in America* is a research opportunity to join faculty research for a book project. This book explores avenues in “applied yoga,” or ways people are taking yoga off the mat and engaging with communities in schools, prisons, hospitals and more. This book considers American yoga practices as launching sites for community engagement and social transformation. The book will link ancient Vedic teachings about service-related yogic practice (*karma yoga*) to service-related yogic impulses in North America today.

The project draws from fields of cultural and applied anthropology, neuroscience, health and medicine, yogic history, and other forms of social analysis to explore theories of consciousness, mind, action and service. An ethnographic approach enables the voices of practitioners to speak for themselves, sharing important experiential perspectives.

**A Student Researcher would:**

- locate relevant yogic texts as well as literature in the sustainability field
- read texts for related themes and summarize key points
- help interview local yoga instructors and practitioners in the region in person and/or via email
- help with analysis of material

**(possibly 20-30 hours per week)**

A small amount of local and/or regional travel may be involved for interview purposes. Otherwise, the project work will be local to Olympia. The faculty member will be available for weekly meetings and discussion about the work in progress. Students with research experience in the social sciences and/or sciences would be ideal.

No funding currently exists for this project.



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9.

**Jennifer Gerend, Ph.D., AICP and Ralph Murphy, Ph.D.**

***A Survey of Municipal Planning Practices in Washington State***

**1) A project description and faculty responsible**

This research project combines the areas of urban planning, public policy, geography and statistics. Jennifer Gerend is leading a study of municipal planning practices in Washington State around retail and downtown revitalization. The main work to be undertaken this summer involves the design and implementation of a survey for planning officials; Ralph Murphy will collaborate on the survey design.

**2) Primary role of students in this work (type of work, weekly level of commitment)**

The student would be involved in meetings about the survey design, gathering e-mail address data for municipal planning officials to feed into the on-line survey, assisting with follow-up communications to ensure a strong response, and in the final analysis. There is some flexibility for the student as to when the work could take place, though the main work month will be July – approximately on a part-time basis, during weekday, daytime business hours.

**3) Is any external funding available to support the study?**

The faculty members involved in this project are funded through a TESC Sponsored Research grant.

**4) Study location (Is travel required? No)**

TESC Olympia

**5) What levels of students (Beginning – Advanced) are most appropriate for this experience?**

Advanced – In order to appreciate the content of the questions, the hierarchy of municipal planning officials to be contacted, and the complexity of undertaking statistical empirical analysis for scholarly research, a student with some background in public policy and/or urban planning plus statistics is preferred. Internship experience would also help.

**6) How the faculty will be available for mentoring.**

This is a special opportunity to be intricately involved in a study of a rarely-surveyed group of professionals. Jennifer and Ralph work from their offices at TESC, both located on the 3<sup>rd</sup> floor of Lab I. In the absence of a science lab where the student could work, we will explore the summer availability of some of the offices nearby that frequently house visiting faculty. Jennifer and Ralph look forward to bringing a student (1) into every aspect of this project. The majority of the work will take place in July, with some meetings before and afterwards for planning and analysis.

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**10.**

Interactive Computer Graphics for K-12 Education.

Faculty: Paul R. McCreary

Phone: 3032

Email: [mccrearp@evergreen.edu](mailto:mccrearp@evergreen.edu)

With today's readily available software and hardware, if you can envision an image in your mind's eye, you can place that image onto a computer screen. If you can envision a dynamic transformation, you can depict that action in a manner that allows a student to take part in the activity. Interactive graphics programs can help K-12 students learn spatial/geometric and algebraic concepts, improve hand-eye coordination, reinforce graphing skills, and introduce basic programming skills. We will make extensive use of *Mathematica*, a software "front end" that supports numeric and symbolic computation and graphic manipulations. We will translate some well known math lessons into graphic settings. We will create activities based on Escher tessellations and other media art that students can interact with and conduct thought experiments.

Students will be responsible for reading suggested articles about the software and lesson possibilities. They will be responsible for applying skills which they learn to basic graphics programming. The time commitment would be approximately five hours per week meeting and working with the faculty on the Tacoma campus.

