

SURF 2023 Projects

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Proposal title: The West Cemetery at Isthmia: Creating an Archaeological Database**Faculty Name:** Ulrike Krotscheck**Email:** ulrikek@evergreen.edu

Description: In 1967, near the archaeological site of Isthmia in Greece, construction workers who were putting in water lines unexpectedly encountered an ancient cemetery. Work was halted, and in response to a request from the government, archaeologists began a rescue excavation, which took place intermittently over the next three years. The excavators at the time did an excellent job of recovering material and documenting the process, but despite these efforts, final publication of the results of these excavations has stalled multiple times. Dr. Krotscheck has been asked to finish this project.

This fellowship will pick up where these excavators left off, and begin the documentation of the finds from this cemetery, with the ultimate goal of publication within the next five years. The student fellow will read the historic excavation notebooks and investigate the inventoried finds. They will then build an excel database of individual interments, along with grave goods found in them, so that these can then be analyzed and evaluated.

The cemetery contained over 100 graves, many of which included grave goods such as ceramic vessels, jewelry, fragments of weapons, and some coins. This fellowship should be of interest for any student studying the ancient world, ceramics, and/or archaeology. All work can be completed remotely.

Expertise required of fellows: Expertise required includes a familiarity with excel, and comfort with data entry processes, as well as a knowledge of best practices in data entry. The ability to read cursive will be very useful to this work. Desired experience includes familiarity with ceramic shapes, and/ or with the ancient Greek world. Students who have completed a "Greece & Italy" program will be particularly well-equipped for this fellowship, but that is not a requirement.

Responsibilities of fellows: By the end of the summer, the fellow will have become an expert in Archaic and Classical Greek ceramics, in particular those included in grave contexts. They will have gained expertise in researching these ceramics with comparanda from other sites and building a comparative bibliography. They will also have gained significant knowledge on how archaeological sites are studied, excavated, and recorded, how artifacts are inventoried, drawn, and photographed, and how archaeological databases are constructed, queried, and used for publication.

All of these learning goals will be accomplished through the activities outlined above.

Anticipated accomplishments: Our hope is that the database of finds will be completed this summer, and all interments will be re-associated with the finds found within them.

Additional information: This project operates under the auspices and with the approval of the Greek antiquities department (Ephoria) and the museum at Isthmia. All finds are in Greece, so the student will be working with online inventory cards and notebooks. Although the finds are from a cemetery, no work with human remains will take place. The organizing institution is Michigan State University, but no affiliation with MSU is required to take part. Finally, the student fellow will be assisting researchers in one of the most pressing current issues in archaeology: helping to publish data that has long been hidden from public view, and making archaeological knowledge more widely available.

Proposal title: Summer invertebrate development: surveying the reproductive progress of shellfish at the Evergreen Shellfish Garden

Faculty Name: Pauline Yu **Email:** yup@evergreen.edu

Description: In this project, the fellow will work with faculty Pauline Yu to monitor the reproductive activities of native and introduced shellfish on the Evergreen Beach, including in and around the Evergreen Shellfish Garden. The project will take place primarily on campus in the microscopy lab and at the Evergreen Beach, with a research and skill-development component, and the potential for gathering sufficient data for a future capstone project. The primary aims of the project will be to collect plankton samples at the beach, to learn to biopsy invertebrates, to learn and apply microscopy for plankton and tissue analysis, and to tend the shellfish bed. The summer season will provide ideal access to the tidal flats of the Evergreen Beach during daytime low tides, low flood tides, and also provide ample opportunity to observe development of marine invertebrates during the peak of the reproductive season. Additionally this opportunity allows us to specifically assess the recruitment of clam species to the clam beds that are part of the Evergreen Shellfish Garden, and closely monitor the growth of seeded oysters. This activity will provide the opportunity for the fellow to become adept with collecting plankton and identifying plankton by microscopy, as well as to develop familiarity with the fields of larval biology and embryology. These skills will have relevance to the shellfish industry, and to marine conservation, restoration and sustainability activities.

