

CMPSC 580

Junior Seminar

Syllabus

Spring 2020

Course Instructor

Dr. Janyl Jumadinova

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Changes to the syllabus due to the switch to remote instruction on March 25, 2020 are marked in red.

Instructor's Office Hours

- Monday, Wednesday, Friday: 9:30 am – 10:30 am (15 minute time slots)
- Tuesday and Thursday: 11:00am - 12:00pm (10 minute time slots)
- Wednesday: 1:30 pm - 2:30 pm (10 minute time slots)

To schedule a meeting with me during the office hours, please go to <https://cs.allegheny.edu/sites/jjumadinova/schedule>, click on the “book an appointment” link and select the available date and time of your choice. You can schedule an appointment outside of my office hours via course’s Slack channel or email.

To attend office hours during remote instruction, please schedule an appointment during available office hour slots on Google Calendar (as above), then click on the Google Meet link in the Google Calendar appointment description, and join the meeting.

Course Meeting Schedule

Discussion and Group Work: Tuesday and Thursday, 9:30 am – 10:45 am

Laboratory Session: Wednesday, 2:30 pm – 4:20 pm

Remote instruction will be conducted asynchronously with a couple of synchronous meetings for Q&A during regular lab time on Google Meet, which will be announced in advance in Slack.

Course Resources

Course Web page: <https://cs.allegheny.edu/sites/jjumadinova/teaching/580>
You can find the most up-to-date schedule of the course and the required readings on the course's page.

GitHub

<https://github.com/allegheny-computer-science-580-s2020>

GitHub will be used for sharing course materials by the instructor and GitHub Classroom will be used for releasing assignments and for submitting assignments by the students.

Slack channel: <https://cs580s2020.slack.com/>

Slack will be used for discussion and communication outside of the classroom.

[Slack Invitation Link](#)

Organization:

Academic Bulletin Course Description

A team-based investigation of select topics in computer science, preparing students for the proposal and completion of a senior project. Working in teams to complete hands-on activities, students learn how to read research papers, state and motivate research questions, design and conduct experiments, and collect and organize evidence for evaluating scientific hypotheses. During a weekly laboratory session students use state-of-the-art technology to gain practical skills in scientific and technical writing, the presentation of computational and mathematical concepts, and the visualization of experimental data.

Prerequisite: CMPSC 101 and at least one of the Fundamentals courses.

Required Readings

In this course you will be asked to read and carefully study many research articles in the field of computer science from a wide variety of both conference proceedings and journals. These reading assignments will be posted on the course's schedule page.

Recommended Textbooks

To improve their technical writing skills and to learn about conducting research in computer science responsibly students should consult the following books.

- *BUGS in Writing: A Guide to Debugging Your Prose*. Lyn Dupré. Second Edition, ISBN-10: 020137921X, ISBN-13: 978-0201379211, 704 pages, 1998.
- *Writing for Computer Science*. Justin Zobel. Second Edition, ISBN-10: 1852338024, ISBN-13:978-1852338022, 270 pages, 2004.

- *On Being a Scientist: A Guide to Responsible Conduct in Research (Third Edition)*. Committee on Science, Engineering, and Public Policy, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. ISBN: 0309119715, 82 pages, 2009. References to the textbook are abbreviated as “OBAS”.
- Along with reading the required books, you will be asked to study many additional articles from a wide variety of conference proceedings, journals, and the popular press.

Class Policies

Grading

The grade that a student receives in this class will be based on the following categories. All percentages are approximate and, if the need to do so presents itself, it is possible for the assigned percentages to change during the academic semester.

Class Participation	30%
Labs	20%
Proposal Deliverables	50%

Each of the above grading categories has the following definition:

- *Class Participation*: All students are required to actively participate during all of the class sessions. Your participation will take a form of participating in the in-class workshops, peer editing, and presentations. You will receive a checkmark grade for each of these activities. **Class participation during remote instruction will involve completion of class exercises via GitHub.**
- *Labs*: Several lab assignments will be given to give students experience with specific technical and research skills required for the project proposal.
- *Proposal Deliverables and a Final Proposal*: Each student must complete several proposal deliverables, including writing drafts of certain sections of the proposal, revising their drafts, and peer editing drafts of others. At the end of the semester students must present their proposal and submit a final proposal document that has gone through multiple revisions.