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**11.**

**Faculty:** Lydia McKinstry, Ph.D., Organic Chemistry

**General Research Interests:** Organic synthesis, including asymmetric synthesis methodology, chemical reaction dynamics and small molecule synthesis.

**Specific Project Description:** The overall goal of this project is to offer a research opportunity where students can gain hands-on experience with advanced chemical research techniques and methods. Students with previous experience in organic chemistry (sophomore-junior level) will develop their skills in the theory and practice of chemical synthesis by working as an apprentice on this ongoing laboratory-based project. The specific aim is the development of a versatile synthetic route to a molecular 'template' that will be used to construct a class of enzyme inhibitors. These inhibitor molecules have been designed as specific 'chemical tools', which will be used to investigate the mechanisms and signaling steps of enzyme mediated apoptosis, or programmed cell death. Several metabolic disorders (e.g. cancer) result from insufficient apoptosis in normal cells. Therefore, through selective enzyme inhibition a more detailed understanding of this process can be gained at a molecular level. The majority of the project work will involve investigation and optimization of key reaction steps in the overall synthetic pathway leading to the target 'template' molecule. This work will include comprehensive review of the chemical literature, use of complex reaction techniques including the handling of air- and moisture-sensitive reagents, use of chemical purification techniques including chromatography, and application of instrumental analysis techniques (Nuclear Magnetic Resonance spectroscopy, Infrared spectroscopy, and Mass Spectrometry) in the characterization of synthesized compounds. Students can expect to work side-by-side with the faculty mentor and spend up to five days per week on this project (in the laboratory and in the library).

**Number of Students:** 1-3

**External Funding:** This project is currently unfunded.

**Location:** Evergreen Olympia Campus

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12.

**Sponsored Summer Research Program Proposal:** *The Encyclopedia Project*

**Sponsoring Faculty:** Miranda Mellis

I propose to work with a student on developing an index and a teacher's guide for The Encyclopedia Project, a multivolume, hardcover publication of innovative prose and art. Student work will include research on conventional indexes as well as contemporary artistic indexes that play with the form. In addition to the index, we will develop a teacher's guide to all three volumes of the EP. The first stage of work will require actively reading the first two volumes of Encyclopedia Project and helping proofread and make cross-references for the third, a manuscript-in-progress. Not including reading for research, the reading required comes to some 900 pages of EP entries, as well as careful engagement with 45-plus pages of visual art. Insofar as Encyclopedia may be used in teaching, student input on the teacher's guide will be especially valuable. There is funding available towards this work in that TESC has awarded me a Faculty Foundation Grant of \$4,000 to work on EP this summer. Travel will not be required of the student. An advanced student with self-initiative, fluency in English grammar, and a capacity for creative editorial collaboration would be best. The student will ideally have a strong interest in innovative literary projects, a deep love of reading, and an ability to think connectively and creatively.

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### 13.

#### Bovine Mastitis Bacteriophage Lab: Mike Paros DVM

Bovine mastitis is one of the most common forms of disease in dairy cows worldwide. Gram negative coliform bacteria are typically associated with severe clinical mastitis and *Escherichia coli* is often isolated from acutely affected cows while also playing a role in recurring subclinical intramammary infections. The widespread and routine prophylactic use of intramammary antibiotics on dairies is now under public scrutiny due to concerns over the transfer of antibiotic resistant genes to human pathogens. Bacteriophages are viruses that can infect bacteria and suppress their growth. A number of animal studies have demonstrated the safe and efficacious use of phages against *E. coli* infections. Utilizing a grant from the Washington State Dairy Products Commission, we have successfully isolated bacteriophages against mastitis causing *E. coli* strains, measured host range specificity, and are currently generating a cocktail of phages that could infect a variety of clinical coliform mastitis strains. We plan to test the ability of phage cocktails to suppress *E. coli* growth in raw milk as a necessary pre-cursor to clinical trials that would examine the use of bacteriophages to prevent *E. coli* mastitis. In order to assess the applicability of our cocktail to field isolates different from the strains used to previously isolate our phages against, we plan to test our phage cocktail against new clinical coliform mastitis strains. Finally we plan to characterize our bacteriophages using molecular techniques. Over the past three years, our laboratory has helped over a dozen Evergreen undergraduate students gain important research and laboratory skills in microbiology. A number of them are now doing graduate research in the biological sciences. A summer student research intern would be expected to work approximately forty hours a week where he or she would help design and execute experiments.

