CS 690 Syllabus

12 September 2016

Welcome to CS 690, the software development project.

When: Monday evenings 6–8:30pm
Where: LLC 207
Credits: 3
Format: This is a *blended* course, which means that nearly half of the content is delivered online. Consult the detailed schedule to to determine which weeks we meet face-to-face *vs* online.

Contact Info

Instructor: Prof. Christopher League, Ph.D.
Email: christopher.league@liu.edu — please include the course number (CS690) in the subject. I have several email addresses, but all messages end up in the same place, so use only one.
Google Hangout: cleague@gmail.com
Office hours: Monday, Wednesday 2:00–2:50, or make an appointment at https://liucs.net/bookme
Office phone: +1 718 488 1274
Office location: LLC 206, LIU Brooklyn

Resources

We will use several web resources:

- https://liucs.net/cs690f16/ — notes, schedule, assignment handouts
- http://www.gradechamp.com/ — grade reports
- TBD — discussion, Q&A
- https://git.liucs.net/ — assignment submission, sample code

There is no required textbook, but if you'd like a book to supplement or for reference, here are some suggestions:

- *The Pragmatic Programmer* by Andrew Hunt and David Thomas
  http://amzn.to/1AkWwHo
- *Team Geek* by Brian W. Fitzpatrick and Ben Collins-Sussman
  http://amzn.to/1OjkwnW or the newer version:

- *Debugging Teams: Better Productivity through Collaboration* by Brian W. Fitzpatrick and Ben Collins-Sussman http://amzn.to/1ZlFh5u
- *The Effective Engineer* by Edmond Lau https://www.theeffectiveengineer.com/book

Campus library resources tailored for computer science are available at https://liucs.net/u1

Requirements

There are a total of 1,000 points available, broken down as follows:

- There will be **6 project milestones** scheduled throughout the semester. The exact requirements and expectations for each will be posted to the course web site. Your contribution will be worth **150 points each,** but I will drop the lowest, so that only 5 milestones count, for a total of **750 points.**
- There will be a final presentation and project submission, worth **250 points.**

On the 1,000-point scale, you can expect the following letter grades:

		≥ 870:	**B+**	≥ 770:	**C+**	≥ 670:	**D+**
≥ 930:	**A**	≥ 830:	**B**	≥ 730:	**C**	≥ 600:	**D**
≥ 900:	**A−**	≥ 800:	**B−**	≥ 700:	**C−**	else:	**F**

In the end, I may choose to adjust the scale slightly to compensate for assignments or questions that turned out to be trickier than I intended. Such adjustments would never *lower* your grade from what is designated in the above table; if you achieve 930 points, you are guaranteed an **A**.

Policies

It is important to complete milestone requirements **on time,** so you don't fall behind. Late work will be graded as follows.

This formula specifies a *lateness factor* f that is multiplied by your earned score to determine a late score. The variable h represents the number of hours the submission is late.

$$f = \frac{8.5 - \log_2\left(\frac{h}{24}\right)}{10}$$

There will be no extra credit. Students usually ask for extra credit late in the semester after they have already squandered their original opportunities. Be sure to

start your work early, so that we can detect and solve any problems before they can affect your grade.

Plagiarism is the use or presentation of ideas, words, or work that is not one's own and that is not common knowledge, without granting credit to the originator. Plagiarism is a practice that is not only unacceptable, but which is to be condemned in the strongest terms possible on the basis of moral, educational and legal grounds. Under University policy, plagiarism may be punishable by a range of penalties from a failing grade in the assignment or course to dismissal from the School of Business, Public Administration and Information Sciences. All students are required to read the handbook on avoiding plagiarism by visiting https://liucs.net/u2

Cheating includes, but is not limited to the following: falsification of statements or data; listing sources that have not been used; having another individual write your paper or do your assignments; writing a paper or creating work for another student to use without proper attribution; purchase of paper or research work for one's submission as his/her own work; using written, verbal, or electronic or other sources of aid during an examination (except when expressly permitted by the instructor, depending on the nature of the examination) or knowingly providing such assistance to aid other students.

