CS 3311/LMC 3432 -- Spring 2017
Junior Design: Project Design and Technical Communication Strategies

Section	Day and Time	Location	Instructors
JDA	10:05 - 10:55 am	CoC 101	Dan Forsyth and Sarah Lozier-Laiola
JDB	11:05 - 11:55 am	CoC 101	Dan Forsyth and Sarah Lozier-Laiola
JDC	12:05- 2:55 pm	CoC 101	Melinda McDaniel and Liz Hutter
JDD	1:05 - 1:55 pm	CoC 101	Melinda McDaniel and Liz Hutter
JDE	2:05 - 2:55 pm	CoC 101	Fisayo Omojokun and Halcyon Lawrence
JDF	3:05 - 3:55 pm	ES&T L1255	Fisayo Omojokun and Halcyon Lawrence

Instructor Contact Information and Office Hours

Instructors	Email	Office Location/Hours
Sarah Lozier-Laiola	sarah.lozier@lmc.gatech.edu	Hall 121-7, MW 1:00 - 2:30 and by appointment
Dan Forsyth	dan.forsyth@cc.gatech.edu Texts to 678 992 9248	CCB 242 / MW 2-3:30 and by appointment. Don't use the stairs at the CCB main entrance. Check with TSO Help Desk near the elevator on first floor if your Buzzcard won't get to the second floor.

Course Overview

This course is part 1 of a two-semester Junior Design capstone course that includes a computer science and technical communication component. This semester teams will develop a software solution to a problem defined either by a client or the team. The semester culminates in the development of a prototype and its demonstration in a formal presentation. Supporting deliverables that teams create include a project vision statement, user stories, and a

usability/design support document. The series of deliverables students create will integrate written, oral, visual, electronic and nonverbal (WOVEN) rhetorical skills for various audiences, purposes, and contexts applicable to students' professional experiences in the workplace.

Course Prerequisites: *CS 2340 and ENGL 1102*

Required Texts

- Anderson, Paul V. *Technical Communication: A Reader-Centered Approach.* 8th ed. Boston, MA: Wadsworth, 2014.
- Shore, James *The Art of Agile,* http://www.jamesshore.com/Agile-Book/
- Additional readings may be assigned. If assigned, these will be available on T-Square or the Living Schedule.

Required Materials

- A free Gmail account. The account will be used to access Google Drive.
- T-Square access. T-square is used to collect assignments and display grades.
- GitHub (www.github.com) is a team version control site which includes wiki and issue tracker. We will be using this for project management and to facilitate client handover of the project. You may use other systems with approval of the instructors.
- CATME (https://www.catme.org/login/index) is a site for team collaboration and peer evaluation.
- Personal laptop/tablets. Bring your *charged* laptop/tablet to each class in order to access and conduct online work.

Learning Outcomes

This course follows the guidelines established by the CS Curriculum Committee for CS 3311 and the Writing and Communication Program for LMC 3403.

Computer Science Outcomes

Accomplishment	Experience	Competencies
As part of a multi-student team, produce and document a non-trivial software system which solves a complex problem requiring analysis of "design tradeoffs", "non-functional	Upon completing the course, reflect upon the impact of your team's design decisions and the challenges of being part of an interpersonal team.	• Demonstrate the ability to identify, develop, and document client requirements for a software-intensive system. Write these up in a vision statement and set of user stories.

requirements" and "real-world client needs."	.	● Given a set of developed user requirements, demonstrate the ability to generate multiple high-level designs, evaluate their merits, and choose the best overall design for the given problem. ● Prepare and orally present details of your project and justify the decisions and facts in your presentation during question and answer periods. ● Demonstrate the ability to plan and execute a semester-long project, tracking progress and making adjustments as necessary to stay on schedule. ● Demonstrate the ability to plan acceptance tests to ensure the system meets both functional and nonfunctional requirements. ● Demonstrate the ability to produce an appropriate prototype for client evaluation.

Technical Communication Outcomes

Rhetoric	Rhetoric focuses on available means of persuasion, considering the synergy of factors such as context, audience, purpose, role, argument, organization, design, visuals, and conventions of language.	● Fashion artifacts that address the exigencies of diverse contexts, exhibiting effective persuasive strategies, tact, and sensitivity to theoretical, ethical and legal concerns. ● Collect, craft, and present technical information in ways that convey a clear purpose to a specific audience.
Process	Processes for communication—for example, creating, planning, drafting, designing, rehearsing, revising, presenting, publishing— are recursive, not linear. Learning productive processes is as important as creating products.	● Construct, select, craft, revise, and repurpose information to reflect individual, cultural, and/or organizational values. ● Collaborate on artifacts that meet the needs of the specific audiences.