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**14.**

Trevor Speller, Ph.D., Member of the Faculty, British Literature  
[spellert@evergreen.edu](mailto:spellert@evergreen.edu), (360) 867-6063

Maps and Illustrations in Early British Novels

I study British literature of the long eighteenth century. This summer research project aims to determine the prevalence and significance of maps and other illustrations in the emerging British novel (*ca.*1680-1750). My goals for the summer are to produce statistics detailing the quantity of maps and illustrations in early British novels, to determine the nature of the relationships between images and text in these books, to reassess prevalent theories of the novel in the light of these findings, and to write up the results.

My plan is for us to locate and read various editions of early novels by Daniel Defoe, Samuel Richardson, Joseph Fielding, Aphra Behn, and others. I also hope to investigate the work of prominent illustrators and mapmakers of the period. We will determine the quantity and quality of illustrations and maps in early British novels, and compare them to other genres of the period. An important component of our work will be to gauge peer-reviewed opinion on our subject.

Students should expect to work an average of 20 hours per week on campus over the course of the summer. A substantial amount of reading, writing, and researching is involved, along with weekly research meetings. Applicants should have some prior academic exposure to the history and/or literature of the European enlightenment, as well as previous experience with upper-division research and writing in the humanities (including how to find, read, and assess peer-reviewed sources). This project will support up to three undergraduate researchers.

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15.

**Alison Styring – Summer Research in Field Ornithology**

I am looking 1-3 qualified students to work on the following summer research projects.

**Monitoring Avian Productivity and Survivorship (MAPS)**

In collaboration with the Center for Natural Lands Management (CNLM), the ornithology lab is establishing a MAPS station at Glacial Heritage Preserve: a remnant native prairie site 23 miles south of campus. MAPS is a network bird banding stations across North America that collect standardized data on key indicators of avian health and survival. I am looking for students to help establish the station and collect the first season of data. Work will include conducting habitat assessments; setting mist-nets; banding birds; collecting information on body condition, sex, breeding status, molt, and age; entering data into spreadsheets/databases; running analyses; and preparing/submitting reports to the Institute for Bird Populations and state/federal wildlife agencies.

**Acoustic monitoring of birds in the Evergreen Forest**

In collaboration with the ongoing ecological research in The Evergreen State College Forest (<http://academic.evergreen.edu/projects/EEON/>), the ornithology lab is conducting an acoustic survey of birds in the campus forest. Work involves conducting acoustic surveys, downloading and archiving recordings, identifying vocalizations, entering data into spreadsheets/databases, and running analyses.

Successful applicants will be expected to work on both projects (devoting ca. 10 hours per week to each project). Desired qualifications: experience/training in MAPS protocol, proficiency with field recording, prior coursework in data analysis (upper division statistics). Successful applicants must commit to conducting field work from 4:45 am to as late as 4 pm on field days. The faculty will work with students in the field and lab during the first weeks of the projects and will meet weekly throughout summer. Interested students should contact Alison Styring ([styringa@evergreen.edu](mailto:styringa@evergreen.edu)) for more information on the projects, qualifications, and expectations.

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16.

