Web Development Minor

Dr. Richard Vogel, Acting Chair
Computer Systems Dept.
Richard.Vogel@farmingdale.edu
631-420-2190
School of Business

Available to all baccalaureate majors except Computer Programming Information Systems, this minor is intended for students who have an interest in expanding their knowledge in Web development. The minor consists of 21 credits (seven 3-credit courses), all to be approved by the department chair.

About Academic Minors

Farmingdale State College students are invited to enhance their studies with an "Academic Minor." A minor is a cluster of thematically related courses drawn from one or more departments. In addition to department based minors (e.g. computer programming & info systems), interdisciplinary minors are also available (e.g. legal studies).

Academic minors are approved by the College-Wide Curriculum Committee and the Provost. Students must make application for an academic minor through the department offering the minor in conjunction with the Registrar's Office. Specific course work must be determined in consultation with a faculty member in the department offering the minor. A statement of successful completion of the academic minor will appear on the student's transcript at the time of graduation.

• A minor is considered to be an optional supplement to a student's major program of study.
• Completion of a minor is not a graduation requirement and is subject to the availability of the courses selected. However, if the requirements for a minor are not completed prior to certification of graduation in the major, it will be assumed that the minor has been dropped. Consequently, the student will only be certified for graduation in their primary major.
• Only students in 4 year baccalaureate programs can apply for a minor.
• A minor should consist of 15 to 21 credits, with the exception of the Chemistry and Air Force ROTC minors which require 22 credits.
• At least 12 credits must be in courses at the 200 level or higher.
• At least 9 credits must be residency credits.
• Specific requirements for each minor are determined by the department granting the minor. Each minor and criteria are described in the Academic Minors Information Guide.
• Students must maintain a minimum cumulative GPA of at least 2.0 in their minor. Some minors may require a higher GPA.
• Students are prohibited from declaring a minor in the same discipline as their major (e.g. one cannot combine an applied math minor with an applied math major). Academic minors may not apply to all curricula.
• Students are permitted to double-count minor courses with liberal arts courses, general education courses and free electives but can only double-count up to 6 credits of required major coursework toward the minor.
• Students are only permitted to take more than one minor with appropriate written approval of their Department Chair or School Dean.

Fall 2017- Subject to Revision
Required: (21 credits)

- BCS 120 Foundations of Computer Programming I 3
- BCS 130 Website Development I 3
- BCS 160 Computers, Society, and Technology 3
- BCS 230 Foundations of Computer Programming II 3
- BCS 240 Website Development II 3
- BCS 303 XML 3

BCS 200 Level or Higher Elective – To be determined in consultation with the Department Chair

When it is deemed necessary, substitutions may be made at the discretion of the Department Chair.

Course Descriptions

**BCS 120 Foundations of Computer Programming I**
This course introduces the C++ Programming Language as a means of developing structured programs. Students will be taught to develop algorithms using top-down stepwise refinement. Students will be introduced to the concept of Object Oriented programming. In addition, students will get a thorough exposure to C++ syntax and debugging techniques. Credits: 3

**BCS 130 Website Development I**
This is an introductory course in web page authoring in which students will create web pages using HTML (HyperText Markup Language) and CSS (Cascading Style Sheets). In addition to the introductory topics of changing text appearance, creating hyperlinks, and inserting images into a web page, advanced topics such as layout, tables, and forms will also be covered. Credits: 3

**BCS 160 Computers, Society, and Technology**
This is an introductory course that provides students with the knowledge to stay current and informed in a technology-oriented, global society. Students will receive instruction in basic computer concepts and terminology, the fundamentals of the Windows operating system and have hands-on experience at the beginning to intermediate level using Microsoft Excel and Access. The Internet will be used to supplement textbook and lecture materials. Note: Students taking this course may not receive credit for BCS 102 or 202. Credits: 3

**BCS 230 Foundations of Computer Programming II**
This course expands the knowledge and skills of Foundations of Computer Programming I. Among the topics covered are: arrays, pointers, strings, classes, data abstraction, inheritance, composition and overloading. Prerequisite(s): BCS 120 with a grade of C or higher Credits: 3

**BCS 240 Website Development II**
In this course, students will learn how to create websites that deliver a seamless experience across a diverse range of desktop and mobile devices using the same code base. In addition, students will learn how to perform forms validation, create navigation and menuing systems, build responsive layouts with flexible content, code media queries, and create and modify template and child pages. Students will use CSS 3 to create user interfaces with toolbars, animations, buttons, forms, lists, events, and themes. Prerequisite(s): BCS 130 with a grade of C or higher Credits: 3
BCS 303 XML
Students will be introduced to the basic intermediate concepts of XML, the Extensible Markup Language. Students will learn how to create the XML document, work with name-spaces, Document Type Definitions, and XML schemas. In addition, students will also use the advanced features of XML, such as XPath and the XSLT stylesheet language to transform XML documents. Prerequisite(s): BCS 130 and BCS 120 all with a grade of C or higher Credits: 3

Admission to Farmingdale State College - State University of New York is based on the qualifications of the applicant without regard to age, sex, marital or military status, race, color, creed, religion, national origin, disability or sexual orientation.