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 not be used to purchase course materials.
COURSE SYLLABUS

CSIS 525
DATABASE DESIGN AND DEVELOPMENT

COURSE DESCRIPTION

Focused on the advanced design and development of databases, students will learn how to architect data storage solutions that are highly dynamic and scalable to meet the rapidly changing needs of business. Areas will include, but are not limited to, client-server processing, parallel processing, distributed, and multidimensional databases. Students will learn how to design database management systems that scale to meet the needs of rapidly changing and competitive business environments.

RATIONALE

CSIS 525 fulfills a core competency in the Masters in Information Technology program. This course covers advanced database development and the concepts of managing database environments.

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 information technology to a biblical worldview.
B. Justify the importance of dynamic and scalable database solutions.
C. Examine the innovative practices of database design.
D. Assess integrative database development processes.
E. Design a database management system that fulfills changing business requirements.

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 (5)

Discussion boards are collaborative learning experiences. Therefore, the student will create a thread in response to the provided prompt for each forum. Each thread must be 400–500 words and demonstrate course-related knowledge. For each thread, the student must support his or her argument with at least 4 citations in current APA format. In addition to the thread, the student will reply to at least 2 other classmates’ threads. Each reply must be 200–250 words and incorporate at least 2 citations in current APA format. Acceptable sources include peer-reviewed journal articles, books, the course textbook, and the Bible.

D. Homework (5)

The student will complete 5 homework assignments. Each assignment will consist of a variable number of questions that are focused on the textbook readings. All homework assignments must be typed into a Microsoft Word document and include screenshots.

E. Research Papers (2)

The student will write 2 research-based papers that each focus on a topic from the textbook readings. The topic will be of his or her choosing and must be approved by the instructor. Each paper must be at least 2,000 words and be in current APA format. Each paper will be completed in 3 parts: Topic Approval, References and Sentence Outline, and Final Draft. Each paper must include at least 7 references. Acceptable sources include peer-reviewed journal articles, books, the course textbook, and the Bible.

F. Projects (2)

The student will design and create 2 database projects that each meet a real-life need. Each project will include a design and development phase with ER Diagram and tables as well as a data analysis phase with advanced data mining queries. Screenshots must be included for these projects.

G. Midterm Exam

The Midterm Exam will cover the Reading & Study materials for Modules/Weeks 1–4. The exam will be open-book/open-notes, contain 50 multiple-choice questions, and have a 1-hour time limit.

H. Final Exam
The Final Exam will cover the Reading & Study materials for Modules/Weeks 5–8. The exam will be open-book/open-notes, contain 50 multiple-choice questions, and have a 1-hour and 30-minute time limit.

VI. COURSE GRADING AND POLICIES

A. Points

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Requirements Checklist</td>
<td>10</td>
</tr>
<tr>
<td>Discussion Board Forums (5 at 40 pts ea)</td>
<td>200</td>
</tr>
<tr>
<td>Homework (5 at 20 pts ea)</td>
<td>100</td>
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<tr>
<td>Research Papers (2)</td>
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</tr>
<tr>
<td>Topic Approvals (2 at 10 pts ea)</td>
<td>20</td>
</tr>
<tr>
<td>References and Sentence Outlines (2 at 15 pts ea)</td>
<td>30</td>
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<tr>
<td>Final Drafts (2 at 75 pts ea)</td>
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<tr>
<td>Projects (2 at 150 pts)</td>
<td>300</td>
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<tr>
<td>Midterm Exam (Modules 1–4)</td>
<td>100</td>
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<tr>
<td>Final Exam (Modules 5–8)</td>
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<td><strong>Total</strong></td>
<td><strong>1010</strong></td>
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B. Scale

C+ = 820–839  C = 780–819  C- = 760–779  F = 0–759

C. Late Assignment Policy

If the student is unable to complete an assignment/Discussion Board on time, then he or she must contact the instructor immediately by email.

Assignments / Discussion Boards that are submitted after the due date without prior approval from the instructor will receive the following deductions:

1. Late assignments submitted within one week of the due date will receive a 10% deduction.
2. Assignments submitted more than one week late will receive a 20% deduction.
3. Assignments submitted two weeks late or after the final date of the course will not be accepted.

D. 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 525**


<table>
<thead>
<tr>
<th>MODULE/WEEK</th>
<th>READING &amp; STUDY</th>
<th>ASSIGNMENTS</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mannino: chs. 5–6 1 presentation 1 website</td>
<td>Course Requirements Checklist  Class Introductions  DB Forum 1  Homework 1  Research Paper 1 - Topic Approval</td>
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<tr>
<td>2</td>
<td>Mannino: chs. 4, 7 1 presentation</td>
<td>DB Forum 2  Homework 2  Research Paper 1 - References and Sentence Outline</td>
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<tr>
<td>3</td>
<td>Mannino: ch. 9 1 presentation</td>
<td>Homework 3  Research Paper 1 - Final Draft</td>
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<td>4</td>
<td>Mannino: chs. 10, 12 1 presentation</td>
<td>Homework 4  Project 1  Midterm Exam</td>
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<td>5</td>
<td>Mannino: chs. 14–15 1 presentation</td>
<td>DB Forum 3  Homework 5  Research Paper 2 - Topic Approval</td>
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<td>6</td>
<td>Mannino: chs. 16–17 1 presentation 1 website</td>
<td>DB Forum 4  Research Paper 2 - References and Sentence Outline</td>
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<td>7</td>
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<td>DB Forum 5  Project 2</td>
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<td>8</td>
<td>Mannino: ch. 19 1 presentation</td>
<td>Research Paper 2 - Final Draft  Final Exam</td>
<td>75 100</td>
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**TOTAL 1010**

DB = Discussion Board

**NOTE:** Module/Week 1 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.