CSC450-02, Senior Research
Fall 2018
Eastern Connecticut State University

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Science Building, Rm 257

Office Hours: MWF: 10-11:00
MW: 3-4:00, or by appointment

Course information:

Title:	Senior Research
Day/Time:	MWF 1:00 – 1:50 PM (SCI 138)
Section:	02
Credit:	3 hours

Course Materials:

1. Course notes and class website: https://gdancik.github.io
2. 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 1% deduction from your final grade.*** 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	Due Date*	% of grade
Autobiography	9/07/18	5%
Article Critique	9/21/18	5%
Literature Review	9/28/18	15%
Research Proposal	10/05/18	10%
Research Outline	11/02/18	5%
Lab Meetings / Article Discussions	Varies	5%
Research Paper – Rough Draft	11/16/18	10%
Research Presentation	varies	10%
Research Paper – Final Draft	5/11/18	15%
Additional Assignments	-	15%
Participation and Online Discussion	-	5%

*Due dates are tentative and subject to change

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

Cell phones are not appropriate in class and must be turned off or set to vibrate and stored off of the class desk. In general, follow the Golden Rule and treat others with respect and the way you want to be treated.

Special Accommodations
Eastern Connecticut State University is committed to following the requirements of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. If you are a student with a disability (or think you may have a disability), and require adaptations or 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. Any student registered with the OAS should contact the instructor as soon as possible for assistance with classroom accommodations. Please note that accommodations are not retroactive, and must be communicated through a Letter of Accommodation which is drafted by the OAS.

***Tentative course schedule**

Week #	Week of	Topic	Major Assignments
1	8/27/18	Introduction to Research, Research in Computer Science, Computer Science Journals	
2	9/3/18	***Labor Day - No Class Monday***	
		Three Paradigms of CS	**Autobiography (Due: 9/7/18)** **Article Discussion (Due: 9/7/18)**
3	9/10/18	Experimental and Design Considerations	**Article Discussion (Due: 9/14/18)**
4	9/17/18	Writing a Research Proposal	**Article Critique (Due: 9/21/18)**
5	9/24/18	Lab Meetings and Project Discussion	**Literature Review (Due: 9/28/18)**
6	10/1/18	Lab Meetings and Project Discussion	**Research Proposal (Due: 10/5/18)**
7	10/8/18	Student Project Meetings	
8	10/15/18	Student Project Meetings	
9	10/22/18	Writing a Research Paper, Creating an Outline	
10	10/29/18	Writing a Research Paper, Using LaTeX	**Outline (Due: 11/02/18)**
11	11/5/18	Lab Meetings, Discussion of Selected Research Papers	
12	11/12/18	How to Give Academic Presentations	**Rough Draft (Due: 11/16/18)**
13	11/19/18	Resumes and Cover Letters	
		Thanksgiving – no class Wednesday or Friday	
14	11/26/18	Final Student Presentations	
15	12/3/18	Final Student Presentations	
	12/12/18		**Final Paper (Due: 4:00 PM)**

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