Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should <u>not</u> be used to purchase course materials.

LIBERTY UNIVERSITY

COURSE SYLLABUS

CSIS 641

SOFTWARE DEVELOPMENT MANAGEMENT

COURSE DESCRIPTION

This course will cover some of the challenges associated with software development management and is intended to serve as a guide to students maturing engineering discipline. Software succeeds when it meets the needs of the people who use it, performs flawlessly over a long period, it is easy to modify, and changes things for the better. Therefore, students will explore software development from a managerial perspective by learning the software process models, modeling, quality management, and managing software projects. This course teaches students how to build better software based on discipline and modern methods, which is acquired through an engineering approach. Discussion of advanced topics such as software process improvement and future software engineering trends will be addressed.

RATIONALE

Software engineering is fundamental to IT value within any large enterprise. The measurement of this value can be found in the concepts and methods used to develop and deploy the correct application or system in a cost-effective form and timely manner. Once supported by well-documented procedures and validated techniques, the enterprise can leverage not only the skill set of its developers but the corporate strategic plan as well. A successful enterprise makes well-informed decisions about these software engineering processes through modeling, advanced development philosophies, and quality assurance.

I. PREREQUISITE

For information regarding prerequisites for this course, please refer to the Academic Course Catalog.

II. REQUIRED RESOURCE PURCHASE

Click on the following link to view the required resource(s) for the term in which you are registered: http://bookstore.mbsdirect.net/liberty.htm

III. ADDITIONAL MATERIALS FOR LEARNING

A. Computer with basic audio/video output equipment

B. Internet access (broadband recommended)

C. Microsoft Office

IV. MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

A. Discuss the relevance of course material and the use of software development management to a biblical worldview. (PLO-1)

B. Summarize the software process through prescriptive and agile process models. (PLO-2)

C. Develop UML-based modeling using modern analysis and design methods. (PLO-3)

D. Explain quality management by addressing all aspects of software testing and quality assurance, formal verification techniques, and change management. (PLO-3)

V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations

B. Course Requirements Checklist

After reading the Course Syllabus and Student Expectations, the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (4)

Discussion boards are collaborative learning experiences. Therefore, the student is required to create a thread in response to the provided prompt for each forum. Each thread must be at least 500 words and demonstrate course-related knowledge. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be at least 250 words.

D. Lab Assignments (3)

The student will complete lab assignments that involve different phases of the software development life cycle. Each assignment builds upon the previous assignment. This will enable the student to encounter the multiple challenges inherent in developing and integrating applications software within the modern enterprise.

E. Comprehensive Lab Assignment

The student will complete a lab assignment that encompasses the different themes taught in the course. For written portions of the assignment, current APA format must be used.

F. Quizzes (4)

Each quiz will cover the Reading & Study material for the assigned modules/weeks. Each quiz will be open-book/open-note, contain 3 short answer and 17 multiple-choice and true/false questions, and have a 2-hour time limit.

VI. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist		10
Discussion Board Forums (4 at 50 pts ea)		200
Lab Assignments (3 at 100 pts ea)		300
Comprehensive Lab Assignment		200
Quizzes (4 at 75 pts ea)	(Modules 1, 3, 5, 7)	300
	Total	1010

B. Scale

A = 940–1010 A- = 920–939 B+ = 900–919 B = 860–899 B- = 840–859
C+ = 820–839 C = 780–819 C- = 760–779 F = 0–759

C. Disability Assistance

Students with a documented disability may contact Liberty University Online's Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.

COURSE SCHEDULE

CSIS 641

Textbook: Pressman & Maxim, *Software Engineering: A Practitioner's Approach* (2015).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Pressman & Maxim: chs. 1–2 1 presentation	Course Requirements Checklist Class Introductions DB Forum 1 Quiz 1	10 0 50 75
2	Pressman & Maxim: chs. 3–5 1 presentation	Lab Assignment 1	100
3	Pressman & Maxim: chs. 6–7 1 presentation	DB Forum 2 Quiz 2	50 75
4	Pressman & Maxim: chs. 8–11	Lab Assignment 2	100
5	Pressman & Maxim: chs. 12, 19–20	DB Forum 3 Quiz 3	50 75
6	Pressman & Maxim: chs. 21–22 1 presentation	Lab Assignment 3	100
7	Pressman & Maxim: chs. 31–34	DB Forum 4 Quiz 4	50 75
8	Pressman & Maxim: chs. 35–36 1 website	Comprehensive Lab Assignment	200
		TOTAL	**1010**

DB = Discussion Board

NOTE: Module/Week one begins on Monday and ends at 11:59 p.m. (ET) on Friday. Modules/Weeks 2-8 begin on Saturday and end at 11:59 p.m. (ET) on Friday.