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

BMIS 430
ADVANCED NETWORKING AND COMMUNICATION SYSTEMS

COURSE DESCRIPTION
This course focuses on routed data networks and the implementation of previously learned business data communications and switched networks concepts, principles and strategies to build a complete data communications network. This course is an in-depth study of technologies and equipment in modern communication networks. The TCP/IP stack and Cisco (or comparable) networking equipment are used to explore methodologies for designing, configuring, and maintaining communication networks. (Formerly ISYS and CMIS 430)

RATIONALE
This course is offered to BMIS majors who seek to build advanced knowledge and skills needed in designing and deploying efficient and effective data communications and network technologies, which solve common business challenges. It culminates the networking series by picking up with the switched networking taught in the BMIS 331 course and extending the student’s knowledge through routed networks and the Internet technologies. By the end of the BMIS 330, BMIS 331, and BMIS 430 sequence, the student will have been exposed to most of the subject areas in a network certification exam.

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

II. REQUIRED RESOURCE PURCHASES
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
D. https://www.netacad.com/
IV. **Measurable Learning Outcomes**
Upon successful completion of this course, the student will be able to:

A. Discuss the relevance of course material to a biblical world view.
B. Apply key telecommunication concepts (such as data transmission, packets, topology, the OSI model, protocols, and standards) associated with networks.
C. Apply key networking concepts to provide network services.
D. Implement network components and devices to provide a business with internetworking capabilities.

V. **Course Requirements and Assignments**

A. Textbook readings and 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)
   
   There will be 4 Discussion Board Forums completed in this course. Discussion boards are collaborative learning experiences. Therefore, the student is required to post 1 thread of at least 250 words in response to a provided prompt. For each thread, the student must support his/her assertions with at least 1 citation in current APA format. Acceptable sources include Cisco material, the Bible, and scholarly journals. The student must also post 2 replies of at least 100 words to his/her classmates’ threads.

D. Packet Tracer Labs (14)
   
   There are 16 Packet Tracer Labs that will be completed in this course. The student must install and use the Cisco Packet Tracer program provided by Netacad in order to complete the labs.
E. Exams (2)
   
   The exams will cover the Reading & Study material for the assigned modules/weeks. The exams will be open-book/open-notes, contain 60 Netacad questions, and have a 1-hour and 15-minute time limit.

VI. **Course Grading and Policies**

A. Points

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Requirements Checklist</td>
<td>10</td>
</tr>
<tr>
<td>Discussion Board Forums (4 at 35 pts ea)</td>
<td>140</td>
</tr>
<tr>
<td>Packet Tracer Labs (14 at 40 pts ea)</td>
<td>560</td>
</tr>
<tr>
<td>Exams (2 at 150 pts ea)</td>
<td>300</td>
</tr>
</tbody>
</table>

**Total** 1010
B. Scale

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

C. Late Assignment Policy

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

Assignments 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.
4. Late Discussion Board threads or replies will not be accepted.

Special circumstances (e.g. death in the family, personal health issues) will be reviewed by the instructor on a case-by-case basis.

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

### BMIS 430

<table>
<thead>
<tr>
<th>MODULE/WEEK</th>
<th>READING &amp; STUDY</th>
<th>ASSIGNMENTS</th>
<th>POINTS</th>
</tr>
</thead>
</table>
| 1           | Netacad Scaling Networks: chs. 1–3 | Course Requirements Checklist  
  DB Forum 1  
  PTL 1 – 1.2.1.7  
  PTL 2 – 1.3.1.3 | 10  
  35  
  40  
  40 |
| 2           | Netacad Scaling Networks: chs. 4, 9  
  1 presentation | DB Forum 2  
  PTL 3 – 9.1.2.5 | 35  
  40 |
| 3           | Netacad Scaling Networks: chs. 5–6  
  1 presentation | PTL 4 – 5.1.1.12  
  PTL 5 – 6.2.3.6 | 40  
  40 |
| 4           | Netacad Scaling Networks: chs. 7–8  
  1 presentation | PTL 6 – 7.2.2.4  
  PTL 7 – 9.3.1.4  
  Midterm Exam | 40  
  40  
  150 |
| 5           | Netacad Connecting Networks: chs. 1–2 | DB Forum 3  
  PTL 8 – 1.4.1.3 | 35  
  40 |
| 6           | Netacad Connecting Networks: chs. 3–5  
  1 presentation | PTL 9 – 3.5.1.2  
  PTL 10 – 5.1.2.6  
  PTL 11 – 5.4.1.2 | 40  
  40  
  40 |
| 7           | Netacad Connecting Networks: chs. 6–7  
  1 presentation | DB Forum 4  
  PTL 12 – 7.2.2.4 | 35  
  40 |
| 8           | Netacad Connecting Networks: chs. 8–9 | PTL 13 – 9.1.1.8  
  PTL 14 – 9.2.3.15  
  Final Exam | 40  
  40  
  150 |

**TOTAL 1010**

DB = Discussion Board  
PTL = Packet Tracer Lab

**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**.