The fellow will finish the summer with a strong understanding of microscopy, plankton collection, and specialized knowledge about mollusc development.

Expertise required of fellows: The fellow should have passion and interest in marine biology, and knowledge or prior experience with marine sciences and microscopy would be very useful. A student with a casual or hobbyist interest in shellfishing, aquaculture and aquaria would be very welcome as well—formal classroom training is not necessary, but an understanding of both field work (the commitment to physical labor and appreciation for working in muddy, wet conditions), and attention to detail and patient lab work (fine motor skills) is essential. The student should be physically able to work on the Evergreen Beach wading in up to 3 feet of water, and should also feel comfortable spending longer periods of time at a microscope (students who have difficulty with migraines or eye strain at a microscope may find this work uncomfortable.) The fellow should also be comfortable with dissection, as invasive procedures with live invertebrates may be necessitated.

Responsibilities of fellows: The fellow will be active in data collection in field and lab. The fellow will participate in some animal husbandry—tracking growth and health of bivalve molluscs in a natural setting. The fellow will gain experience with using campus equipment (plankton nets and microscopes), observing and identifying zooplankton, learning anatomy and histology of invertebrates. Part of doing fieldwork also involves data management, and learning to organize and summarize data.

The student should be willing to and is expected to develop networking, organizational and communication skills to allow them to interface with campus staff, scientists and other marine resource stakeholders. Developing respectful working relationships with varied college and external interests is

also a core responsibility of the fellow. The fellow also has an obligation throughout to learn how to use and maintain scientific equipment properly.

Anticipated accomplishments: Two faculty (myself and Sarah Williams), alumni and current students support the continuation of the educational shellfish garden on campus supported by academic programs, Paths of Study and the School of Professional and Continuing Education. As this resource continues as a teaching resource, it ties in with the College's mandate to provide training in agriculture (Edible Campus Campaign), makes appropriate use of the tideland property (Climate Change Initiative and Living Lands proposal), and connects students to the historic food gathering places of the Squaxin Island Tribe. The hands on training of a fellow will revive student agency and ownership of the Shellfish Garden resource, and will further our understanding of the ecology of the organisms at the Evergreen Beach. The shellfish resources of the beach support the food sustainability imperative of the college (clams and oysters were harvested for programs in Spring 2021, Fall 2021, Spring 2022, Fall 2022 and will be again for Winter and Spring of 2023) and support the education about marine environment stewardship. We anticipate supporting current and future programs such as Marine Biodiversity, Forest, Farm, Shellfish Garden: Experiential Learning, Undergraduate Research with Pauline Yu, and offerings associated with the proposed Marine Bioresources Certificate.

Additional information: In the spirit of recruiting more diverse participants into the marine sciences and the field of aquaculture, students who identify as underrepresented minorities (racial, ethnic, neurodivergent, gender and LGBTQP2S) are encouraged to apply. All qualified applicants will be given equal consideration regardless of identity. Given the importance of maintaining the shellfish bed on a continuing basis, applicants will be encouraged to utilize their knowledge and skills to continue the work and recruit fellow students to continue to steward the Evergreen Shellfish Garden. Applicants who demonstrate an interest in longer-term commitment to the stewardship activities would be given preference. Given the outdoor fieldwork emphasis of this project, we anticipate that fieldwork can be conducted safely and with distancing. Lab work in the Microscopy Lab on campus can be done during summer when occupancy of the lab space is low. If conditions are such that lab work must be done remotely, there's the possibility that a microscope loan through the Science Support Center could be arranged for the fellow to do some of the lab work from home.

Proposal title: Decarceral Studies: critical literacy + critical numeracy in the age of hyperincarceration

Faculty Name: Eirik Steinhoff

Email: steinhoe@evergreen.edu

Description: This multi-year “Decarceral Studies” action research project concerns liberal arts and liberation education in prison in collaboration with students and teachers behind bars.

