COMPUTER PROGRAMMING AND APPLICATION DEVELOPMENT ASSOCIATE OF APPLIED SCIENCE DEGREE

Computer Programming and Application Development is a fall start program. Please see an advisor for more information.

The Computer Programming and Application Development degree prepares students to enter industry as entry-level software and web application developers. Students gain hands-on experience and skills in C#, Java, Perl, Visual Basic.NET, and web development technologies such as HTML5, CSS3, JavaScript, and PHP. Graduates will also gain experience working on Linux and Windows Operating System platforms, as well as the basics of Cisco networking. This combination of programming skills, web development skills, and computer system knowledge combine to create a powerful mix of skills valuable to a variety of business, industrial, and professional fields. At graduation, each student will have a portfolio of applications created for demonstration at job interviews. See our website at www.msubillings.edu/careers (http://www.msubillings.edu/careers/) for graduate data.

Before a student can be accepted into the Computer Programming and Application Development degree program, competency in mathematics and computers must be demonstrated. This may be done by:

- transferring of appropriate credits
- completing the computer literacy challenge test
- obtaining permission of CST faculty
- taking prerequisite course (CAPP 120)
- possessing current ACT/SAT scores in the required range
- taking the necessary prerequisite English, math and/or computer classes identified in the catalog

Check with an academic advisor to determine how you can meet these requirements. Students should check the course descriptions for required prerequisites.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Design, create, edit, deploy and administer dynamic web sites.
- Design, create, edit, deploy and administer databases.
- Analyze, design and document from conception to development of a final application.
- Test computer applications and systems solutions.

Required Courses

Code	Title	Credits
CAPP 156	MS Excel	3
CAPP 158	MS Access	3
COMX 106	Comm in a Dynamic Workplace	3
CSCI 100	Intro to Programming	3
CSCI 111B	Programming with Java I	3
CSCI 114	Programming with C#	3
CSCI 116	Intro to Python Programming	3
CSCI 121	Programming with Java II	3
CSCI 124	Advanced C#/.NET	3
CSCI 181	Web Design & Programming	3
CSCI 211	Client Side Programming	3
CSCI 214	Server-Side Web Prog & Admin	3
CSCI 223	Software Development	3
CSCI 240	Databases and SQL	3
CSCI 258	Web Application Development	3
CSCI 299	Thesis/Capstone	4
ITS 166	Configuring MS Windows 10	3
ITS 212	Network Operating Sys-Server A	3
ITS 224	Introduction to Linux	3
M 143	Finite Mathematics	4
NTS 104	CCNA 1: Intro to Networks	4
WRIT 121	Intro to Technical Writing	3
Total Minimum Credits		**69**

Suggested Plan of Study

Code	Title	Credits
First Semester		
CAPP 156	MS Excel	3
CSCI 240	Databases and SQL	3
CSCI 100	Intro to Programming	3
CSCI 181	Web Design & Programming	3
ITS 166	Configuring MS Windows 10	3
WRIT 121	Intro to Technical Writing	3
Total		18
Second Semester		
CSCI 114	Programming with C#	3
CSCI 116	Intro to Python Programming	3
CSCI 211	Client Side Programming	3
ITS 212	Network Operating Sys-Server A	3
ITS 224	Introduction to Linux	3
COMX 106	Comm in a Dynamic Workplace	3
Total		18
Third Semester		
CSCI 111B	Programming with Java I	3
CSCI 124	Advanced C#/.NET	3
CSCI 214	Server-Side Web Prog & Admin	3
CSCI 223	Software Development	3
M 143	Finite Mathematics	4
Total		16
Fourth Semester		
CAPP 158	MS Access	3
NTS 104	CCNA 1: Intro to Networks	4
CSCI 121	Programming with Java II	3
CSCI 258	Web Application Development	3
CSCI 299	Thesis/Capstone	4
Total		17