Syllabus and Class Information
Construction of User Interfaces
SE/COM S 319, (3-0) Cr. 3.
Spring 2021

Lecture Information

Lecture/Lab	11:00-11:50AM Mon Wed 11:00-11:50AM Fri [Lab starting Feb-05]	
Lecture Location	https://iastate.webex.com/iastate/j.php?MTID=m9849722779d2d4d2536ecf9fdbcc8ad0	
Instructor	Ali Jannesari	Jinu Susan Kabala
Email	jannesar@iastate.edu	jsusan@iastate.edu
Office Location	https://iastate.webex.com/meet/jannesar	https://iastate.webex.com/meet/jsusan
Office Hours	Tue 4:00-5:00PM, and by appointment	Thu 5:00-6:00PM, and by appointment

Teaching Assistants

TA Office Hours	1PM-2PM Mon https://iastate.webex.com/webappng/sites/iastate/meeting/info/e944c32b75ff4a67ad7cbceb0a70af71 11:50AM -12:20PM Friday (Same location with Lab Activity)
TA Information	

TA Name	Email	Webex Personal Room
Hung Phan	hungphd@iastate.edu	https://iastate.webex.com/meet/hungphd
Ali Tehrani	tehrani@iastate.edu	https://iastate.webex.com/meet/tehrani
Aishwarya Sarkar	asarkar1@iastate.edu	https://iastate.webex.com/meet/asarkar1
Suri Sayeed	suri@iastate.edu	https://iastate.webex.com/meet/suri
Waqwoya Abebe	wmabebe@iastate.edu	https://iastate.webex.com/meet/wmabebe

Computer Science Help Center
Hours: Feb 1- April 30 MWF 9:55a-6:00p and TR 6:00-10:00p

- Visit Help room on Piazza piazza.com/iastate/spring2021/comshelproomtutoring
- Email cs_helproom@iastate.edu
- Tutors for COM S 319:
    - Brad Akin, baakin
    - Ishan Banerjee, ishanb
    - Kobe Hass, kjhass
    - Alex Harms, ajharms
    - Tracy Le, tracyle
    - Sam Reinart, sreinart
    - Andrew (Drew) Schmitt, ams2513
    - Cody Tomkins, ctomkins

Course web page on Canvas
Link on Canvas: https://canvas.iastate.edu/courses/80639

Please regularly check the course web page for the latest updates and announcements regarding the course.

Textbooks

Most of the materials covered in the class will be based on free online textbooks/tutorials/articles.
Optional textbooks for your references:

- Software Engineering, Ian Sommerville, Pearson; 10th edition.
- Designing the User Interface: Strategies for Effective Human-Computer Interaction, Shneiderman, 6th edition.

Topics

The catalog description:

Overview of user interface design. Evaluation and testing of user interfaces. Review of principles of object orientation, object oriented design and analysis using UML in the context of user interface design. Design of windows, menus and commands. Developing Web and Windows-based user-interfaces. Event-driven programming. Introduction to Frameworks and APIs for the construction of user interfaces.

Some key areas we want to focus and investigate are:

- **Basic concepts:** Process vs thread, client/server applications.
- **Event-driven programming:** Introduction to Human Computer Interaction (HCI), web user interfaces, web programming (JavaScript, Node.js, client/server programming), event-driven architecture, event-driven programming in JavaScript and Node.js, windows-based user-interfaces, event-driven programming in JavaFX, APIs and frameworks.
- **User Interfaces:** Design principles for user interfaces, design issues, user interface construction, testing of user interfaces.
- **Object-oriented analysis using UML:** System modeling, behavioral and structural modeling, UML diagrams, interaction diagrams.
- **Introduction to Test-Driven Development (TDD):** Unit testing, user interface testing.

Outcomes (ABET Outcomes)

At the end of SE/Com S 319, students should have:

1. An ability to analyze a complex computing problem, and to apply principles of computing and other relevant disciplines to identify solutions.
2. An ability to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. An ability to apply computer science theory and software development fundamentals to produce computing-based solutions.

Prerequisites

Com S 228 or permission of instructor (The completed Prereq Waiver Form must be sent to csadvising@iastate.edu no later than Wednesday January 27, 2020 by 5 pm). Contact the instructor of the section you are registered to if you have questions.