The project’s hypothesis comes from Victor Hugo: “[Anyone] who opens a school door closes a prison.”

A recent RAND study shows that for every \$1 spent on education behind bars, \$4-5 are saved on future incarceration. Evidence from the Bard Prison Initiative (founded 2001, with some 400 graduates) suggests that an intensive liberal arts curriculum, in particular, leads to an astonishing reduction in recidivism (2% vs 20-40%); this comes as a consequence not of focusing on recidivism per se but rather on the life-changing power of the liberal arts.

“Decarceral Studies” builds on these findings in collaboration with several cohorts: (1) students enrolled in the Gateways for Incarcerated Youth program, (2) students enrolled in the Black Prisoner Caucus’s TEACH classes, & (3) students enrolled in the Freedom Reads Writers Group.

The objective here is to document, analyze, and reflect on the accomplishments of these programs, & to compose a “scholarship of teaching & learning” essay that presents these findings/recommendations for the world at large.

Our research will include:

- an analytical description of these programs
- concrete recommendations for other faculty + students in similar classes
- reflections on the theory and practice of teaching and learning behind bars

Areas of inquiry will include:

- documentation + analysis of Gateways + BPC-TEACH + Freedom Reads curricula (one deliverable being transferable repertoires of frameworks + classroom practices)
- research into Gateways & BPC-TEACH & Freedom Reads
- research on similar prison education projects (FEPPS, UBB, BPI, PUP, P2CP, etc.)

Expertise required of fellows: This Fellowship is ideal for intermediate and advanced students with strong backgrounds in at least 2 of the following areas:

- the theory & practice of popular education
- mass incarceration
- critical literacy &/or critical numeracy
- action research

Ideal candidates will be autonomous learners capable of collaboration, improvisation, and imagination. Although Fellows will not be required to participate in all elements of the research, the expectation is that they be willing and able to pursue more than one thing closely related to the research agenda outlined above. This means the ideal candidates will demonstrate the abilities both (a) to compartmentalize and focus on the tasks at hand as well as (b) to synthesize and invent new questions for us to pursue.

Annotated bibliographies, synthesis essays, and research reports (with maps, charts, and diagrams) will be primary means through which this research is conducted, with seminars as a primary mode of metabolization.

Our findings will become part of an emerging adult prison education program at the College.

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Responsibilities of fellows: Research Fellows will be responsible for developing a research program in close collaboration with the faculty sponsor(s). Ideal research itineraries will build on the Fellow's strengths while also venturing into new territory. Fellows will be responsible for presenting their findings in seminar-settings with each other and with the faculty sponsor(s).

Hyperincarceration is a crisis that requires interdisciplinary analysis and solutions. This collaborative scholarly work needs to happen both on campus and behind bars --- and beyond bars and campus in the world-at-large. In other words, Fellows will gain both knowledge and experience in translating theory into practice as well as in theorizing about our practice.

Disciplines involved in this research include (but are not limited to): critical literacy + critical numeracy; the scholarship of teaching and learning; action research; literature; sociology; composition studies; poetics; political economy; public policy; statistics; history, aesthetics; critical theory.

Anticipated accomplishments: This research will be as intensive, comprehensive, and responsive as possible.

With 1 Fellow the research will result in (a) a pedagogical toolkit & (b) a poster &/or slideshow to be shared at a Summer Institute on Decarceral Studies.

With 2 Fellows the research will result in (a) + (b) as well as (c) an essay draft & (d) a deeper contribution to future curriculum in this zone.

Proposal title: Seeding a Sustainable Campus Food System: Comparative Field Trials

Faculty Name and emails: Steve Scheuerell (scheuers@evergreen.edu) and Sarah Williams (williasa@evergreen.edu)

Description: This field research project facilitates learning of field trial methods for establishing experimental plantings on Evergreen's farm and oysters at Evergreen's shoreline shellfish garden in relation to the movement to combine agroecology science and the movement for inclusive, just, sustainable, and participatory food and ag practices. The project will support comparative research methods including the Northern Organic Vegetable Improvement Collaborative (NOVIC) research specifications to address organic seed, plant breeding, production, and culinary traits as well as GRUB's "Tend, Gather, Grow" community food systems initiative to address Traditional Ecological Knowledge in relation to the living lands and waters of Evergreen's campus. The student(s) will learn to design comparative field trials to gather data on oyster growing methods and on-farm assessment of plant variety growth habits, disease, and insect pest infestations or invasive predation. Data also will be gathered on the maturity and grading of harvested varieties, harvesting ease, flavor profiles, and overall yield and harvest potential. The field trials will be designed for incorporation into Food and Ag academic programs to provide summer, and when feasible, spring, fall and winter quarter tasting labs. Sensory assessment protocols will be used, which have been developed by Lane Selman of OSU's Culinary Breeding Network and Rowan Jacobsen in *A Geography of Oysters*, *The Essential Oyster*, and *The Living Shore*, including attention to seed sovereignty, climate change and sustainability, and culturally relevant, community-based food preferences.

Expertise required of fellows: The potential SURF student should have experience with ecological data collection (especially in the field), introductory data analysis, experience writing scientific or environmental humanities lab reports, excellent communication skills including visual and website literacies, aptitude for sensory assessment, and a passion for food and agriculture. The ability to handle and grow plants and oysters in the field is required. However, faculty are willing to work with the potential fellow to improve these skillsets. Students interested in this project are strongly advised to contact the faculty to discuss how their academic background and prior research experience can fit into the needs of the project. The project may require a commitment of 20-30 hours some weeks and less other weeks. Self-motivation and time management skills are essential. Given the length of the growing season, interested students should contact faculty about ILC and internships options spring and fall quarters.

Responsibilities of fellows: Student(s) will have different duties as the season progresses. They will learn field trial design, plant seeds, care for seedlings, and transplant and transfer and roll seedlings to/in the beds they have prepared. They will maintain the field plots including monitoring, irrigation, weed/invasive management, trellis/net installation, and plant pruning/training or oyster seed rolling. Student(s) will spend approx. 15 h/week monitoring the field experiment and documenting all necessary data. Fellow(s) will be expected to spend up to 5h/week studying relevant documents, writing and analyzing gathered data, and logging the activities online. Faculty will provide an ePortfolio template for data collection, weekly reporting, and project documentation including photographs. Members of the faculty team will meet with the student(s) to discuss data reports and consult on data analysis and documentation of the project. Meetings early in the project will be necessary to lay out the research design, schedules, and proper use of lab and field equipment. Interested students are encouraged to

consult with the faculty team ASAP regarding their spring and fall quarter academic coursework, which could include related ILCs or participation in Food and Ag programs.

Anticipated accomplishments: The project workload is commensurate with what should be expected from one engaged student over the growing season. More than one SURF student would allow for comparative research on plant and oyster variety production as well as sensory characteristics in relation to the taste of place, terroir and meroir. Both faculty will be incorporating this research project into their particular 22-23 and 23-24 programs and the collaborations planned between the farm (Scheuerell) and the food (Williams) programs, specifically regarding sensory assessment, samplings, and value-added additions to the Market Stand. Additionally, Dr. Scheuerell will be utilizing the experiment and data set to teach introductory field plot research methods and statistics within the farm program and Dr. Williams with Dr. Bowman will be utilize this research as a model for their "Land-Based Learning: Foodways" program. This project will be a continuation of successful field trials conducted at the Organic Farm from 2018, several of which are documented at this Capstone Projects in Food and Ag website: <https://sites.evergreen.edu/capfoodag/>