Modes & Media	Activities and assignments should use a variety of modes and media—written, oral, visual, electronic, and nonverbal—singly and in combination. The context and culture of multimodality and multimedia are critical.	• Create WOVEN (Written, Oral, Visual, Electronic, and Nonverbal) artifacts— such as memos, emails, proposals, reports, instructions, manuals, websites, and short and long presentations— that display strategic uses of generic and stylistic conventions.
Design	Documents and other artifacts should arrange visual elements according to consistent, efficient, and effective principles.	• Use theories and principles of document design to create and present accessible, comprehensible, and usable artifacts. • Integrate graphics to achieve maximum clarity in print documents, presentation slides, websites, and other artifacts.

Resources

Please familiarize yourself with these resources and use them while completing coursework throughout the semester.

- Communication Center (http://www.communicationcenter.gatech.edu) in Clough 477 provides students assistance with developing, drafting, and revising all their communication multimodal artifacts. Additionally, the staff includes professional tutors especially trained to assist non-native speakers.
- Purdue On-line Writing Lab (https://owl.english.purdue.edu/owl/) is a convenient and comprehensive writing resource that covers all facets of writing, including grammar and other writing conventions.
- Lynda (http://lynda.gatech.edu) is a valuable resource for learning how to use software with which you are not familiar. Training for use of software for this class is the student's responsibility.
- IEEE citation style guide (http://www.ieee.org/documents/ieeecitationref.pdf) provides citation standards to be used in written deliverables.
- Multimedia Studio (http://librarycommons.gatech.edu/multimedia.php) in the Georgia Tech library provides access to software for creating multimodal projects and hardware including a plotter, color and black-and-white printers, scanner, and audio/recording equipment.

Grade Components & Evaluation

Your grade is computed based upon the deliverables listed below and then adjusted based on your team's peer evaluation. There is only one grade book on T-Square, and you will receive the same

grade in both courses. Please refer to the Living Schedule below for due dates and location for submission of deliverables.

Components	**Weight %**
Vision Statement (Inc. Project Bid Email and Initial Client Email)	20
User Stories + Acceptance Test Criteria	20
UX/Decision Support	20
Final Presentation/Demo	20
Client Feedback	10
Project Management (inc. bio, team charter, client charter, meeting minutes, peer evaluations)	10
Total	**100**

Peer Evaluation

This course uses peer evaluation (conducted through CATME, an online team management tool) to ensure that students are participating in the course and collaborating with their team constructively. Your final grade may be adjusted based upon the ways you perform in these evaluations. If your grade is going to be negatively impacted by peer evaluations, you will be given the opportunity to appear before the instructors and explain your situation. We will consider several factors, including records of commits in GitHub, document editing history in Google Docs, evidence of participation in team meetings (as tracked on your T-Square wikis), and the Deliverables Collaboration Forms. Please ensure that you do your team work in such a way that your contribution can be verified.

Client Feedback

Since the project that you work on will be client-driven, client feedback factors significantly into your final grade for this course. You will be given directions about the types of communication you should engage in with your client so that they can adequately assess your work this semester. If

teams are having problems with their client communication, please let your instructors know sooner rather than later, so that we can advise you on how to proceed.

Team-Directed Projects

Though many of the projects in this course are client-led, you are also encouraged to pursue your own project. Because you will not be working on a pre-vetted project, your first step is to get your project approved by your course instructors, to ensure that it is appropriate to the course. You must also find a faculty advisor to serve as a "client." This advisor MAY NOT be one of your own instructors, but they may be one of the instructors from another section of the course. Your instructors can help facilitate this connection. Your instructor will evaluate your course deliverables, while your client feedback score will come from the faculty member acting as your client.

Team Building & Team Management

Learning the strategies and processes associated with working collaboratively with your peers is an important component of this course. Teams will compose team building documents (such as a team charter) at the beginning of the semester. In addition, each deliverable will be accompanied by a form that outlines the specific ways each team member has contributed to the production of that deliverable. The collection of these forms, in conjunction with your CATME peer evaluations and your Team Meetings Wiki, will comprise your Project Management Grade.

Individual Contributions to Team Deliverables

It is the instructors' expectation that individuals will participate in the production of *each* course deliverable. While we understand that this is a semester-long project and individuals in a team will contribute in different ways (e.g., providing code review, writing lines of code, or document editing) to the project for a number of reasons (e.g. competency with a particular coding language or platform), we do expect each individual to make a genuine and earnest effort on each deliverable. Instructors will be guided in their decisions about grades based on individual contributions. Therefore, individuals should think carefully about how they can demonstrate their participation in each assignment to their instructors (for example, commits to GitHub or contribution to a Google Doc or keeping a personal assignment log).

