CSC450-01, Senior Research
Fall 2023
Eastern Connecticut State University

Instructor: Dr. Garrett Dancik (he/him/his)
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                       Science Building, Rm 257

Office Hours: MWF: 11:00 – 12:00 PM
                        MF: 3:00 – 4:00 PM, or by appointment

Course information:
Title: Senior Research
Day/Time: MWF 10:00 – 10:50 AM (Science Rm 135)
Section: 01
Credit: 3 hours

Course Materials:

1. Course notes and class website: https://gdancik.github.io
2. Additional course material: https://easternct.blackboard.com/
3. Perusall (https://perusall.com/) will be used for several assignments. You must sign up using the following class code: DANCIK-D43TA
4. Piazza (https://piazza.com) will be used for online discussion. A mobile app is available from the App store (iPhone/iPad) or Google Play (Android devices)

Course Description
As the culminating capstone of the liberal arts curriculum, this course offers students the opportunity to reflect on and apply knowledge and skills acquired in the first two tiers and in the computer science curriculum. The focus is to engage in independent inquiry, to apply critical thinking to solving specific problems in computer science, and to reflect on this effort as an outcome of the liberal arts education. Students will study the process of and methodologies in computer science research. Presentation of research results and writing of research papers are required. This course also fulfills the final stage of the writing-intensive requirement for the major.

LAC Tier III Independent Inquiry Outcomes
This course meets the Tier III requirements for Independent Inquiry of the Liberal Arts Core Curriculum. This course will achieve the following outcomes:

- Demonstrate the ability to engage in independent inquiry (*Research Project*)
- Apply current and critical thinking in a focused area of study (*Research Project, Article Discussions*)
- Reflect on the context of their Independent Inquiry or artistic creation (*Research Project*)
- Reflect on this work as an outcome of their liberal arts education (*Research Project, Assignments*)
- Effectively communicate ideas orally (*Research Project, Lab Meetings, Article Discussions*)
- Effectively communicate ideas visually (*Research Project, Lab Meetings*)
- Effectively communicate ideas in writing (*Research Project and Related Assignments*)
- Discern the ethical dimensions of the production and acquisition of knowledge within disciplines (*Research Project, Article Discussions*)
- Effectively seek and employ information to achieve academic goals (*Research Project*)

Course Objectives
1. Demonstrate the ability to engage in independent inquiry in the field of computer science
2. Apply current and critical thinking in a focused area of study
3. Reflect on the context of their independent inquiry
4. Reflect on this work as an outcome of a liberal arts education
5. Learn to write, communicate, and present research ideas and results in computer science.

Attendance: Attendance is required. ***Any unexcused absence during Lab Meetings, Article Discussions, Presentations, or Group Assignments will result in an automatic deduction of 1 percentage point from your final grade (without limit).*** If you are going to miss a class, or end up missing a class, for a justifiable reason, you need to contact me prior to the next class so that you can make up any missed work. Additional unexcused absences will result in 1% deduction from your final grade (up to 5%). Note that exercises may also be assigned and collected during class.

Online discussion: We will use Piazza (https://piazza.com) as an online discussion and question and answer forum in this course. Shortly after the beginning of the semester, you will receive an e-mail with registration instructions sent to your Eastern e-mail address. Piazza allows for students to post and answer questions, anonymously if desired. The class benefits by seeing questions asked by other students (who often have the same questions as you) and by contributing answers. As the instructor, I will answer questions and can endorse correct student answers as well. For these reasons, all non-personal (e.g., not grade-related) questions should be posted to Piazza rather than e-mailed to me. In addition, you will use Piazza to ask your fellow students questions about their projects.

Course Assignments and Grading

Assignment	% of grade
Autobiography	5%
Article Discussions	5%
Article Critique	5%
Literature Review	10%
Lab Meetings	5%
Research Proposal	10%
Research Outline	5%
Research Paper – Rough Draft	10%
Research Presentation	10%
Research Paper – Final Draft	15%
Additional Assignments	10%
Participation (Online Discussion)	10%

Grading Scale

93-100: **A**   90-92: **A-**

87-89: **B+**   83-86: **B**   80-82: **B-**

77-79: **C+**   73-76: **C**   70-72: **C-**

65-69: **D+**   60-64: **D**   59 and below: **F**

Academic Honesty
You are encouraged to discuss assignments and your research topic with one another. However, copying work from another student (unless otherwise specified) and *plagiarism* is *cheating* and this will not be tolerated. A student found cheating or plagiarizing will automatically receive a grade of "F" on the assignment and will be reported to the department head with further potential consequences. In addition, students are responsible for familiarizing themselves with the University's numerous policies and procedures contained in the University Catalog and Student Handbook. The Code of Conduct policies and the Policy on Academic Misconduct are of special significance, since cheating, plagiarism, and personal misconduct are strictly prohibited and carry severe penalties. Students should read and understand Eastern's Academic Misconduct Policy, which can be found in the student handbook:
www.easternct.edu/academicmisconduct
All violations will be handled under the procedures established in this policy.

Classroom civility and safety
In general, follow the Golden Rule and treat others with respect and the way you want to be treated. In addition, students are expected to adhere to current health and safety protocols as regularly updated on Easternct.edu. Any student who fails to follow safety protocols during class will be referred to the Office of Student Conduct for disciplinary review. In response to state or university restrictions, the professor may deem it necessary to revise assignments and due dates articulated here.