Course Organization

The course includes lectures, lab activities, assignments, a group assignment (portfolio) and project meetings. We will also have quizzes and a final exam. Assignments may depend on course material and lab activities. We start out with programming assignments, but later assignments will include conceptual parts as well as programming parts. Lab activities involve among others, utilities, frameworks and tools

for the concepts covered in class and assignments. The group assignment involves teamwork and requires students to propose sufficiently complex projects that incorporate programming knowledge and design skills.

- Lectures and lab activities (lab activities most Friday classes)
- Homework assignments
- Quizzes (in class)
- A group assignment (portfolio): A project that you work as a team
- Final exam

Homework and Projects

- Individual assignments on relevant topics of lectures and lab activities include both programming tasks and conceptual components.
- A group project assignment (portfolio) that involves teamwork and requires students to draw upon one another's knowledge and skills.

Grading

Grades will be based on an overall weighted average with the approximate relative weights:

- Quizzes: **5%**
- Lab activities: **10%**
- Assignments: **25%**
- 1 main programming project (group project): **40%** (individual performance assessed)
  - 5% proposal; 10% final presentation / demonstration; 20% project reports and content
  - 5% Attendance and project meetings with TAs and team – can bump you up ½ grade, e.g. B+ □ A- (Random attendance checks!)
- Final exam: **20%**

Attendance policy

- Lectures and labs
  - Attendance is encouraged, but not required. The recordings of lectures shall be made available after the lecture
  - It is your responsibility to check the Canvas announcements daily to make sure you have no missed any deadlines especially quizzes
  - If you cannot make it to the section you are registered to, you may choose to attend the other section without instructor approval
- Group activities (Team meetings)
  - Attendance is mandatory, and grades are assigned for attendance to the weekly team meetings with TA. If you cannot make it, please get approval from TA.

Lab policy

- Lab activities will be recorded and made available every Monday by 6:00am every week starting week of 01-Feb.
- Every student is expected to watch the lab video and try the lab on their own, so that you can use the Friday breakout sessions to resolve issues with TA.
- You may also use the lab hour to resolve any questions regarding homework as well.

Late homework policy

Except when announced otherwise, late homework will normally be accepted up to 3 days late with a penalty of 5% per day (Saturday and Sunday each count as one day).

Grade Appeal Policy
You may appeal a grade within **ONE WEEK** of grade announcement. Appeals for exam grades will be handled by the instructor. Appeals for homework, lab and project grades will be handled by the TA who graded your work. If you disagree with TA's decision, you may appeal to the instructor within **ONE WEEK** of receiving TA's decision.

Academic Dishonesty Policy
The class will follow Iowa State University's policy on academic dishonesty. All suspected cases of academic dishonesty will be reported to the Dean of Students Office. See http://www.dso.iastate.edu/ja/academic/misconduct.html. Unless specifically instructed otherwise, the assignments in this course are to be the product of your own intellectual effort and are to be done on your own. Any violation of this rule will be considered academic dishonesty, otherwise known as cheating. **Anyone guilty of academic dishonesty will receive an automatic F in this course.**

Academic Integrity
Academic Integrity, based on the values of honesty, trust, fairness, respect, and responsibility, is a fundamental principle of scholarship in higher education. Iowa State's Academic and Research Misconduct Policy prohibits: plagiarism (using another person's writing or copying any work without proper citation); falsification; unauthorized collaboration during a test or on an assignment or substitution for another student to take an exam, course or test; and other forms of academic dishonesty. If you are to benefit from this class and be properly evaluated for your contributions, it is important for you to be familiar with and follow Iowa State's Academic Dishonesty and Research Misconduct policies. Students are also encouraged to review these Student Resources. Work that violates this policy will not be tolerated. Students who are found responsible for a violation of the Academic Misconduct Policy will have both a university process sanction and an academic outcome that could include a failing grade on the assignment or exam, or a failing grade for the course.

Prep Week
This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook. There will normally be homework due on the last day of classes.
Attention: Final presentations/demonstrations of group projects could take place within the Dead Week!

COVID-19 health and safety requirements

There shall be no in-person meetings in this class. All activities shall be fulfilled online. If you live on campus, please comply with University guidance.

Accessibility Statement

Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan

to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

Religious Accommodation

Iowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in writing. The instructor will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation with your professor at the earliest possible time. You or your instructor may also seek assistance from the Dean of Students Office at 515-294-1020 or the Office of Equal Opportunity at 515-294-7612.

Free Expression

Iowa State University supports and upholds the First Amendment protection of freedom of speech and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Contact Information for Academic Issues: If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu