PROJECT AND PORTFOLIO VI

The Project and Portfolio VI: Web Design and Development course combines hands-on learning experiences with summative and formative portfolio assessments. In this course, students will identify and plan the scope of a project, including the concept, design, and production pace. Students will expand on the preproduction methods learned in the Project and Portfolio V: Web Design and Development course by creating the necessary preproduction documentation to ensure the successful delivery of their project. By the end of the course, students will have an intimate knowledge of the requirements needed to complete their project.

FULL SAIL UNIVERSITY®

THIS COURSE WILL ENSURE THAT STUDENTS HAVE ALL OF THE PLANNING, SERVER-SIDE PROGRAMMING, DATABASE-INTEGRATION, DEVELOPMENT, PREPRODUCTION, AND PRODUCTION SKILLS NECESSARY TO HANDLE THE NEXT DEGREE PHASE.

Students will focus on fine-tuning their server-side skills while adding completed components and projects to their online portfolios. In addition, they will have the opportunity to collaborate and provide feedback on team projects as well as conduct and share their research on various web-development technologies.

OUTCOMES

To demonstrate proficiency in choosing and implementing an appropriate development stack to architect a modular web application given a functional-requirements document and timeline

To demonstrate proficiency developing server-side code using frameworks appropriate to the chosen web stack

To demonstrate proficiency integrating API services to extend feature functionalities, or mash-ups, within the proposed web application

To demonstrate proficiency using a version-control system to manage and commit all project assets

MATERIALS

- **MacBook Pro** with Internet access
- **Trello** app (free) or equivalent (e.g., **ZenHub**)
- **Slack** account https://wdd.slack.com
- Favorite flow-charting tool
- Code editor of choice
- **VirtualBox**/Machine server environment
- Presentation software (e.g., **Keynote**, **reveal.js**, **PowerPoint**)
- **WordPress** portfolio site used in previous courses
- Titles listed available via **Safari Books Online**

PRODUCTION PROCESS MATERIALS

- *Scrum: Novice to Ninja*, M. David Green, SitePoint
- *Web ReDesign 2.0: Workflow that Works* (2nd edition), Kelly Goto and Emily Cotler, Peachpit Press
- *The Agile Samurai: How Agile Masters Deliver Great Software*, Jonathan Rasmusson, Pragmatic Bookshelf

STACK/FRAMEWORKS

- LAMP Stack:
  - **Laravel** https://www.laravel.com/docs/
  - *Mastering Laravel*, Christopher John Pecoraro, Packt Publishing
- MEAN Stack:
  - **Node.js** https://nodejs.org/en/
  - *Building an E-Commerce Application with MEAN*, Adrian Mejia, Packt Publishing

PORTFOLIO STRUCTURE

Students will spend time further developing their server-side programming and database-integration skills from previous courses. They will also have the opportunity to fine-tune their team-building and collaboration skills by providing feedback on a variety of web-application projects.

The assignments students have completed in previous courses in preparation for this portfolio cycle are listed in the table.

PORTFOLIO COMPETENCIES AND COMPONENTS

COURSE NAME	PORTFOLIO-RELATED ACTIVITY NAME
SERVER-SIDE LANGUAGES	▐ CRUD with Server-Side Languages ▐ Using MVC-Driven and Fully Object-Oriented Server-Side Language to Create Basic Web Applications ▐ Creating Basic Web Applications Using Current Tech Stacks ▐ Using Sessions and Cookies for Form and Login Functionality ▐ Basic RESTful API ▐ Server-Client Relationships and Terminology
ADVANCED DATABASE STRUCTURES	▐ Installing and Configuring Popular Nonrelational Database Software ▐ Applying Map/Reduce Concepts to Build Nonrelational Database Queries ▐ Translating Relational Database Schemas to Nonrelational Schemas ▐ Translating Data Access Layers in Server-Side Applications to Use Nonrelational Data Stores ▐ Building Self-Hosted Nonrelational Database Application
ADVANCED SERVER-SIDE LANGUAGES	▐ Constructing End-to-End Web Applications ▐ Using Third-Party Development Frameworks to Accelerate Server-Side Web-Application Development ▐ Common Components of Third-Party Frameworks ▐ Popular Content-Management Systems ▐ Creating Web Applications That Consume a Third-Party API

Students' portfolio course work will include developing a combination of new server-side application features and functionality as well as refining components from previous web-development courses.

WEEKLY BREAKDOWN

WEEK ONE

Students will explore course objectives and self-assess their competencies developed in previous server-side courses. They will create a preliminary burn list of goals and milestones to help them improve their server-side skills. Students will also begin researching agile project development for teams, create a group charter, and develop their consulting brand for an e-commerce shopping cart project using server-side frameworks/stacks.

THEMES

▌ Pre-Quiz   ▌ Solo Burn List   ▌ Team Charter Stand-Up

WEEK TWO

Students will work through their individual burn lists, conducting research on server-side frameworks/stacks and agile project management. They will also work in teams to establish an agile project plan and prototype design for the e-commerce shopping cart project. While prepping for the second Team Project Stand-Up, each student will contribute a unique server-side feature.

