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

CSCI 601
APPLIED NETWORK SECURITY

COURSE DESCRIPTION
In this course the students will learn hands on, practical techniques for securing a network. Topics include installing, configuring and using Intrusion Detection software, firewalls, anti-virus, etc.

RATIONALE
The increasingly visible rise of cyber security attacks requires the skilled application of security policies and designs in the modern network. This course looks at the development and practical installation and configuration of security policies, designs, and software to protect, prevent, and track networking security attacks.

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 Word

IV. MEASURABLE LEARNING OUTCOMES
Upon successful completion of this course, the student will be able to:
A. Install, configure, and use major security software in a realistic setting.
B. Evaluate various features of security software products.
C. Evaluate the security needs of an organization.
D. Design a security solution for an organization based on the previous evaluation.
E. Integrate biblical principles within the field of applied network security.

V. COURSE REQUIREMENTS AND ASSIGNMENTS
A. Textbook readings and lecture presentations

B. Course Requirements Checklist

After reading the 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 provide a thread in response to the provided prompt for each forum. Each thread must be a minimum of 300 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 a minimum of 150 words.

D. Labs (6)

The student will complete labs associated with the course material. Each lab will have specific instructions for tasks, along with deliverables, to be completed in the virtual lab environment.

E. Network Design Project Part 1

The student will write a 5-page, research-based paper in current APA format that focuses on a network solution design using best practices in network security. Further instructions are provided in the course. The paper must include at least 5 references in addition to the course textbook and the Bible.

F. Network Design Project Part 2

The student will write a 5-page research-based paper in current APA format that builds upon the paper in the Network Design Project Part 1 – adding content for a security solution for the specialty topic selected in Module/Week 8. The final deliverable will be a 10-page paper combining Parts 1 and 2 – and must include at least 5 additional references in addition to the course textbook and the Bible. The student should modify sections previously written in Part 1 as appropriate to make the final paper cohesive and address issues noted by the instructor when assessing Part 1.
G. Quizzes (6)

Each quiz will cover the Reading & Study material for the assigned modules/weeks. Each quiz will be open-book/open-notes, contain multiple-choice, true/false, and short answer questions, and have a 60-minute time limit.

H. Midterm Exam

The Midterm Exam will cover the Reading & Study material for Modules/Weeks 1–4. The Midterm Exam will be open-book/open-notes, contain multiple-choice and short answer questions, and have a time limit of 1 hour and 30 minutes.

VI. COURSE GRADING AND POLICIES

A. Points

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Requirements Checklist</td>
<td>10</td>
</tr>
<tr>
<td>Discussion Board Forums (4 at 50 pts ea)</td>
<td>200</td>
</tr>
<tr>
<td>Labs (6 at 50 pts ea)</td>
<td>300</td>
</tr>
<tr>
<td>Network Design Project Part 1</td>
<td>125</td>
</tr>
<tr>
<td>Network Design Project Part 2</td>
<td>125</td>
</tr>
<tr>
<td>Quizzes (6 at 25 pts ea)</td>
<td>150</td>
</tr>
<tr>
<td>Midterm Exam (Modules 1–4)</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1010</td>
</tr>
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B. Scale

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 LUODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.
## Course Schedule

**CSCI 601**


<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>Vacca: ch. 1 1 presentation</td>
<td>Course Requirements Checklist  Class Introductions  DB Forum 1  Lab 1: SIEM Tools  Quiz 1</td>
<td>10 0 50 50 25</td>
</tr>
<tr>
<td>2</td>
<td>Vacca: chs. 2–3 1 presentation 2 websites</td>
<td>Lab 2: Network Security Policies  Quiz 2</td>
<td>50 25</td>
</tr>
<tr>
<td>3</td>
<td>Vacca: ch. 7 1 presentation</td>
<td>DB Forum 2  Lab 3: Network Security Tools  Quiz 3</td>
<td>50 50 25</td>
</tr>
<tr>
<td>4</td>
<td>Vacca: ch. 8 1 presentation 1 website</td>
<td>Lab 4: VPNs  Quiz 4  Network Design Project Part 1</td>
<td>50 25 125</td>
</tr>
<tr>
<td>5</td>
<td>Vacca: ch. 9 (sections 1–11) 1 presentation 1 website</td>
<td>Lab 5: IDS Implementation  Midterm Exam</td>
<td>50 100</td>
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<tr>
<td>6</td>
<td>Vacca: ch. 9 (sections 12–26) 1 presentation 1 website</td>
<td>DB Forum 3  Quiz 5</td>
<td>50 25</td>
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<tr>
<td>7</td>
<td>Vacca: ch. 10 1 presentation 1 website</td>
<td>Lab 6: Firewall Deployment and Attack Analysis  Quiz 6</td>
<td>50 25</td>
</tr>
<tr>
<td>8</td>
<td>Vacca: ch. 4, 11, 12, or 13 (depending upon student selection) 1 presentation 3 websites</td>
<td>DB Forum 4  Network Design Project Part 2</td>
<td>50 125</td>
</tr>
</tbody>
</table>

TOTAL 1010

DB = Discussion Board

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