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 354

INTEGRATIVE PROGRAMMING AND TECHNOLOGIES

COURSE DESCRIPTION

Examines the integration of systems and applications across global businesses; explores programming interfaces, data mapping and exchange, scripting, and programming languages to support the configuration, maintenance, integration, and security of systems.

RATIONALE

The purpose of this course is to examine the integration of systems and applications across global businesses. Additionally, this course explores programming interfaces, data mapping, and integration. This course provides students with a foundation for applying scripting and analyzing the security of systems.

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. Blackboard recommended browsers

D. Microsoft Office

IV. MEASURABLE LEARNING OUTCOMES

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

A. Integrate a biblical worldview within information technology.

B. Examine IT services used to integrate incongruent applications.

C. Distinguish the role of data exchange between dissimilar IT systems.

D. Compare programming design patterns.

E. Construct an integrative programming solution.

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 (2)

Discussion boards are collaborative learning experiences. Therefore, the student is required to provide a thread in response to the provided biblical prompt for each forum. Each thread must be at least 250 words, demonstrate course-related knowledge, and reference at least 1 source from the Bible. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be at least 150 words.

D. Group Discussion Board Forums (6)

For this collaborative discussion board, the student will be assigned a group. Each group member will be assigned a topic for research. The student will submit his/her thread to the group for feedback and collaboration. Each thread must be at least 250 words, demonstrate course-related knowledge, and reference 3 peer-reviewed sources in addition to the course textbook and Bible. Topics will include architectures for integrating distributed systems, web services and middleware, and network and communication systems. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be at least 150 words.

E. XSL Synthesis Assignment

The student will write an XML file and a style for the XML file by writing an XSL file, which is the synthesis for the XML file. The student will submit the XML and XSL files for this assignment.

F. Data Mapping Exercise

The student will create an XML mapping schema by writing it in an editor of his/her choice or by reading the XML file into a string and creating the schema from that string.

G. Web Service Implementation Exercise

The student will locate a web service and create an interface that directly interacts with the chosen web service.

H. LibertyU Assignment

The student will create and run an IDL interface using a provided example.

I. Final Project

The student will utilize knowledge gained from previous assignments in order to complete a distributed system prototype. The student must use current APA format and include at least 2 scholarly or industry references.

VI. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist		10
Discussion Board Forums (2 at 45 pts ea)		90
Group Discussion Board Forums (6 at 60 pts ea)		360
XSL Synthesis Assignment		100
Data Mapping Exercise		100
Web Service Implementation Exercise		100
LibertyU Assignment		50
Final Project		200
	Total	1010

B. Scale

A = 900–1010 B = 800–899 C = 700–799 D = 600–699 F = 0–599

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.

LIBERTY UNIVERSITY

COURSE SCHEDULE

CSIS 354

Textbook: Coulouris, G. et al., *Distributed Systems: Concepts and Design* (2012).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Coulouris: ch. 1 1 presentation	Course Requirements Checklist Class Introductions DB Forum 1	10 0 45
2	Coulouris: ch. 2 1 presentation	Group DB Forum 1	60
3	Coulouris: ch. 4 1 presentation	Group DB Forum 2 XSL Synthesis Assignment	60 100
4	Coulouris: ch. 5 1 presentation	Group DB Forum 3 Data Mapping Exercise	60 100
5	Coulouris: ch. 6 1 presentation	Group DB Forum 4 Web Service Implementation Exercise	60 100
6	Coulouris: ch. 8 1 presentation	Group DB Forum 5 LibertyU Assignment	60 50
7	Coulouris: ch. 9 1 presentation	Group DB Forum 6	60
8	Coulouris: ch. 18 1 presentation	DB Forum 2 Final Project	45 200
		TOTAL	**1010**

DB = Discussion Board

NOTE: Each course module/week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on **Friday**.