Ogden-Weber Technical College

200 N. Washington Blvd, Ogden, UT 84404

801-627-8300

Computer Programming	Course Description

Catalog Year: 2023, Required Hours: 840

Required Core Courses (840 hours required)

C# (840 hours required)		Hours
PROG1000	**Career Planning**	**30.00**
This course assesses student strengths and weaknesses to determine the best career fit in the technology field and provides training for students to build quality resumes and cover letters as well as guidance in applying for jobs and participating in practice interviews.		
PROG1015	**Intro to Programming**	**30.00**
This course is designed as an introduction to programming for the students who have no or very little programming knowledge and experience.		
PROG1070	**Structured Project I**	**60.00**
This course is designed to teach students programming syntax, design, thinking skills, troubleshooting techniques, and tools, while simulating industry by hands on exposure to the full lifecycle of Software Development. This course will provide students an opportunity to build a project as they learn syntax, concepts, tools, and techniques. This course starts from design and ends with a deep dive into methods.		
MATH1044	**Programming Math**	**30.00**
The purpose of this course is to teach students the essential concepts of mathematics including algebra that Software Developers use. Using the skills developed through this course students will be able to face the logical and mathematical challenges that programming represents.		
PROG1075	**Structured Project II**	**60.00**
This course is designed to teach students programming syntax, design, thinking skills, troubleshooting techniques, and tools, while simulating industry by hands on exposure to the full lifecycle of Software Development. This course will provide students an opportunity to build a project as they learn syntax, concepts, tools, and techniques. This course starts from design and ends with a deep dive into methods.		
PROG1001	**Foundations of Computer Science**	**120.00**
This course provides the students with a solid understanding in many computer science topics that have industry applications. Students will learn concepts such as ethical issues in computing, networks, operating systems, databases, problem solving and programming. This course will provide a background in basic computing along with many other foundation skills. Objectives: Build a foundational level of understanding in these areas: History and Social Implications of Computing Computing Security and Ethics Computer Architecture Networks The Internet Database Fundamentals Numbering Systems and Data Representations Data Structures Operating Systems File Structures The Human-Computer Interface Problem Solving and Debugging Software Engineering		
PROG2113	**HTML and CSS**	**120.00**
This course introduces the markup language HTML and the stylesheet language CSS to develop highly effective websites. Comprehensive coverage of HTML5, Cascading Style Sheets (CSS), and Web design best practices are covered. In addition, the course presents information on accessibility, ethics, e-commerce, website promotion strategies, and an intro to JavaScript.		
PROG1080	**Structured Project III**	**90.00**
This course is designed to build on the skills presented in the previous project course and will expand students' knowledge in programming by exploring design, thinking skills, troubleshooting techniques, and tools, while simulating industry through hands on exposure to the full lifecycle of Software Development. This course will provide students an opportunity to build a project as they learn syntax, concepts, tools, and techniques. This course covers basic user interfaces and ends with searching and sorting.		
PROG1501	**SQL: Relational Database**	**120.00**
This course is designed to give users an understanding of the SQL language using Oracle's SQL Developer tools. The course covers SQL commands for DML (data manipulation language), DDL (data definition language), and Query operations. The course topics are valid to all versions of Oracle through Oracle 12g. The SQL techniques can be applied to other database environments. Competencies: • Ability to normalize a database to third form • Understand relational database theory and concepts • Demonstrate skill in the basics of the SQL language • Become proficient in formulating SQL queries • Understand Oracle's SQL Developer tools • Ability to use DML (insert, update, and delete) and DDL (create, alter, and drop) • Know and apply SQL programming techniques to retrieve desired data and write advanced queries		

PROG1085	Structured Project IV	90.00

This course is designed to build on the skills presented in the previous project course and will expand students' knowledge in programming by exploring design, thinking skills, troubleshooting techniques, and tools, while simulating industry through hands on exposure to the full lifecycle of Software Development. This course will provide students an opportunity to build a project as they learn syntax, concepts, tools and techniques. This course covers custom lined data structures and ends with asynchronous programming.

PROG1061	Computer Programming Capstone Project	60.00

This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. This course will explore how to complete a project from the definition phase through implementation.