Project Title: **Integrating Robotics, Math and Music**

Richard Weiss and Arun Chandra

Arun Chandra and Richard Weiss will be working on this project, funded by a Foundation Grant for Summer 2013. The application of robotics to the synthesis of sound is a new, interdisciplinary field. The research we would like to pursue is intellectually challenging yet accessible to an undergraduate. This research project brings together mathematics, computer science, and sound synthesis. The goal is to create a platform for combining the interactivity of mobile robotics with the creative experience of music composition. The main outcome will be programming mobile robots to interact with the environment, sensing people and producing music in response. We would like one or two students to work on this. Ideally, each student participating in this work would have a background in two of the three disciplines, which probably means a class standing of junior or senior. If there are two students, we would like one to have a background in music and the other in computer science. Since the common language that people from these fields use to communicate with each other is programming, we would like each student to have some experience with that. We have been teaching together in the program Music, Math and Cybernetics, and there would be students from that program who would be qualified. Richard will directly supervise the students in programming the Create mobile robot. Together we will supervise the students on programming a musical composition. We will meet once a week with the students to discuss progress and problems. We would expect the students to work 30 hours a week for 10 weeks.



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**17.**

Project Title: **Interactive, Algorithmic Composition of Music Using Swarms**

Richard Weiss

At the NSF workshop, I discussed a collaborative project with Prof. Frank Mauceri and Prof. Steven Majercik from Bowdoin College. They are working on developing an automated musical accompanist using a computational model called particle systems. They have invited me to join them, and my idea is to apply and characterize mathematical transformations to the space of particles that are modeling the human performer and the sound synthesis response. The intellectual challenge is to understand the mapping of particle systems (swarms) in computer science to musical sounds and the reverse. I would be happy to work with one or more students on either of these ideas: developing the software to drive the robot platform and play the musical composition or experimenting with mathematical mappings from particle configuration space to sound configuration space.

The role of the student(s) will be to extend the work of Mauceri and Majercik by programming particle systems in Netlogo and

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18.

Title: **EDURange: Creating Games/Interactive Exercises to Teach Cybersecurity.**

Richard Weiss

I will be working on this project in Summer 2013. The goal is to develop exercises for teaching computer security to undergraduates through hands-on interactive exercises. It has been well-established that interactive exercises and games increase student engagement in learning. Depending on the exercise, this may also enhance learning outcomes by teaching specific skills. I am working on creating exercises that can be linked to skills in cybersecurity and which can be assessed independently. These exercises will be made available on the Web and at conferences to faculty at a wide variety of schools, so they need to be thoroughly tested. I have a collaborative NSF grant to study this, and it will fund one student in the summer to work with me. I would be interested in having funding for a second student to work with us. The work will be at an upper division level, and the student should have a good background in computer science, having taken Computer Science Foundations plus some additional work. I will supervise the student directly and plan to have one or two meetings a week to discuss progress and problems. The primary work of the student will be the creation and testing of virtual machines (VMs) and virtual networks based on specifications of the exercises that our research team has already proposed. The student will also help develop the website for the project at <http://blogs.evergreen.edu/edurange>. The balance of work among design, programming and testing will depend on the student's ability and experience. I would expect the student to work 30 hrs/week for 10-12 weeks.

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**19.**

Project Description: From Bead to Word, From Fieldwork to Book

Faculty: Sarah Williams

While asking Turkana women (nomadic pastoralists of NW Kenya) about the 20 pounds of beads around their necks, I was asked a question in return, "What good is a pencil?" From their perspective I had nothing while doing my doctoral fieldwork: just a pencil, nothing of value, no herds to milk, no children, no husband, no beads, no beauty, nothing. This research project invites students to explore just what good our pencils--our technologies of knowing--are in relationship to alternative "bead" or so called illiterate economies. The focus of student research will be the development of the digital bibliographic literacy necessary to assist in preparing for publication a book on the relationship between Turkana women's beads and ethnographic reason. Specific research areas in which students can expect to develop skills include critical thinking, literature review, human subject protocol, experimental ethnography, and digital bibliographic methods including Photoshop and Zotero. The faculty has received Sponsored Research Funding to support the faculty writing component of this project and will be eager to meet regularly on campus with student researchers throughout the summer. Because there is a University Press interested in reviewing a finished manuscript, 1-3 student researchers with a range of expertise (first-year to seniors) but strong on work habits, commitment, and creative scholarship are most welcome.

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END