Additional information: The student(s) will gain a capstone type quality project experience. The Food and Ag POS will utilize the project documentation for recruitment and retention. Ongoing participation in the NOVIC national field trials will enhance our curriculum by creating connections with participating institutions, produce for sensory assessment labs, and an on-campus field research site for demonstrating sustainable design, plot maintenance, data collection and analysis. A video from our 2019 field trial is featured on NOVIC's national website: <https://eorganic.info/group/5751/news> The role of participatory field trials in food and ag education was featured in a roundtable of Evergreen students, alumni, and faculty at the 2022 Organic Seed Growers Conference. This summer 2023 project will include collaboration among the student(s), faculty, and on-going campus initiatives regarding a stewardship working group; the revival of S&A student community gardening clubs; continued collaboration with Dr. Pauline Yu regarding the shellfish garden and her sediment-focused SURF "23 proposal; and the community-supported bulkhead removal project for salmon and Olympia oyster habitat restoration.

The faculty recognize issues of inclusion, diversity and equity, particularly in agriculture and the sciences and therefore especially encourages applicants from under-represented groups including women, racial/ethnic identities, and LGBTQA individuals. Of course, all eligible applicants will be considered and are welcome to apply. Given the anticipated length of the growing season, applicants will be encouraged to consider working with one or all faculty team members in some capacity during the spring and fall quarters, either in academic programs or through an ILC.

Proposal title: Blood - the Water of Life: a Cultural, Scientific, Artistic Study**Faculty Name:** Hirsh Diamant **Email:** diamanth@evergreen.edu

Description: All cultures consider blood to be something special. In Chinese culture blood is defined as a special Red Water that carries Qi, or life energy. Circulation of blood in all animals and circulation of water in plants are essential for life. Western philosophy and medicine and Eastern cultural traditions developed different ways of understanding blood. The purpose of this summer research project is to examine and correlate different cultural, scientific, and artistic ways of understanding blood with a specific focus on Chinese and Indian medical traditions. For example, Chinese doctors developed Renying Cunkou and Sanbu Jiuhou pulse diagnosis to give an inner view of the blood system and understand impairments that manifest as disease.

SURF Fellows will research and compile information about blood from western and eastern traditions. We will consider the following questions: how can we correlate different traditions and develop coherent ways of understanding information of standard blood tests and Chinese, and Ayurvedic diagnosis of blood? How can this study help us to re-imagine human anatomy and human development and help us to develop a healthier relationship to ourselves, and the world?

If possible, we will do some blood observation using microscopes in Evergreen labs.

Expertise required of fellows: SURF Fellows will consult with Evergreen faculties that teach Human Anatomy including Carolyn Prouty, D.V.M. who agreed to help as an advisor. SURF Fellows will also interview practitioners of Chinese medicine and other professionals that work with blood including blood donations and blood banks. Our aim will be to create exploratory research papers, Power Points, artworks, films, and animations that will illuminate a coherent understanding of blood as the water of life.

SURF Fellows need to have beginning to intermediate skills with video production and animation.

Responsibilities of fellows: SURF Fellows will be in weekly communications and meetings with faculty on Zoom and in-person when necessary. SURF fellows will gain knowledge and experience in research, APA citation, synthesizing material from different sources, and presenting research findings in mediums of art.

Anticipated accomplishments: Our aim will be to create exploratory research papers, Power Points, artworks, films, and animations that will illuminate a coherent understanding of blood as the water of life.

Additional information: SURF Fellows need to have an interest in cultures, health, medicine, classical texts, and media

Proposal title: Ecophysiology of Marine Invertebrates**Faculty Name:** Erik V. Thuesen **Email:** thuesene@evergreen.edu

Description: Organisms that live in estuaries experience a wide range of environmental parameters, and these fluctuating conditions of temperature, salinity, oxygen concentration, etc. pose physiological challenges that need to be overcome. This project will examine the response of whole animal metabolism to changes in various environmental parameters. Working with one or two specific species commonly encountered in Puget Sound, this project will establish the environmental parameters that the species can tolerate. Appropriate species will be chosen based on mutual interests of the student/faculty and on the availability of specimens. Past research in this lab has focused on crustaceans, cnidarians, ctenophores, nemertean, polychaetes, chaetognaths and molluscs.

