APC 400: Applied Communication Networks – Course Syllabus

IMPORTANT: This course syllabus document contains basic information about the course. A final syllabus with detailed guidelines, instructor information, project information, rubrics, course/university policies, and other course-related information will be provided to students upon course enrollment.

Course Description and Objectives
This course covers fundamental concepts in the design, configuration, and problem solving of computer networks. Topics include: TCP/IP and OSI architecture, application layer (Web, FTP, remote connection, email, client and server interaction), transport layer (TCP/UDP), network layer (IP), data link and physical layers.

By the end of this course, you will be able to:
- Explain OSI architecture.
- Explain the layered structure of TCP/IP protocol.
- Describe common network application protocols including email, telnet, ftp, and http.
- Explain routing and network layer protocols.
- Describe the data link layer including error detection and correction, multiple access protocols, MAC addressing, Ethernet, link layer switches, and PPP.
- Describe the physical layer.

Prerequisites
- APC 350: Programming II

Grading
Evaluation Methods
Your final grade will be based on your performance on the following:

<table>
<thead>
<tr>
<th>Item(s)</th>
<th>Weight</th>
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<tbody>
<tr>
<td>2 Exams</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>4 Programs</td>
<td>35%</td>
</tr>
<tr>
<td>Quizzes and Assignments</td>
<td>25%</td>
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Grading Scale
The following grading scale is used to evaluate all course requirements and determine your final grade:

- 90–100% = A
- 80–89% = B
- 70–79% = C
- 60–69% = D
- 0–59% = F
Workload

Students should expect to spend 144 credit hours per semester to complete the activities and assignments in this course. In a fall or spring semester, the time to dedicate per credit will range between 7-10 hours per week and in summer semester between 10-13 hours.