

# LIBERTY UNIVERSITY

## ONLINE ACADEMY

### Application Development Certificate - Course Descriptions

#### **CSIS 100 (CSB 3100) – Intro to Information Sciences & Systems**

This course examines the design, selection, implementation, and management of enterprise Business solutions. The focus is on identifying critical business processes and envisioning how technology can be developed to provide solutions which generate competitive advantage. Students learn how applying frameworks and strategies around the Business Process and Organization Strategy provide a competitive advantage. Topics include MIS and IT fundamentals, Information Systems Management and Using Enterprise Business Applications for competitive advantage. The course also includes a component for Technical Writing for Information Systems. (Formerly BMIS 200)

*College Credits: 3*

*LUOA High School Equivalency: Fine Art/Career/Technology Elective*

*Sub-term: B/D*

*Course Prerequisites: MATH 110 or Math Assessment*

#### **CSIS 208 (CSB 3208) – Application Programming**

Development of computer and programming skills, problem-solving methods, and selected applications. This course provides a broad-based introduction to programming in Visual Basic. Students will learn how to build a program from the design phase all the way through to delivery.

*College Credits: 3*

*LUOA High School Equivalency: Fine Art/Career/Technology Elective*

*Sub-term: B/D*

*Course Prerequisites: CSIS 100 and MATH 121 or higher*

#### **CSIS 209 (CSB 3209) – C# Programming**

Development of computer and programming skills using the C# language. Students will learn how to use C# to develop stand-alone applications in an IDE. Advanced concepts, such as database connectivity and web applications will also be examined.

*College Credits: 3*

*LUOA High School Equivalency: Fine Art/Career/Technology Elective*

*Sub-term: B/D*

*Course Prerequisites: CSIS 208 or CSIS 212*

#### **CSIS 212 (CSB 3213) – Object-Oriented Programming**

A study of the general-purpose, secure, object-oriented, portable programs. This course prepares students to program stand-alone applications. It will cover features such as programming concepts, data types, operators, flow control statements, objects, classes, methods, arrays, and strings. The concept of object-oriented programming is emphasized. The course has an additional \$35 fee for course materials

*College Credits: 3*

*LUOA High School Equivalency: Fine Art/Career/Technology Elective*

*Sub-term: B/D*

*Course Prerequisites: CSIS 208*

**CSIS 312 (CSB 3312) – Advanced Object-Oriented Programming**

In-depth study of the advanced features of Java, with an emphasis on the “why” as well as the “how to” of programming in the Java language. This course also prepares students for the Sun Certified Java Programmer exam. (Formerly BMIS 312)

*College Credits: 3*

*LUOA High School Equivalency: Fine Art/Career/Technology Elective*

*Sub-term: B/D*

*Course Prerequisites: CSIS 212*

**CSIS 375 (CSB 3375) – Human-Computer Interaction**

This course provides a study and application of the concepts, theory, and practice of effective user interactive computer software, including user-centered design principles, guidelines, and evaluation for designing a software product. Cognitive and social aspects of human interaction will be examined in conjunction with elements of technological devices. Human interaction with mobile applications, internet applications, social networking technology, cloud computing, and stand-alone applications will be explored. (Formerly BMIS 375, CSCI 375)

*College Credits: 3*

*LUOA High School Equivalency: Fine Art/Career/Technology Elective*

*Sub-term: B/D*

*Course Prerequisites: CSIS 208 or 212*

**Additional course needed for prerequisite**

*\*Need MATH 121 or Higher – recommended to do BUSI 230 (MATH 201)*

**BUSI 230 (CSB 3230) – Introduction to Probability and Statistics**

Introduction to descriptive statistics and probability, probability distributions, estimation, tests of hypotheses, chi-square tests, regression analysis, and correlation with applications in business and science. (Cross-listed with MATH 201)

*College Credits: 3*

*LUOA High School Equivalency: Higher Math*

*Sub-term: B/C/D*

*Course Prerequisites: MATH 110, Math Assessment, or SAT/ACT*