Assignment Completion

All assignments will have a stated due date. To accommodate for unforeseen life events, each student will be given an option of dropping one assignment grade at the end of the semester. The dropped grade can not include the final proposal assignment. Otherwise, unless severe extenuating circumstances have been presented to the instructor, no assignments will be accepted after the deadline.

Attendance

It is mandatory for all students to attend all of the class and laboratory sessions. Additionally, in order to acquire the proper skills in technical writing, critical reading, and the presentation and evaluation of technical material, it is essential for students to have hands-on experience in a laboratory. If you will not be able to attend a session, then please see the one of the course instructor at least one week in advance in order to explain your situation. Students who miss a class session will lose their participation grade for that class. Students who miss more than two unexcused laboratories will have their final grade in the course reduced by one letter grade. Students who miss more than four unexcused laboratories will automatically fail the course.

Frequent or prolonged absences due to illness should be documented by the student's doctor, the Health Center, the Dean of Students' Office, or the office of Student Disability Services. If you need to miss class due to a religious observance, please speak to me in advance to make appropriate arrangements.

Due to the asynchronous mode of teaching during remote instruction attendance is not expected. Instead, class exercises will be used to evaluate participation.

Communication

Various digital channels will be used in this course for communication, including email, Slack, and the GitHub issue tracker. Additionally, the course website will be used to store the syllabus, course schedule and the assignment sheets, course's GitHub organization will contain participation activities, exams and starter assignment repositories, and Sakai will be used to report student's numerical grades. Students are responsible for regularly checking all platforms to ensure that the important messages are not being missed.

Seeking Assistance

Students who are struggling to understand the knowledge and skills developed in a class or a laboratory session are encourage to seek assistance from the course instructor. Students who need the course instructor's assistance should schedule a meeting through her Web site.

A Note on extenuating circumstances

If you should find yourself in difficult circumstances that significantly interfere with your ability to prepare for this class and to complete assignments, please inform me immediately so that we can work something out together! Do not wait until the last day of class to ask for exceptions to what is stated in this syllabus. In such a situation, you may also find it helpful to contact one of the available resources on campus:

The Maytum Learning Commons, Library/Academic Commons, 814-332-2898

You may request an individual tutor through Learning Commons:

<http://sites.allegHENY.edu/learningcommons/tutoring/>

Allegheny College Counseling Center, Reis Hall, 814 -332-4368
Winslow Health Center, Schultz Hall , 814-332-4355
Allegheny College Chaplain, Reis Hall, 814-332-2800

Special Needs and Disability

Students with disabilities who believe they may need accommodations in this class are encouraged to contact Disability Services at (814) 332-2898. Disability Services is part of the Learning Commons and is located in Pelletier Library. Please do this as soon as possible to ensure that approved accommodations are implemented in a timely fashion.

Honor Code

All students enrolled at Allegheny College are bound by the Honor Code. It is expected that your behaviour will reflect that commitment. To this end, we expect that you will adhere to the following Department Policy:

Department of Computer Science Honor Code Policy

It is recognized that an important part of the learning process in any course, and particularly in computer science, derives from thoughtful discussions with teachers, student assistants, and fellow students. Such dialogue is encouraged. However, it is necessary to distinguish carefully between the student who discusses the principles underlying a problem with others, and the student who produces assignments that are identical to, or merely variations on, someone else's work. It will therefore be understood that all assignments submitted to faculty of the Department of Computer Science are to be the original work of the student submitting the assignment, and should be signed in accordance with the provisions of the Honor Code. Appropriate action will be taken when assignments give evidence that they were derived from the work of others.

You are encouraged to periodically review the specifics of the Honor Code as stated in the College Catalog and The Compass.

Welcome to Computer Science Research!

Computer hardware and software are everywhere! Conducting research in computer science is a challenging and rewarding activity that leads to the production of hardware, software, and scientific insights that have the potential to positively influence the lives of many people. As you learn more about research methods in computer science you will also enhance your ability to effectively write and speak about a wide range of topics in computer science. I ask that you bring your best effort and highest enthusiasm as you pursue research in computer science this semester.