KIEI-925: Startup Programming and Management

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FIRST CLASS ATTENDANCE IS MANDATORY

ATTENDANCE AT ALL LECTURES HIGHLY RECOMMENDED

PLESE SEE THE FAQ AT THE END OF THIS SYLLABUS

Course Description

This course is geared for entrepreneurs and non-programmers who want to build their own web applications and/or manage a software product lifecycle. Students will build a project in small steps, learning the fundamentals of computer programming and modern web application development along the way.

Learning Goals

• The Ruby on Rails web framework for building web applications

• Key concepts and patterns in modern web programming regardless of framework

• Communicate more effectively and credibly with developers on your teams

• The core principles of agile team management and best practices

• Prioritize features more efficiently by developing a better feel for their costs

Student Expectations

This is an empowering course, but it is not an easy course. Students should expect to spend 8-10 hours a week on project assignments. Students are highly encouraged to work with a partner or study group.

Attendance at lectures is paramount. If you miss a lecture, it is your responsibility to meet with classmates. If you miss two lectures, you will probably never catch up.

Computer Requirements

We will be using a cloud-based coding environment at http://c9.io. Students must own or have access to a modern computer that is capable of smoothly running one of the following web browsers: Google Chrome, Mozilla Firefox, or Safari.

Assignments and Grading

Students must build a project of their choosing throughout the quarter as their final project. Students are encouraged to work in groups for all assignments including the final project, but each student must still turn in their own project code that they developed themselves. Details will be provided at the first class.
• Homework is worth 50% of your grade: 5 homework assignments @ 10% each
• There will be a mid-term exam worth 25% (week 6)
• The final project is worth 25%

Course Schedule

WEEK 1	Development Environment. User stories, MVP identification, and domain modeling.
WEEK 2	Ruby programming language and APIs
WEEK 3	Database-backed domain modeling
WEEK 4	Parameters; RESTful routing
WEEK 5	View helpers; the Golden 7; Model associations
WEEK 6	Model Associations part 2; MIDTERM
WEEK 7	Model Validations; User Authentication and Authorization
WEEK 8	Web Hosting
WEEK 9	Sending Email & Texts
WEEK 10	Surprise goodies & wrap-up

FAQ

Q. Do I need to know any computer programming?

Yes! You need to have taken KIEI-924 or have the equivalent experience. You should know how to build a static website and deploy it to a live internet service, such as GitHub Pages.

Q. If I miss a class, will the instructor or the TA help me catch up?

Not really. Classes are an interactive combination of demonstrations and lab exercise and cannot be replicated on an individual basis. If you are ill and have to miss class, please do your best to catch up with classmates. The instructor and TA are always available to help answer questions, but we can't re-enact the entire class over again.

Q. Do I need to do anything to my computer?

Nope! You will simply need to be able to access http://c9.io to do your work. Any modern browser should work (that is: Google Chrome, Firefox, or Safari).