PROG1090	Job Prep	30.00

This course allows for students to develop the skills and tools necessary to prepare for entry into the job search as well as providing opportunities to participate in a realistic practice interview and job search refresher.

JavaScript (840 hours required)		Hours
PROG1000	Career Planning	30.00

This course assesses student strengths and weaknesses to determine the best career fit in the technology field and provides training for students to build quality resumes and cover letters as well as guidance in applying for jobs and participating in practice interviews.

PROG1190	Photoshop for Web	60.00

This course introduces Adobe Photoshop, an industry standard software for creating and editing graphics. The course covers techniques for common Photoshop tasks including selecting and isolating objects, creating image composites, masking and editing images, setting typography, and improving images with retouching and effects.

PROG2113	HTML and CSS	120.00

This course introduces the markup language HTML and the stylesheet language CSS to develop highly effective websites. Comprehensive coverage of HTML5, Cascading Style Sheets (CSS), and Web design best practices are covered. In addition, the course presents information on accessibility, ethics, e-commerce, website promotion strategies, and an intro to JavaScript.

PROG1015	Intro to Programming	30.00

This course is designed as an introduction to programming for the students who have no or very little programming knowledge and experience.

PROG1170	JavaScript Project I	60.00

This course is designed to teach students programming syntax, design, thinking skills, troubleshooting techniques, and tools, while simulating industry by hands on exposure to the full lifecycle of Software Development. Students will have the opportunity to build a project as they learn syntax, concepts, tools, and techniques. This course starts with an introduction to JavaScript and ends with basic libraries and tools.

MATH1044	Programming Math	30.00

The purpose of this course is to teach students the essential concepts of mathematics including algebra that Software Developers use. Using the skills developed through this course students will be able to face the logical and mathematical challenges that programming represents.

PROG1175	JavaScript Project II	60.00

This course is designed to teach students programming syntax, design, thinking skills, troubleshooting techniques, and tools, while simulating industry by hands on exposure to the full lifecycle of Software Development. This course will provide students with an opportunity to build a project as they learn syntax, concepts, tools, and techniques. This course starts with design and ends with a deep dive into methods. This course covers intermediate JavaScript and frameworks.

PROG1001	Foundations of Computer Science	120.00

This course provides the students with a solid understanding in many computer science topics that have industry applications. Students will learn concepts such as ethical issues in computing, networks, operating systems, databases, problem solving and programming. This course will provide a background in basic computing along with many other foundation skills.
Objectives: Build a foundational level of understanding in these areas:
History and Social Implications of Computing
Computing Security and Ethics
Computer Architecture
Networks
The Internet
Database Fundamentals
Numbering Systems and Data Representations
Data Structures
Operating Systems
File Structures
The Human-Computer Interface
Problem Solving and Debugging
Software Engineering

PROG1180	JavaScript Project III	90.00

This course builds on the skills presented in the previous project course and will expand knowledge in programming by exploring design, thinking skills, troubleshooting techniques, and tools, while simulating industry through hands on exposure to the full lifecycle of Software Development. This course provides an opportunity to build a project as they learn syntax, concepts, tools, and techniques. This course covers an introduction to jQuery and ends with MongoDB.

PROG1030	SQL for the Web	60.00
This course covers topics in Structured Query Language (SQL), the language that communicates with databases. The course explores concepts to build, query, and manipulate relational databases. The course covers data manipulation through joins, functions, views, and triggers. SQL techniques can be applied to other database environments.		
PROG1185	**JavaScript Project IV**	**90.00**
This course builds on the skills presented in the previous project course and will expand knowledge in programming by exploring design, thinking skills, troubleshooting techniques, and tools, while simulating industry through hands on exposure to the full lifecycle of Software Development. This course provides students with an opportunity to build a project using syntax, concepts, tools and techniques. This course covers advanced full stack topics up to deployment and support.		
PROG1060	**Software Technology Capstone Project**	**60.00**
This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete a project from the definition phase through implementation. Objectives: Gain practical experience by working on projects Build up your portfolio Challenge yourself and expand your skills		
PROG1090	**Job Prep**	**30.00**
This course allows for students to develop the skills and tools necessary to prepare for entry into the job search as well as providing opportunities to participate in a realistic practice interview and job search refresher.		