In a course with programming assignments, it is usually okay to work with and learn from other students to **some** extent, but what you submit in the end needs to be your own. The most reliable way to do that would be to set aside whatever code you created together, and then recreate it from scratch on your own.

Showing up on time to class is extremely important. If you must be absent or more than 5 minutes late, please try to notify me in advance. I will be keeping track of whether you are in class, and when you arrive. A few missed classes will not count against you, but habitual absence will significantly hurt your grade. Additionally, there will be no make-up quizzes. I do not distinguish between 'excused' and 'unexcused' absence. Unless you miss an *exam* due to a severe medical emergency, I don't want to see a doctor's note. If you do miss an exam, the make-up exam will be different – and probably *not* easier.

Long Island University seeks to provide **reasonable accommodations for all qualified persons with disabilities,** whether psychological, neurological, chronic medical, learning, sensory, or physical. The University will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to register with Student Support Services as early as possible and to provide faculty members with the formal communication for suitable accommodations. Visit Pratt 410, call 718 488 1044, or visit http://www.liu.edu/Brooklyn/SSS

I participate in the **LIU Safe Zone** program. Representatives of the program serve as contacts for individuals on campus with questions or concerns related to sexual orientation and gender identity, whether of self or of a friend or family member. The goal of the program is to promote a safe and free campus for all students. Safe Zone

areas can be identified by a sticker with the LIU Safe Zone logo.

The **Family Educational Rights and Privacy Act** (FERPA) gives students control over the disclosure of their educational records. During this course you may have the opportunity to create accounts or register with certain public online services. In these cases, you need not make any personally identifying information public. You may use a pseudonym or online handle, as long as you identify yourself to the instructor.

Goals and objectives

Upon completion of the course, students should be able to…

- demonstrate proficiency in basic algorithms and data structures
- understand the mathematical and logical foundations of computing
- master the fundamental facilities of various programming languages and software architectures
- effectively use tools for software development
- develop a data modeling design for a proposed database application
- communicate technical ideas and specifications in writing
- give an effective oral presentation on some technical subject area
- exhibit awareness of professional organizations and technical opportunities
- productively attend seminars and workshops outside of class work

Schedule

We will work through these areas of the software development life-cycle:

1. Requirements analysis and project planning
2. Software architecture and system design
3. Implementation tools and techniques
4. Verification and validation
5. Deployment and maintenance

The day-by-day schedule is shown below, including all deadlines.

Mon Sep 12 Meeting (F2F) at 6 pm.
Mon Sep 19 Meeting (F2F) at 6 pm.
Sun Sep 25 Milestone 1 due at 23:59.
Mon Sep 26 Meeting (F2F) at 6 pm.
Mon Oct 3 Meeting (Online) at 6 pm.
Sun Oct 9 Milestone 2 due at 23:59.
Mon Oct 10 Meeting (F2F) at 6 pm.
Mon Oct 17 Meeting (F2F) at 6 pm.

Sun Oct 23 Milestone 3 due at 23:59.
Mon Oct 24 Meeting (Online) at 6 pm.
Mon Oct 31 Meeting (F2F) at 6 pm.
Sun Nov 6 Milestone 4 due at 23:59.
Mon Nov 7 Meeting (F2F) at 6 pm.
Mon Nov 14 Meeting (Online) at 6 pm.
Sun Nov 20 Milestone 5 due at 23:59.
Mon Nov 21 Meeting (F2F) at 6 pm.
Mon Nov 28 Meeting (F2F) at 6 pm.
Sun Dec 4 Milestone 6 due at 23:59.
Mon Dec 5 Meeting (Online) at 6 pm.
Mon Dec 12 Meeting (F2F) at 6 pm.