## **4500 SENIOR CAPST**

## **COURSE DESCRIPTION**

CS 4500 is the senior software engineering laboratory where computer science students engage in a semester-long project to build a software system based on their own interests. Formally, the purpose of the course is the development of significant software systems by small student groups, with emphasis on applying sound, disciplined software engineering practice. Less formally, the purpose of the course is to give seniors the experience of planning, designing, and implementing a software system of their own choosing, while working collaboratively with a team of colleagues.

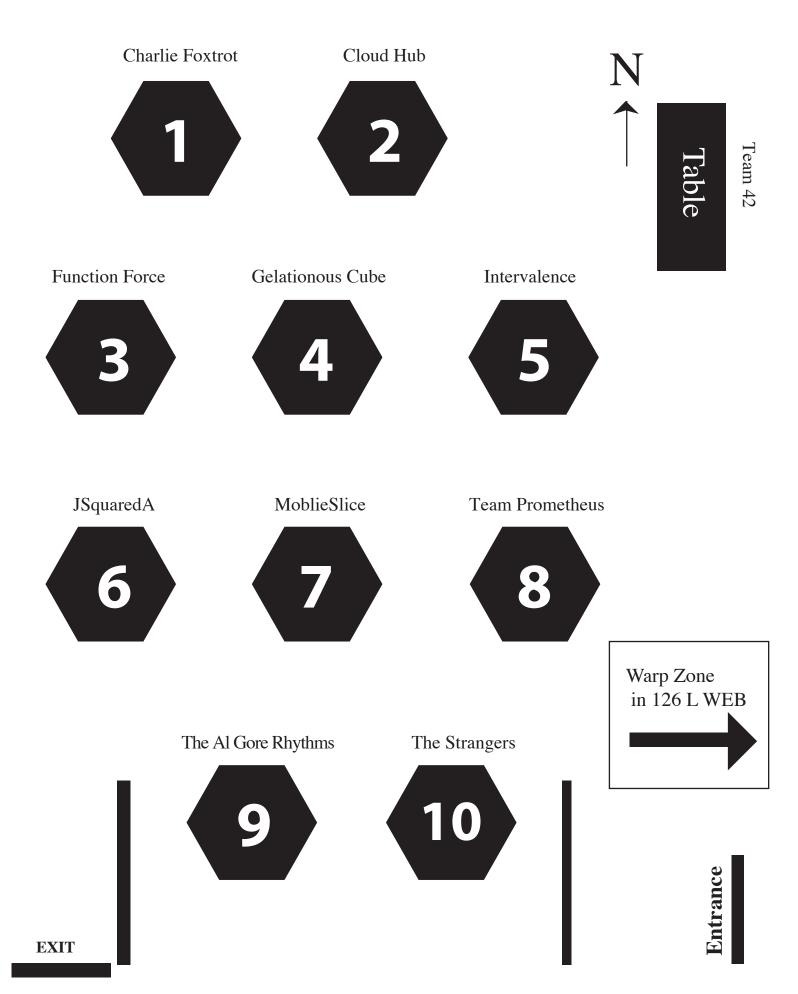
## **SCHEDULE**

Room 130 WEB

9:00 am - 12:00 pm Demonstration viewing and judging

12:00 pm - 12:30 pm Pizza (room 126 WEB)

12:30 pm - 1:00 pm Awards ceremony



**Team name:** Charlie Foxtrot **Project name:** collab-mode

Team members: Andrew Cobb, Joel Hough, Jeff Jenkins, Josiah Powell

Website: http://collab-mode.com/

**Project description:** Collab-mode is a collaborative editing mode for the beloved text editor Emacs. Collab-mode focuses on ease of use and interoperability. Behind the scenes it uses the popular Infinote protocol. That means that collab-mode can easily work with any other collaborative editor that uses the Infinote protocol such as the widely used open-source editor Gobby. Collab-mode uses your existing Google account to connect you with your friends so that you can edit your documents and source code with them. Since collab-mode utilizes XMPP, you can also chat with your friends about your document or invite them to join you. As the creator of Emacs Richard Stallman once said, "Collaborative editing in Emacs is the most desirable thing."



Collaborative!
Emacs!
Fun!



