

CS 691 Syllabus

25 January 2018

Welcome to CS 691, Software Development Project. We will develop a large software systems project based on a current analysis and design paradigm, resulting in a valid and verified software system.

When: Monday evenings 6–8:35pm

Where: M411

Credits: 3

Contact Info

Instructor: Prof. Christopher League, Ph.D.

Email: christopher.league@liu.edu — please include the course number (CS691) in the subject. I have several email addresses, but all messages end up in the same place, so **please use only one**.

Google Hangout: cleague@gmail.com

Office hours: Monday, Wednesday 4–4:50 PM, Thursday 3–4:50 PM, or make an appointment at <https://liucs.net/bookme>

Office phone: +1 718 488 1274

Office location: H-700, LIU Brooklyn

Resources

- We will use several web resources:
 - <https://liucs.net/cs691s18/> — notes, schedule, assignment handouts
 - <http://www.gradechamp.com/> — grade reports
 - <https://gitlab.liu.edu/> — assignment submission, discussion

If you have a question or problem that might also apply to other students, *please* ask on the discussion forum rather than by email. Then the GA and other students can help you too, and the solution is available for all to see. Try to use email only for personal matters such as your grades.

- 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>
 - *Debugging Teams: Better Productivity through Collaboration* by Brian W. Fitzpatrick and Ben Collins-Sussman <http://amzn.to/1Z1Fh5u>
 - *The Effective Engineer* by Edmond Lau
<https://www.theeffectiveengineer.com/book>

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+
≥ 930: A	≥ 830: B	≥ 700: C
≥ 900: A–	≥ 800: B–	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 'un-excused' 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.

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, including changes made by the Americans with Disabilities Amendments Act of 2008, the Long Island University **does not discriminate against qualified individuals with disabilities**. If you are a student with a documented disability/impairment (psychological, neurological, chronic medical, learning disability, sensory, physical) and require reasonable accommodations, please register with Student Support Services and provide me with an accommodation letter. Visit Sloan Building 1st floor, 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

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

Thu Jan 25 Meeting 1 at 6 pm. Brainstorm some app ideas. Demonstration of React Native.

Thu Feb 1 Meeting 2 at 6 pm. Component-based design with props and state. Using setState, Button, FlatList view.

Thu Feb 8 Meeting 3 at 6 pm.

Tue Feb 13 Milestone 1 due at 23:59.

Thu Feb 15 Meeting 4 at 6 pm.

Thu Feb 22 Meeting 5 at 6 pm.

Tue Mar 6 Milestone 2 due at 23:59.

Thu Mar 8 Meeting 6 at 6 pm.

Tue Mar 20 Milestone 3 due at 23:59.

Thu Mar 22 Meeting 7 at 6 pm.

Thu Mar 29 Meeting 8 at 6 pm.

Tue Apr 3 Milestone 4 due at 23:59.

Thu Apr 5 Meeting 9 at 6 pm.

Thu Apr 12 Meeting 10 at 6 pm.

Tue Apr 17 Milestone 5 due at 23:59.

Thu Apr 19 Meeting 11 at 6 pm.

Tue May 1 Milestone 6 due at 23:59.

Thu May 3 Meeting 12 at 6 pm.

Thu May 10 Meeting 13 at 6 pm. Project demonstrations and wrap-up. **Final submission** due at 23:59.