THEMES

▌ E-commerce Prototype   ▌ Agile Team Stand-Up
▌ Solo Feature

WEEK THREE

As students wrap up their unique feature contributions for the team project, they will also begin to explore a different server-side project of their choice using a new stack/framework from their burn list. Teams will work together to provide a third prototype demo with various features, including MVC, CRUD, and API integration for e-commerce. Teams will also prepare for their final Team Project Stand-Ups and demo presentations in Weeks 3 and 4.

THEMES

▌ Team Collaboration   ▌ Burn-List Research   ▌ Final Demo Prep

WEEK FOUR

Students will spend some time on self-reflection as well as reflection on their teamwork. The class will then discuss their observed improvement, future goals, and progress based on each student's milestones and individual progress. Additionally, teams will present their Team Final Demo and receive feedback from their peers.

THEMES

▌ Self/Team Reflections   ▌ Team Demo   ▌ Future Planning

GRADE WEIGHTS

ACTIVITY	GRADE WEIGHT
WEEK 1	
Discussion 1—Meet Your Team and Introductions	3%
Discussion 2—Discuss Research Findings (Agile Teams and LAMP)	3%
Assignment 1—Solo Proposal Documentation with Agile	5%
Assignment 2—Solo Version Control (Git Repo Link)	3%
Solo and Team Project Stand-Ups	6%
WEEK 2	
Comprehension Quiz 2	3%
Team Proposal Think Tank	4%
Discussion 3—Discuss Research Findings (Agile Teams and LAMP)	4%
Assignment 3—Team Proposal and Timeline Doc with Agile	2%
Assignment 4—Team Version Control (Git Repo Link)	2%
Solo and Team Project Stand-Ups	6%
GPS	10%
Total	**100%**

ACTIVITY	GRADE WEIGHT
WEEK 3	
Comprehension Quiz 3	3%
Discussion 4—Discuss Research Findings (Solo Agile and MEAN)	2%
Server-Side Résumé Upload	2%
Assignment 5—Solo PDS and Agile Documentation	4%
Solo and Team Project Stand-Ups	10%
WEEK 4	
Final Exam	10%
Discussion 5—Discuss Research Findings (Solo Agile and MEAN)	2%
Portfolio Link Updates and Peer-Review Feedback	2%
Assignment 6—Solo Screencast (Slides, Demo Link Setup)	4%
Solo and Team Project Stand-Ups	10%

FEEDBACK

The instructor will review students' assignments on a weekly basis, and students may contact the instructor via the **Slack** platform or email with additional questions. Students will also receive general feedback from peers through various role-playing scenarios. Additionally, they may receive mentor-related critique from industry figures. Each week will provide unique opportunities for students to trace their path of progress and individual growth.

Students will be assigned to a team project in Week 1 and will follow accountability policies to help them understand the nature of team building on a real-world web-development project. They will collaborate with their assigned team members to develop their demo. During team presentations, students will again receive feedback from their classmates, reinforcing the importance of team building and collaboration.

CONNECTIONS

Technical research, project planning, and effective utilization of new server-side technologies are critical skills in today's workforce. Learning full-stack web development will help students understand how to research and utilize new server-side stacks required to customize server-side apps. This course will task students to research and understand the skills necessary to host a full website in a production environment. They will also realize the importance of providing weekly stand-up and/or status reports in their careers. Building these high-demand skills will enable students to keep pace with the industry and contribute to teams that produce modern-day web applications.

OUT-OF-CLASS WORK

This course requires at least 40 hours of preparation and out-of-class work. Out-of-class activities are documented in this syllabus and include reading assignments, outside research, project development, skills practice, and homework. Consideration has been given to creating out-of-class work that will support your efforts to successfully complete this course while achieving course objectives and program learning outcomes.

COURSE-SPECIFIC RUBRICS

The course rubrics are hosted here on **Google Drive**: https://docs.google.com/spreadsheets/d/1Saa -DVD0CrR2exhYVD4Iy7ze6J2HBX8vngQuyTTDKF8 /edit?ts=58064c6a#gid=1211370192

ADDITIONAL RESOURCES

FURTHER RESEARCH | TUTORIALS | COURSE DIRECTOR'S PICKS

WEEK 1

Martin Angelov—The Languages And Frameworks You Should Learn in 2016
http://tutorialzine.com/2015/12/the-languages-and-frameworks-you-should-learn-in-2016/

Kevin Yank—Which Server-Side Language Is Right For You? https://www.sitepoint.com/server-side-language-right/

WEEK 2

Pro Django (2nd edition), Marty Alchin, Apress
Chapter 1: Understanding Django
http://ce.safaribooksonline.com/book/web-design-and-development/9781430258094/chapter-1-understanding
-django/9781430258094_ch01_xhtml?query=((django))#snippet

Django www.djangoproject.com/

WEEK 3

Rahul Rajat Singh—An Absolute Beginner's Tutorial on ASP.NET MVC for Web Forms Developers
http://www.codeproject.com/Articles/575397/An-Absolute-Beginners-Tutorial-on-ASP-NET-MVC-for

WEEK 4

Oracle—Oracle8*i* Enterprise JavaBeans Developer's Guide and Reference (Release 3)
https://docs.oracle.com/cd/A97335_01/apps.102/a83725/secure5.htm

Big Data: Concepts, Methodologies, Tools, and Applications, Information Resources Management Association, IGI
Global http://ce.safaribooksonline.com/book/databases/business-intelligence/9781466698406