PER SCHOLAS

[Software Engineer] Syllabus

Instructor Information

Instructor	Email

General Information

Description

This course is compiled with weeks of comprehensive and intensive hands-on technical training in web development/software engineering. The course is split into modules. Learners begin to think, and build, like software engineers. In each curriculum module, learners develop key skills through interactive labs, lectures, and close collaboration, showcasing progress through Portfolio Projects.

Our main goal is to upset the manner in which computer programming is instructed and to foster a network of computer programmers, ensuring Engineers are job ready with the most up to date, prevalent and transferable skills/tech stack. Per Scholas's Software Engineering course builds excellent engineers through the use of subject matter experts and an intentionally designed curriculum, group projects that tackle issues in the developer community, and endless hiring support.

Module 1: Javascript and CS Concepts

After diving into the fundamentals of programming, learners get comfortable with object-oriented programming, Git, advanced HTML/5 & CSS3. Learners will make an ajax api request and output the data into the DOM. Learners will learn some data massaging as well as ES6 syntax.

Module 2: Backend Frameworks

Learners build full-stack web applications, deepening their knowledge of client-facing and server-side development. Topics will include building full CRUD applications, token-based authentication, as well as advanced JS. Advance JS techniques include promises, closures, & data structures, including linked lists, stacks and queues, sets, and trees.

Module 3: Front-end Frameworks

Learners build SPAs and web applications built entirely with React. They will understand MVC (Model-View-Controller) and how to implement it on large scale applications. Learners will make API requests using Fetch and render the data using React components. Finally, learners will have an introduction to

databases using Google Firebase and implement Authentication.

Module 4: Portfolio Development

Learners will fine tune their portfolios and dive into interview prep with their Technical Instructors.

Technical Grading and Graduation Requirements.

All learners will be graded per the following criteria for in class assignments and the final project:

- Final Mod Projects - 45%
    - Modules 1, 2 & 3 will have final projects.
- Mid-Mod Projects - 15%
    - Modules 1, 2 & 3 will have a Mid-Mod project.
- Homework - 20%
    - learners must successfully complete 80% of their homework to meet graduation requirements.
- Capstone Project- 20 %
    - This project will incorporate everything learners covered in the class. Learners are required to incorporate the skills they learned from the learner choice module into their capstone project.

For each assignment/presentation your instructor will provide a grading rubric. Assignments will be assigned on a bi-weekly basis. At the completion of the module, learners will present their final projects to Per Scholas instructional staff.

On the last week of class, a learner showcase will host the graduates presenting their Capstone Projects.

In addition to the above grading criteria you must adhere to the Per Scholas attendance policy as outlined in the enrollment agreement.

Only those learners who have maintained a GPA of 70% or higher and have met all of the requirements listed above will receive a Certificate of completion and attend graduation.

Please note that Per Scholas has a strict no plagiarism policy. Plagiarism is considered cheating. Any learners caught plagiarizing will be automatically dismissed from the course. Plagiarism includes but is not limited to copying code from another learner's work and/or another existing website. You are allowed to use small pieces of non-original code, provided you properly provide citations and can explain the code's functionality to your instructor.

Required Materials and Online Tools

- Github Account - learners will sign up for github accounts in class.
- Slack - learners will use Slack as their main messaging platform
- Per Scholas Academy(Canvas)- login information provided by the instructor
- https://www.codecademy.com/learn/javascript - Code Academy fundamental Programming Concepts
- https://www.hackerrank.com/contests/7days-javascript/challenges - Hacker Ranks Advance JS

More to be assigned.

Course Schedule

Module	Topic	Deliverable
I	**Javascript and CS Concepts**	
II	**Backend Frameworks**	Final Project
III	**Front End Frameworks**	Final Project
IV	**Portfolio Development**	Learner Showcase

Days Off

Per Scholas will be closed on the following dates, you are expected to work on class work and projects during days when school is not in session:

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