Team name: Cloud Hub
Project name: Cloud Hub

Team members: Colby Griego, Jash Sayani, Andrew Taeoalii, Jehaz Zarook

Website: www.cloudhub.tk

**Project description:** Cloud Hub is a Backend-as-a-service (BaaS) that provides database and file storage to mobile and web apps with a REST API. Developers can sign up and start storing data and files to the non-relational MongoDB on the backend with simple REST API calls. This takes away the hassle of setting up backend servers, installation and configuration of software and security hassles. Cloud Hub also provides GeoLocation support, SMS and E-mail APIs and built-in analytics for apps and user management.





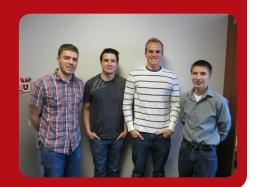
**Team name:** Function Force **Project name:** penVenture

Team members: George Richards, Eric Saupe, Kyle Van Wagenen, Brian Wernick

Website: http://penventure.com

**Project description:** penVenture has been created to bring journaling into the 21st century through social media integration. Throughout the day your life is cataloged and shared through Facebook status updates, tweets, blog posts and Instagram pictures. Our goal is to make journal writing easy and fun by allowing you to drag and drop entries from various social media accounts into your daily journal entry. Through enhanced functionality the entries can be customized with image rotation and scaling, rich-text editing, and free flow organization. The best part, all your data is securely stored in the cloud, using custom cloud software to store and retrieve your entries quickly. Writing in a journal has never been this easy and fun.





**Team name:** Gelatinous Cube **Project name:** Akintu

Team members: Joshua Belcher, Devin Ekins, Colton Myers, Kyle Rich

Website: http://akintu.net

**Project description**: Akintu is a multi-player role-playing game which is modeled after the genre of Roguelikes, based on the 1980s game Rogue. The player can choose from a variety of races and classes, and then adventure through a randomly-generated world, fighting monsters and collecting treasure. We have over 50 different race/class combinations, many different monsters, and millions of possible randomly-generated items in the game. Up to 4 players can play together. The game is written exclusively in Python, leveraging the Pygame libraries and the Twisted network engine.





**Team name:** Intervalence **Project name:** Proto

Team members: Leif Anderson, Daniel Blakemore, Bruce Bolick, Jon Parker

Website: http://www.intervalence.com/

**Project description:** Settlers discovered, among the stars, beautiful proto-solarsystems rich in resources upon which to prosper. And then the corporations followed. Conflict befell the galaxy, and what were once stellar nurseries have become all out warzones. Our war is not noble. It's just business. You are a champion of the Neo Stella Corporation aboard the N.S.C. Artemis, flagship of the Third Stellan Fleet. Tactical Command reports an enemy force within the nearby Thalisian Accretion Disk. You must infiltrate the system and eliminate all threats.

## **Key Features:**

Proto - A 3D multiplayer space combat experience.

Unprecedented hybrid gameplay - play as either a pilot, or a fleet commander.

Mine resources, build up a fleet, and engage in brutal skirmishes.

Fight computer Al's, or skirmish against other players in multiplayer mode.





Team name: JSquaredA

**Project name:** Image Search Plus

Team members: Justin Berger, Joonki Chung, Anthony Litchfield

Website: http://eng.utah.edu/~berger/JSguaredA/

**Project description:** Image Search Plus is a new way to search for images. It allows you to find a picture you want based on how it looks rather than its name or key words. Instead ImageSearchPlus allows you to search for images based on a simple sketch of what you want. Open a browser and visit the website and you will be given a chance to use our simple sketchpad to quickly draw a sketch and search for images similar to that sketch. This will allow our users to quickly and easily find the picture they want.





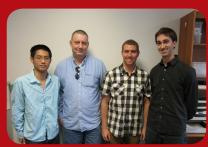
**Team name:** MobileSlice **Project name:** TabiCloud

Team members: Thomas Kline, David Riskin, Jun Tang, Harley Tigner

Website: http://www.tabicloud.com

**Project description:** TabiCloud couples the complete power of a fully-functional desktop with the ease-of-use and mobility of a tablet device. It provides a customizable cloud-based remote desktop environment, accessible via a tablet, without all the hassle of a normal remote desktop connection or the tech know-how required to setup and customize a personal desktop computer. By coupling the power of the cloud with the freedom of a tablet, TabiCloud offers something for everyone, from the hard-core developer to a business power user, and even a casual web-surfer.





**Team name:** Team 42

**Project name:** When's It Due?

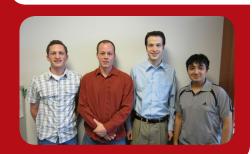
**Team members:** Jacobus LaFazia, Bibodha Neupane, Tom Robertson, Rob Stefanussen

Website: www.whensitdue.info

**Project description:** When's It Due? is a mobile application to keep you on the ball. As a student using Canvas, CIS or Moodle, your class and assignment information is extracted from each of the systems and placed in the palm of your hand. You'll no longer need to navigate complicated websites in a tiny mobile browser just to check on the due date of an assignment! With automatic assignment notifications, class reminders and calendars, you'll be able to stay on top of your classes and get straight A's to keep your parents happy.



When's It Due?



**Team name:** Team Prometheus **Project name:** Knowledge Theif

Team members: Hoa Hoang, Mike Liu, Ben Nelson, Landon Wilkins

Website: KnowledgeThief.com

**Project description:** In Ancient Greek mythology the titan Prometheus stole the knowledge of fire for the benefit of mankind. This story is what inspired Knowledge Thief. The project is meant to change the world for the better through education. Knowledge Thief is meant to be an education resource aggregator. Its primary use is organizing and presenting the best education resources available on the internet today to its users. The users further have the option of combining these resources into specific playlists, or as we call them: "paths". Users will have the ability to add resources they find useful to our community driven directory of resources. Additional functionality includes, but is not limited to, user badges and reputation points for active users of the website, exploration of different learning paths, voting upon resources, and experiencing augmented learning with our resource viewer.

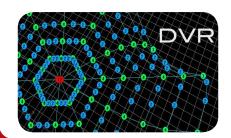


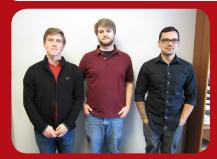


**Team name:** The Al Gore Rhythms **Project name:** Dudley View Right (DVR)

**Team members:** Matthew Dudley, Jeremy Mefford, Ryan Swanson

**Project description:** DVR is a browser based tool for network researchers to be able to see their optimization algorithms in action. Researchers will be given the finest grain control imaginable in defining parameters for placing and optimizing components of ad hoc radio frequency networks. With their data and their algorithms feeding DVR's simulation engine, they will be able to see interactive 3D results of their work.





**Team name:** The Strangers **Project name:** Alike

Team members: Richard Holand, Daniel King, Autumn Rogers, Eric Smith

Website: alikemobile.com

**Project description:** It can be hard to talk to people you don't know - after all, what can you say to them? aLike answers that question. When you sign up for our mobile app through your Facebook account, it looks at the pages you've liked and uses them to match you with aLike users around you. By telling you what you have in common, our app cuts out the guesswork and awkwardness of meeting someone new. You can use the app to chat with them or friend them, or find each other in person and talk. Whether you're at a coffee shop, a bar, or your college campus, whether you're interested in movies, sports, or string theory, our app helps you meet the people around you by telling you how you're aLike.





**Team name:** Warp Zone **Project name:** Mobioke

Team members: Richard Arnold, Jakub Szpunar, Xuhua Yu

Website: http://sunny.eng.utah.edu/

**Project description:** Mobioke modernizes the karaoke experience to an all digital format and helps karaoke singers answer the difficult question, "What should I sing?" To perform a karaoke show DJ's use a custom application that automatically integrates with the singers' phones. Thick, cumbersome and outdated binders of songs are replaced with an interactive and customizable Android app. Singers can easily browse and search for songs to sing while seamlessly submitting their song requests to the DJ from their phone. Users are empowered with current karaoke show information and statistics to tailor the karaoke experience to meet their needs. The entire process is supported by web services on Mobioke's custom server that facilitates all communication between DJ and singer. Mobioke provides an unparalleled level of communication and ease to karaoke allowing everyone to focus on what they came to do...sing!



