

# Salem State University

## Certificate for Full Stack Software Developer

### Curriculum for Fall 2020 Start

#### User Centric Frontend Development

Introduction To The Integrated Development Environment

Cloud9

The Cloud 9 Ecosystem

Introduction to Rescue Your Work From Certain Death

The Command-line Interface

Git Basics

GitHub

Introduction to Fixing and Examining Stuff

Debugging HTML & CSS In The Browser

Introduction To Responsive Web Design

Responsive Design Basics

Media Queries

Mobile vs Desktop Approach

Responsive Design - Mini-Project

Introduction To CSS Animations And Transitions

CSS Transitions

CSS Animations

CSS Transformations

CSS Witchcraft

Introduction To Bootstrap

Bootstrap Basecamp

Core CSS & The Grid System

Components

Beyond Bootstrap

Introduction To User Experience Design (UXD)

The Strategy Plane

The Scope Plane

The Structure Plane

The Skeleton Plane

The Surface Plane

Resume Project Introduction

The Basic Structure

The Header

The Footer

Three Reasons To Hire Me

Contact details

The Resume Page

My Skills

My Work History

The Contact page

Download my CV

User Centric Frontend Development Milestone Project

## Interactive Frontend Development

- Test-Driven Development Using Jasmine
- From JavaScript to jQuery
- jQuery Introduction
- jQuery Events
- jQuery - Traversing Mt. Dom
- Scalable Vector Graphics (SVGs)
- D3.js
- DC.js and Crossfilter.js
- Data Visualization Introduction
- Loading Your Data
- Creating Your Charts
- Show Salary Correlations
- Layout and Styling
- Application Programming Interfaces (APIs)
- Consuming APIs Using JavaScript
- Data & The DOM
- Project Introduction
- Google Maps
- The GitHub API
- Sending Emails Using EmailJS
- Interactive Frontend Development Milestone Project

## Practical Python

- Getting Started With Python In Cloud 9
- Test Driven Development with Python
- File I/O
- Boggle Solver Part One
- Boggle Solver Part Two
- Getting Started
- Applying Styles
- Flask & Data
- Routing and Templates
- Deploying Our Project To Heroku
- Starting The Project
- Expanding Our Project
- Upgrading Our Chat Functionality

## Data Centric Development

- Data Fundamentals
- Data Store Types
- Database Fundamentals
- Relational Database Design
- A Database Management System In Action - MySQL
- SQL In Action
- Introduction To Go Humongous With MongoDB
- Create a MongoDB Database
- Manipulate Data Using Mongo Shell
- Manipulate Data Programmatically With Python
- Manipulate Data With A Custom User Interface
- Introduction to Mini Project

- Putting The Basics In Place
  - Adding A Task - Accepting User Input
  - Adding A Task - Writing to the Database
  - Editing A Task
  - Delete A Task
  - Manage Categories
  - Adding Application Navigation
- Data Centric Development Milestone Project
- Full Stack Frameworks with Django
  - Hello Django
  - Testing Django
  - The Heroku Platform
  - Making Our Code Deployment Ready
  - Deploying Our Project
  - Environments, Automation & Security
  - Getting Set Up
  - Logging Out
  - Creating Login Functionality
  - Authorization
  - User Registration & Profiles
  - Password Reset
  - Custom Authentication
  - Styling A Django Project
  - Introduction To Blog All About It
  - Set Yourself Up For Success
  - Create Models, Views And URLs
  - Create HTML templates and CSS styles
  - Let's Go Live!
  - Products and a Shopping Cart
  - Finding and Purchasing Products
  - Hosting your E-commerce web app
- Full Stack Frameworks with Django Milestone Project
- Portfolio Submission and Assessment Guide