Special Accommodations

Eastern Connecticut State University is committed to following the requirements of the Americans with Disabilities Act (ADA) of 1990, the ADA Amendment Act of 2008, and Section 504 of the Rehabilitation Act of 1973, as amended in 1998. If you are a student with a disability (or think you might have a disability) and require accommodations or assistance evacuating a building in the case of an emergency, please contact the Office of AccessAbility Services (OAS) at 860-465-0189 to discuss your request further. Please note that accommodations are not retroactive and must be communicated through a Letter of Accommodation, which is drafted by the OAS. Please visit the Office of Accessibility Website at https://www.easternct.edu/accessability/index.html for more information on how to register with our office.

Diversity Statement

Eastern Connecticut State University values the diversity of its students, faculty, and staff. Differences in race, ethnicity, national origin, class, religion, learning styles, gender, gender identity and expression, sexual orientation, age, ideology, and other aspects of human variation and characterization, including but not limited to those protected by law and CSCU policies, enrich the educational experiences and social and intellectual development of students and create a rich cultural environment. Eastern is committed to ensuring that regardless of their differences, all members of the Eastern community are challenged to achieve their full potential and are supported in their pursuit of that goal in a campus environment that is free from discrimination and harassment.

Assistance at the Writing Center

The Eastern Writing Center, located in the ASC and staffed by trained peer tutors, is available to help all students with their writing. The Writing Center supports the liberal-arts mission of Eastern by helping students with their writing from any class, at any stage, from brainstorming and drafting to revision to proofreading and editing. We help students do their own work, and do it more comfortably and confidently. Any student can and should use the Writing Center. The process of talking with readers about writing and getting feedback on student writing is something all writers do and can benefit from. Students can either drop into the Center or make an appointment by going to the "Useful Links" column on the Current Students webpage and selecting "GradesFirst" (http://www.easternct.edu/index/current-students/). Students are asked to bring copies of any assignment sheets to the Writing Center, so tutors know what is expected of the assignment. Assistance with Academic Advising and Subject Tutoring at the Academic Service Center Students are encouraged to use the support services offered by the Academic Services Center (ASC) located on the ground floor of the Library. Advising Services and tutoring in math, writing, and other subjects are available. The ASC also offers assistance with study techniques, time management, and "Eastern in 4" graduation planning.

Student Sexual Misconduct Policy

Title IX of the Education Amendment of 1972, as well as the Board of Regents Policy on Sexual Misconduct Reporting, Support Services and Processes, prohibit acts of

sexual misconduct – sexual harassment, sexual assault, sex-based discrimination, dating violence, domestic violence, stalking, and inappropriate relationships between employees and students. If you or someone you know has been or experiences harassment or assault, resources are available within the Title IX Office and with the Sexual Assault & Interpersonal Violence Response Team (SAIV-RT). Alleged violations should be reported to the Title IX Coordinator in the Office of Equity and Diversity at 860-465-5012. Reports to law enforcement can be made to Eastern Connecticut State University Police Department at 860-465-5310. To receive support and advocacy, please contact the Co-Chair of the Sexual Assault & Interpersonal Violence Response Team (SAIV-RT) at 860-465-4314. You may also visit the SAIV-RT website at https://www.easternct.edu/sexual- assault-and-interpersonal-violence/index.html for more information including a list of confidential resources.

Statement from Counseling and Psychological Services (CAPS)
Mental Health and Wellness: Eastern Connecticut State University faculty and staff recognize that mental health concerns can impact academic performance and interfere with daily life activities. Please notify your faculty member or academic advisor for academic assistance, as needed. Counseling and Psychological Services (CAPS) can also provide support if you're feeling stressed, overwhelmed, anxious, depressed, lost or are struggling with other personal issues.

Please call or visit the Counseling and Psychological Services (CAPS) website for more information. These professional services are free, confidential, and support non- traditional, graduate, and undergraduate students. Call 860-465-0181 to schedule an appointment. Same day urgent hours are M-F, 1-3.

Students in crisis and/or experiencing suicidal thoughts, free 24/7 crisis support in the US, call:

- Suicide & Crisis Lifeline at 9-8-8
- Suicide Prevention Lifeline at 1-800-273-8255
- Text HOME to the Crisis Text Line at 741 741
- Trevor Project 1-866-488-7386 for LGBTQ youth
- 211 (mental health emergency)

Course Schedule
*This is a tentative schedule and is subject to change

Week #	Week of	Topic		Major Assignments
1	8/28/23	Introduction to Research Research in Computer Science		
2	9/4/23	*Labor Day - No Class Monday*	Computer Science Journals Three Paradigms of CS	**Autobiography (Due: 9/8/2023)**
3	9/11/23	Experimental and Design Considerations		**Article Discussion (Due: 9/11/2023)**
4	9/18/23	Writing a Literature Review and Research Proposal		**Article Discussion (Due: 9/18/2023)**
5	9/25/23	Lab Meetings and Project Discussion		**Article Critique (Due: 9/25/2023)**
6	10/2/23	Lab Meetings and Project Discussion		
7	10/9/23	Lab Meetings and Project Discussion		**Literature Review (Due: 10/09/2023)**
8	10/16/23	Student Project Meetings		**Research Proposal (Due: 10/16/2023)**
9	10/23/23	Student Project Meetings		
10	10/30/23	Writing a Research Paper, Creating an Outline		
11	11/6/23	Lab Meetings and Project Discussion		**Research Outline (Due: 11/08/2023)**
12	11/13/23	Lab Meetings and Project Discussion		
13	11/20/23	How to Give Academic Presentations	*Thanksgiving – no class Wednesday or Friday*	**Rough Draft (Due: 11/21/2023)**
14	11/27/23	Final Presentations		
15	12/04/23	Final Presentations		
	12/13/22	Final Presentations (11:00 – 1:00 PM)		**Final Paper (Due: 12/13/2023, 11:00 AM)**