Full Stack Development Immersive

Course Name	Upon completion of this program, the student will be able to:	PLO1 - Define the concept of "Full Stack" in web development and the basic principles and rules of web design.	PLO2 - Describe some of the most used digital languages in industry, their strengths, and applications.	PLO3 - Explain data structure and system design techniques for solving problems in different environments and contexts.	PLO4 - Apply project management methodologies and skills of web development projects in a variety of organizational environments.
FSDI 101: Introductory HTML & CSS					
Define the basic HTML components such as Structure, Text, Lists, and Links.	X = See key below	WE, RQ and FE			
	IRM	I			
Explain CSS aspects such as Color, Text, Boxes, as well as HTML 5 layout and practical information.	X = See key below	P, WE and FE			
	IRM	I			
FSDI 102: Intermediate HTML & CSS					
Show skill proficiency in aspects of HTML such as Loops, Images, Tables, Forms, Markup, Video, and Audio.	X = See key below	WE, RQ and FE			
	IRM	R			
Describe CSS aspects such as List, Tables, Forms, Images, and HTML 5 Layout.	X = See key below	P and FE			
	IRM	R			
FSDI 103: Programming Fundamentals					
Explain the concept of variables.	X = See key below	P and FE			
	IRM	I			
Apply conditional statements and loops.	X = See key below	P and FE			
	IRM	I			
Write programming functions.	X = See key below	P, QR and FE			
	IRM	I			
FSDI 104: JavaScript Fundamentals					
Apply the Document Object Model.	X = See key below	P, WE and FE			
	IRM	I			
Describe JavaScript functions, as well as Object Literal and Constructor.	X = See key below	P, RQ and FE			
	IRM	I			
FSDI 105: jQuery Fundamentals					
Explain the basic aspects of JavaScript such as Advanced JavaScript Objects, Document Object Model, and Events.	X = See key below	P, RQ and FE	P, RQ and FE		
	IRM	I	I		
Apply fundamental aspects of jQuery such as Query Selector and Functions.	X = See key below	P, RQ and FE	P, RQ and FE		
	IRM	I	I		
FSDI 106: JavaScript and jQuery Solutions					

Describe JavaScript Events and Functions.	X = See key below	P, RQ and FE	P, RQ and FE		
	IRM	R	I		
Show skill proficiency in aspects of jQuery and Ajax such as Server connection (GET, POST) and JSON.	X = See key below	P, RQ and FE	P, RQ and FE		
	IRM	R	I		
FSDI 107: Introductory React					
Produce a single page application using React.	X = See key below	FE and P	FE and P		
	IRM	R	I		
Modify components using React.	X = See key below	P, RQ and FE	P, RQ and FE		
	IRM	R	I		
Illustrate communication between React components.	X = See key below	P, RQ and FE	P, RQ and FE		
	IRM	R	I		
FSDI 108: Introductory Python					
Show skill proficiency in Python variables, loops, lists, Exception handling, as well as if, for, and functions.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	I		
Explain file management functions such as read, write, and delete.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	I		
FSDI 109: Intermediate React					
Apply State Management techniques such as Context API, Store, Actions, and Reducers.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	R		
Describe API endpoint communication with React.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	R		
FSDI 110: Introductory Web API with ASP.net/Flask					
Show skill proficiency in basic aspects of Flask such as RESTful API, Template Rendering, and Database Storage.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	I		
Illiustrate how to serve a React project from a Flask server and connect React with a RESTful API.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	I		
FSDI 111: Intermediate Python and Flask					
Describe micro-services with templates for graphical frontends in web applications.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	R		
Show how to connect applications to databases to allow users to create, read, update and delete persistent records.	X = See key below	FE, RQ, and P	FE, RQ, and P		
	IRM	R	R		
FSDI 112: Introductory Django					
Explain installation and configuration in Django.	X = See key below	WE, RQ and FE	WE, RQ and FE		
	IRM	R	I		