Expertise required of fellows: Students will need to have completed course work in marine sciences and/or zoology and possess a working knowledge of lab chemistry and microscopy. This project contains both lab and field components, and students should feel comfortable carrying out investigations in both situations. Students will collect animals in southern Puget Sound, maintain them in seawater aquaria and measure metabolism of target species in the lab.

Responsibilities of fellows: A short final report describing the results and a poster about the project will be put together by the students. Student(s) involved with this project will benefit through gaining experience in marine fieldwork, learning to identify marine invertebrates, learning to use a sophisticated oxygen fiber optic oxygen sensor, carrying out precise in vivo oxygen measurements, analyzing data and preparing figures using statistical and graphing software.

Proposal title: Tree water-use, water-stress, and sapling growth in Temperate Rainforests

Faculty Name: Dylan Fischer **Email:** fischerd@evergreen.edu

Description: In this research experience, students will work with two discrete collaborative forest tree research projects based at Evergreen. First, students will join a multi-agency (DNR and Dept. of Ecology), and multiple institution (Evergreen and WSU) team to investigate how tree species use water and affect water cycles in temperate rainforests. Students will study trees instrumented with sapflow (transpiration) probes, and use specialized technology to measure water stress in Douglas-fir and maple trees. This research is part of a multi-year effort, and this summer we will concentrate on measuring water stress and transpiration in a range of tree sizes in forest and semi-urban environments. Second, students will work with two common garden experiments to determine genetic-based patterns in sapling growth and ecological interactions for young trees planted at The Evergreen State College in the past 5 years. This second project will represent a collaboration with Penn State university, and a series of miniature experimental tree plantings across the us (<https://popup-poplars.com/index.html>). Students will have the opportunity to develop their own research project in the context of these projects. Measurements will involve tedious work and caretaking of experiments and experimentally planted trees. Hours will be variable and depend on the nature of each measurement, but students should be prepared for regular weekly schedules, and occasional irregular hours (such as predawn-measurement of tree stress). Students should talk directly with the faculty member prior to applying to get a better sense of the work and commitment required.

Expertise required of fellows: Students should have prior intermediate-advanced experience in plant physiology and in conducting ecological research. Opportunities will be present for participation in larger research projects, and publishing student research in peer reviewed journals.

Responsibilities of fellows: Hours will be variable and depend on the nature of each measurement, but students should be prepared for regular weekly schedules, and occasional irregular hours (such as predawn-measurement of tree stress). Students should talk directly with the faculty member prior to applying to get a better sense of the work and commitment required. Students should be highly capable of conducting independent research in the field. Students should have exceptional communication skills regarding experimental set-up, notetaking, work accomplished, and data quality.

Anticipated accomplishments: Students will complete several unique datasets associated with the above projects and will be invited to participate in local, regional, and national-level scientific meetings and follow-up publications associated with the work.

Proposal title: South Sound Housing Policies, Social Reproduction & Solidarity Economics

Faculty Name: Savvina Chowdhury **Email:** chowdhus@evergreen.edu

Description: This SURF project builds on my ongoing research interest in US housing policy. Feminist theorists have argued that the household is a site of social reproduction,“ a broad term that refers to a society’s capacity to maintain families, care for elders, raise children, tend to the needs of people over their lifetimes, and cultivate socially desirable values and practices that maintain neighborly relations and bind communities together. Faculty and SURF fellow will draw on insights from feminist social reproduction theory and the emerging framework of solidarity economics to examine local housing policy campaigns and initiatives.

Entry-level home prices have been climbing in a period of job market instability, decades-long downward pressure on real wages, and now, rising interest rates. Housing is a key strategy for building towards economic security in old age and for the transfer of inter-generational wealth. For many households, however, not only is the proverbial house + automobile part of the “American dream” increasingly out of reach, even renting a home and working towards building wealth has become challenging in the current economic context.

This SURF project will examine current conditions in the South Sound housing market, contemporary housing policies, as well as local discourse on housing rights and initiatives to address housing justice. How are housing advocates, policymakers and local communities thinking about re-designing built environments to address social needs and social reproduction? How are housing authorities in cities in the South Sound addressing affordable housing and rising rents? How are housing justice advocates and renters rights groups, engaging with housing authorities, local initiatives and campaigns for housing justice?

Expertise required of fellows: I’m interested to work with someone with strong inter-personal communication skills, good organizational skills and an interest in studying the intersections of housing justice, racial justice and feminist theory. Ideally, applicants would have some background knowledge in feminist theory, housing policy and US political economy. Desirable work experiences include familiarity with community-based work, and/or work with housing advocacy groups, housing-related mutual aid projects or student housing cooperatives and intentional communities.

The SURF fellow would work with me to draw on insights from feminist social reproduction theory and analyze current local housing justice campaigns and policy initiatives.

Responsibilities of fellows: The SURF fellow will learn about and apply feminist theory to analyzing of housing policy. They will work on developing skills in:

- (i) Gaining knowledge of the race, class and gender-based critiques of South Sound housing policy;
- (ii) Learning how to write a literature review: read about current housing policy initiatives, read texts from the feminist economics as well as urban studies;
- (iii) Learning about historical models as well as feminist visions for designing alternative intentional housing communities

(iv) Write summaries and begin developing their own analysis through their research, writing and discussions with faculty.

A. The SURF fellow will be expected to read the following texts and write up brief summaries of key takeaways vis-à-vis design principles from:

1. Harvey, D., (2012). *Rebel Cities: From The Right to the City to Urban Revolution*. Verso.
2. Hayden, D., (1981). *The Grand Domestic Revolution*
3. Jacobs, J. (1961). *The Death and Life of Great American Cities*. Random House: New York.
4. Katznelson, I., (2006). *When Affirmative Action Was White: An Untold History of Racial Inequality in Twentieth-Century America*
5. Marcuse, P., & Madden, D. (2016). *In Defense of Housing: The Politics of Crisis*. Verso.
6. Keeanga-Yamahtta Taylor, *The Race for Profit*
7. Kern., L., (2021) *The Feminist City: Claiming Space in a Man-Made World*. Verso.
8. ROAR Magazine Number 6, Summer, 2017, "The City Rises".

B. The SURF fellow will research, examine and analyze current policy campaigns for housing justice

Anticipated accomplishments: At the end of the summer, the SURF fellow will gain an understanding of how to assess and evaluate current housing policy initiatives and campaigns within a framework of Social Reproduction and Solidarity Economics along the lines of the following:

- a. How are housing advocates addressing affordability and decommodified housing?
- b. How are they addressing housing security and stability of ownership through, for example, collectively owned property (co-op housing) and community land trusts?
- c. How are they addressing environmental sustainability in building design, reduced carbon foot-print, finding ways to consume that are more ethical, such as access to public transportation, biking, pedestrian walkways etc.
- d. How are they addressing food sovereignty (over food deserts/apartheid), vegetable gardens, chicken, goats etc.
- e. How are they addressing intergenerational living where children and elders have access to a portfolio of care-givers, and cultivate relationships across generations?

Proposal title: Creating a hint tool for students I cybersecurity exercises**Faculty Name:** Richard Weiss **Email:** weissr@evergreen.edu

Description: The goal of this project is to apply machine learning to analyze data from students engaged in a cybersecurity lab assignment and notify the instructor if a student is having trouble. This allows the instructor to intervene promptly. This work will be done in the EDURange framework.

The EDURange project was designed as a collection of hands-on cybersecurity exercises and a framework for creating them. Now it includes tools for an instructor to see how students are doing as they complete an exercise (Mirkovic 2020, Svabensky 2022, Weiss 2017). One of the challenges for both online and in-person instruction is to be able to give students meaningful feedback on their lab work while they are doing a lab assignment. Instructors may not know right away which students need help. In addition, instructors may have hidden biases and may be less likely to offer help to students with whom they are less comfortable. We plan to address this problem by using machine learning to identify students who need help, based on their interaction with the lab exercise.