Scaffolding Assignments & Drafts

Scaffolding assignments and drafts foster students' development of process and deepen students' understanding of rhetorical principles of audience, design, evidence, and persuasion. Measuring students' success in the class (i.e., course grades) is built around the process of creating, drafting, and revising projects; therefore scaffolding assignments and/or drafts are incorporated into the process and evaluation of each course module. We expect students to read all instructors' feedback on drafts/assignments and to see us during office hours or by appointment with questions or concerns.

Living Course Schedule

The course schedule can be accessed here:

https://docs.google.com/document/d/1vzdahk2aECdHqOsWAioRmMr-4ECM-RmS-wSZ0_Fu4aw/edit?usp=sharing

The Living Schedule provides teams with weekly information about class activities, assignments and posting locations. As the title implies, the schedule may be modified over the course of the semester to meet the needs of the class; please consult it regularly for the most up-to-date information.

Course Policies

Attendance

Attendance at each class session is required of all students. Participation in in-class discussions and activities is integral to learning and applying computer science and technical communication concepts in your project.

- **Reasons for absences**. The attendance policy does not make any distinction about the reasons for your absences. Only absences officially exempted by the Institute (e.g., due to participation in official Georgia Tech athletics, to religious observance, to personal or family crisis confirmed by documentation from the Dean of Students) will not be counted among your allotted absences. These exemptions are difficult to get.
- Students are given three (3) non-institutionally approved absences, for which you are not required to provide any explanation or supporting documents, although a courtesy email to your instructors is appreciated.
- Each additional absence after the allotted three (3) non-institutionally approved absences deducts one-third of a letter grade from a student's final grade. *Missing five (5) classes in the semester (not including the two allowed absences for job interviews, described below) will result in automatic failure of the class.*
- We will allow two (2) excused absences for job interviews. While job interviews are not institute-approved excused absences, we recognize the need of students to pursue job opportunities. These two absences are to help those students who just cannot schedule an interview for any other time. That being said, we strongly encourage students to make every effort to schedule all job interviews on one of the many days we have team meetings/work days scheduled. You are required to provide evidence of the interview (e.g. itinerary, interview letter etc.).

If you are absent, it is your responsibility to check the course agenda and/or to find out from a teammate what you may have missed while absent and to have completed any work due the day

you return. If you know you will be absent, please email your instructors as a courtesy. If you are absent on a day in which an in-class assignment is completed, do not assume that it can be made up. Please speak with your instructors and confirm what needs to be done.

Attendance will be taken at the *beginning* of each class; should you arrive late, it is your responsibility to check in with the instructors so that an absence is not recorded. Arriving at class more than 20 minutes late is counted as an absence. If you know that you will be late to class, please let the instructors know.

Non–Discrimination

This class does not discriminate on the basis of race, color, age, religion, national origin, sexual orientation, gender, marital status, disability, or status as a veteran. Alternative viewpoints are welcome; however, statements that are deemed racist, sexist, homophobic, classist, or otherwise discriminatory toward others in the class or outside the class will not be tolerated.

Academic Misconduct

One serious kind of academic misconduct is plagiarism, which occurs when a writer, speaker, or designer deliberately uses someone else's language, ideas, images, or other original material or code without fully acknowledging its source by quotation marks as appropriate, in footnotes or endnotes, in works cited, and in other ways as appropriate (modified from WPA Statement on "Defining and Avoiding Plagiarism"). If you engage in plagiarism or any other form of academic misconduct, you will fail the assignment in which you have engaged in academic misconduct and be referred to the Office of Student Integrity, as required by Georgia Tech policy. We strongly urge you to be familiar with these Georgia Tech sites:

- Honor Challenge — http://www.honor.gatech.edu/
- Office of Student Integrity — http://www.osi.gatech.edu/index.php/
- Process for academic misconduct — http://www.osi.gatech.edu/plugins/content/index.php?id=15

Final Instructional Class Days - April 24-25, 2017

- No tests or quizzes are to be administered on Final Instructional Class Days.
- Graded homework or assignments, course projects, demonstrations, and presentations may be due during Final Instructional Class Days, provided they are listed on the syllabus at the start of the semester.
- All quizzes and tests should be graded and reported to students on or before the last final instructional day.

Reading Periods - April 26, 2016 (all day); April 27, 2017 (8am - 2:20pm); May 2, 2017 (8am - 2:20pm)

- No classes meet during Reading Periods.

- No assignments, projects, presentations, or other graded activities can be due or take place during Reading Periods.
- Instructors may schedule optional study review sessions for students during Reading Periods (but no credit or extra credit may be attached to these optional sessions).