

Instructor: Brian Eng or Ben Block

Slack: entr451.slack.com

WINTER 2022 EVANSTON – IN-CLASSROOM

WINTER 2022 CHICAGO – TAUGHT VIRTUALLY VIA ZOOM

Course Description

This course is geared to provide technical literacy for non-programmers who will be founders, employees, or consultants to "tech-enabled" organizations. This is a survey-style course that is very hands-on – students will learn the essentials of coding by creating websites and web-based software applications that manipulate data and work across today's platforms and devices.

The course is focused on software development within the context of product entrepreneurship. The intent of this course is to give you an overview of the technical tools, technologies, and skills necessary to build a software-based product, and to help you gain perspectives on building software through the lens of a startup founder, product manager, or technical leader.

This is a very hands-on class, so it is important to be on time and to have reviewed all assigned supplemental materials. If, for any reason, a class session is missed, you are responsible for catching up. Late work is penalized at a rate of 10% per 24 hours late; any work not submitted within 3 days following the due date will not be accepted.

Students will:

- Build their own websites/applications and deploy it on a variety of platforms, including tablets and mobile devices, using modern web development tools and techniques
- Achieve working proficiency with web programming languages and related open-source technologies, using it to build simple web applications
- Gain exposure to open-source business initiatives from Facebook, Google, and other major contributors to the languages and frameworks shaping modern software development
- Learn to query, manipulate, and consume data with open datasets, SQL, and APIs

Students should expect to spend 6-8 hours a week on coding projects and take-home exercises. There is no final exam.

Instructor: Brian Eng or Ben Block

Slack: entr451.slack.com

WINTER 2022 EVANSTON – IN-CLASSROOM

WINTER 2022 CHICAGO – TAUGHT VIRTUALLY VIA ZOOM

All students must have a modern Mac or Windows computer for completing homework and in-class projects. Detailed instructions on setup will be provided prior to the first day of class.

Unauthorized copying or distribution of any course materials is strictly prohibited.

Assignments and Grading

Detailed instructions for creating a Github account to be used to turn in assignments will be provided at the first class session. Students are highly encouraged to work in study groups for all projects, but each student must turn in their own code.

Code Projects (80%)

4 projects worth 20% each

Class Participation (20%)

Practice exercises in-classroom and between class sessions, pre-work/class prep, attendance, and active participation in course discussion/in-class lab time

Course Format

Introduction to Software Development is made up of 10 3-hour weekly sessions. Class format will vary slightly from week to week, but generally will consist of a combination of the following:

- Lecture, supplemented by written materials and/or videos provided before each class session – all readings/videos must be completed BEFORE class, as material provided in supplemental material will not be reiterated during lecture
- Examples and demos of technical concepts
- Hands-on exercises with feedback and solutions, often applied as a study on software implemented at real-world companies
- Every lecture is recorded for reference; however, unless you are sick or in quarantine, the recording should not be used as a replacement for attending class.

Instructor: Brian Eng or Ben Block

Slack: entr451.slack.com

WINTER 2022 EVANSTON – IN-CLASSROOM

WINTER 2022 CHICAGO – TAUGHT VIRTUALLY VIA ZOOM

Expectations

- Attend every class. This is a VERY fast-paced course. Our intent is to get non-programmers up-to-speed on developing software in only 10 weeks – so we cover a lot of material in a very short amount of time. As such, if you miss a class, you will be behind. Miss two classes, and it will be very difficult to catch up at all.
- Be on time to class and, if you're attending via Zoom, please always have your camera ON.
- If you are sick or are in quarantine, please let me know.
- This is a hands-on software development course – so using your laptop during class time is unavoidable! However, please only use your laptop for course work! Close any non-essential apps and notifications, and try everything you can to not get distracted by email, social media, or other shiny things that will inevitably pop up on your computer.

Office Hours/Getting Help

We will have multiple sets of office hours via Zoom each week; dates and times will be announced on the first day of class and posted to Canvas.

For quick help or asynchronous class discussion, we have a dedicated Slack channel available at entr451.slack.com.

Tentative Course Outline

Week 1: Coding is the New Literacy

Week 2: SQL

Week 3: Domain Modeling

Week 4: Programming Fundamentals

**ENTR-451:
Introduction to Software Development**

Instructor: Brian Eng or Ben Block

Slack: entr451.slack.com

WINTER 2022 EVANSTON – IN-CLASSROOM

WINTER 2022 CHICAGO – TAUGHT VIRTUALLY VIA ZOOM

Week 5: Object-Relational Mapping

Week 6: Intro to Web Apps

Week 7: APIs, MVC, and REST

Week 8: Application Security

Week 9: Web Design for Builders

Week 10: Bringing it Together