The first step in our planned research is to collect data. Some of this is already happening. The EDURange system collects the commands that students type, and there are often questions associated with the lab that students answer while they are performing the tasks. In addition, we have implemented a chat feature for students to talk with the instructor or TA. This summer, a SURF student would integrate the commands with the answers and the chat into a single data structure that could be used in a machine learning algorithm to identify students who are struggling. Preliminary results have shown that using only the commands, it is possible to predict with 80% accuracy whether or not a student will complete the exercise. We want to do better, and we should be able to do so by integrating the new information.

The components of the project are

- Integrate multiple sources of data in EDURange
- Run multiple machine learning algorithms on the data
- Analyze the results to identify the most promising approaches
- Write a paper with the findings and present them

Expertise required of fellows: The students should have background and interest in computer programming. They should have taken Computer Science Foundations. In addition, it would be desirable for them to have studied machine learning or statistics by the summer. They will be doing most of their programming in Python and JavaScript, so having experience with one or both is desirable.

Responsibilities of fellows: The students are expected to gain experience in computer science research, including machine learning and cybersecurity. The students will be expected to read background literature on the topic (provided by faculty), meet with faculty regularly to provide updates and seek guidance, design experiments and produce a written report by the end of the summer. The students should also create a poster communicating their research and results to a general audience.

Students will be welcome to continue working on this project after the summer and could have the opportunity to work on a journal manuscript in the future.

Anticipated accomplishments: By the end of the summer, we expect to have a minimal implementation of data integration that can be evaluated by faculty at Evergreen and other institutions. EDURange has a collection of about ten exercises. It would be sufficient to test the analysis system on one of those exercises and get quantitative results. Richard Weiss and others (Svabensky et al 2022) have developed a survey that could be used for evaluation.

Proposal title: Movement Roots**Faculty Name:** Jehrin Alexandria **Email:** alexandj@evergreen.edu

Description: For this SURF research project entitled Movement Roots, student fellows and I will be researching movement that is abstract/authentic and self-generated and comparing it to classical ballet. We will be researching ways to take non-structured movement and integrate it into classical ballet technique. Some of the questions we will explore are what happens to the structured movement, what happens to the non-structured movement when these systems are combined, why do people move, how has movement progressed from tribal cultural forms to structured classical ballet, does movement tell a subconscious story, a cultural/historical story, and how do we interpret movement?

The larger question of this research is whether the art form of classical ballet can be evolved into a system that includes Authentic Movement and is it possible that this could evolve the direction of classical ballet. We will be experimenting using different dance techniques during group movement sessions. There will also be research into the historical, cultural, and societal evolution of movement styles via text and video. This research work can help in areas of child development, psychology, and working with the learning disabled by using movement to express non-verbal communication. The work will also benefit those in the dance, arts, and theater.

Expertise required of fellows: This study requires one student fellow to have studied classical ballet for at least a year and one fellow that does not have any expertise in movement training. It does require a willingness to explore oneself, an interest and curiosity about movement, and its origins. The student fellows will be researching as well as participating in movement exercises. Being flexible is not required. Basic computer skills are required to research as well as the ability to take video.

Responsibilities of fellows: The student fellows will be expected to participate in weekly movement exercises, some exploratory and others designed. Some work will be done alone and some with the other fellow in the project. There will be a movement demonstration presentation at the end of the project. Student fellows will be expected to keep a journal of their work. In addition, there will be historical text research, as well as dance video research.

Anticipated accomplishments: 120 hours of dance training and experimentation, 120 hours of research into understanding the roots of movement and how those roots can and do influence structured movement. An ability to move unrestrictedly and then to be able to create structure, form, and content from this for performance. At the end of the project student fellows will create a visual demonstration of taking a structured style of movement, classical ballet and combine it with non-structured/Authentic Movement in choreography.