Execute a MVC web application with Django, including templates and views.	X = See key below	WE, RQ, P and FE	WE, RQ, P and FE		
	IRM	R	I		
FSDI 113: Intermediate Django					
Imlement class based views in Django rest framework.	X = See key below	WE, RQ and FE	WE, RQ and FE		
	IRM	R	R		
Produce a database connection and authentication via Django rest framework.	X = See key below	RQ, P and FE	RQ, P and FE		
	IRM	R	R		
FSDI 114: Algorithms and Data Structures					
Demonstrate skill proficiency in data organization, management, and storage formats that enable efficient access and modification.	X = See key below		WE, RQ and FE	WE, RQ and FE	
	IRM		R	I	
Apply algorithms to solve problems.	X = See key below	RQ, P and FE	RQ, P and FE	RQ, P and FE	
	IRM	R	R	I	
FSDI 115: User Experience and Responsive Design					
Implement UX Design Fundamentals, Principles, Techniques, and Usability Testing	X = See key below		WE, RQ and FE	WE, RQ and FE	
	IRM		R	I	
Execute Responsive Design functions such as Flexbox basics and media query basics.	X = See key below	RQ, P and FE		RQ, P and FE	RQ, P and FE
	IRM	R		I	I
FSDI 116: Software Development Methodology Fundamentals					
Explain Scrum in Agile Methodologies.	X = See key below	WE, RQ and FE	WE, RQ and FE	WE, RQ and FE	
	IRM	R	R	I	
Perfrom Test-Driven Methodology including Unit and Acceptance Testing, as well as Refactoring.	X = See key below		RQ, P and FE	RQ, P and FE	RQ, P and FE
	IRM		R	I	I
FSDI 117: Agile Architecture and Software Project Management					
Apply various aspects of Agile Architecture such as Architectural Styles, Architectural Techniques, SOLID Principles, and Design Patterns.	X = See key below	RQ, P and FE		RQ, P and FE	RQ, P and FE
	IRM	R		R	R
Implement Software Project Management effort and cost estimations.	X = See key below	WE, RQ and FE	WE, RQ and FE		WE, RQ and FE
	IRM	R	R		R
FSDI 118: Capstone I: User Experience					
Produce a final capstone project proposal inlcluding Responsive Design and Grid Basics.	X = See key below	RQ, P and FE		RQ, P and FE	RQ, P and FE
	IRM	R		R	R

Apply the basic aspects of UX Design such as Design Principles and Techniques, Usability Testing, User Testing Surveys and Interviews, Information Architecture, Cognitive Walkthrough, System Usability Scale (SUS), and Usability Testing planning.	X = See key below	RQ, P and FE	RQ, P and FE	RQ, P and FE	RQ, P and FE
	IRM	R	R	R	R
FSDI 119: Capstone II: Agile Methodology and Architecture					
Impement a final capstone project with Agile Architecture and defined Styles and Techniques.	X = See key below	RQ, P and FE	RQ, P and FE	RQ, P and FE	RQ, P and FE
	IRM	R	R	R	R
Prepare software architecture in a final capstone project.	X = See key below	RQ, P and FE	RQ, P and FE	RQ, P and FE	RQ, P and FE
	IRM	R	R	R	R
FSDI 120: Capstone III: Project Management					
Implement Software Project Management tecniques for Effort Estimation, Cost Estimation, and Risk Management.	X = See key below	RQ, P and FE	RQ, P and FE	RQ, P and FE	RQ, P and FE
	IRM	M	M	M	M
Apply the basic aspects of Test Driven Development in final capstone project.	X = See key below	RQ, P and FE	RQ, P and FE	RQ, P and FE	RQ, P and FE
	IRM	M	M	M	M

X = The assessment which measures the stated program objective/outcome.

KEY	
Projects	P
Researched and Critiqued Articles	RA
Review / Discussion Question Responses	RQ
Case Studies	CS
Web Exercises	WE
Final Exam with Essay Questions	FE
Introduced, Reinforced, Mastered	IRM