Telecommunication Networks I
CIS 345

Credits: 3

Course Description:
This course is an introductory course in telecommunications networks. It covers the fundamentals of networking concepts, such as networking media, topology, switching, and management. It will also include an introduction to Open System Interface (OSI) layered organization and the functionality of each layer.

Prerequisites: Basic skills- ENG 095; ESL 0095; ACR 095; MAT 012/ 051
CIS 165 or department approval

Student Learning Outcomes and Assessment:

- **Outcome:** Identify the different types of telecommunication networks and OSI seven-layer standards.
  **Assessment:** Homework assignments and exams

- **Outcome:** Analyze and describe computer network building blocks and their functions.
  **Assessment:** Written assignments and exams

- **Outcome:** Interpret network designs and management methods for networks.
  **Assessment:** Term Projects and exams

- **Outcome:** Justify the choice of topologies, protocols and transmission media for appropriate networks.
  **Assessment:** Homework assignments and exams

General Education Outcomes and Assessment

- **Communication Skills** – Students will write, read, listen and speak critically and effectively.
  **Assessment:** Students will write research projects/papers on different topics related to telecommunication networks critically and effectively.

- **Quantitative Skills** – Students will use quantitative skills and the concepts and methods of mathematics to solve problems
  **Assessment:** Students will use quantitative skills to interpret the design and management methods of network.

- **Information and Technology Literacy** – Students will collect, evaluate and interpret information and effectively use information technologies
  **Assessment:** Students will evaluate and interpret the OSI Reference Model, network topologies, protocols and transmission media.

Required Text & Readings:

Author: Tamara Dean
Publisher: Cengage Learning

Other Resources:

Use of Technology: Flash drives are strongly recommended.

Evaluation & Requirements of Students:

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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Midterm</td>
<td>25%</td>
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<tr>
<td>Final</td>
<td>30%</td>
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<tr>
<td>Project</td>
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<td>Class Labs</td>
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<td><strong>Total</strong></td>
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Outline of Topics:

Week 1 : An Introduction to Networking
Week 2: Networking Standards and the OSI Model
Week 3-4: Transmission Basics and Networking Media
Week 5: Topologies and Ethernet Standards
Week 6-7: Network Hardware, Switching, and Routing
Week 8-10: TCP/IP Networking
Week 11: Wide Area Network
Week 12: Wireless Networking
Week 13: Managing and Troubleshooting
Week 14-15: Network Security

College Attendance Policy:

At BMCC, the maximum number of absences is limited to one more hour than the number of hours a class meets in one week. For example, you may be enrolled in a three-hour class. In that class, you would be allowed 4 hours of absence (not 4 days). In the case of excessive absences, the instructor has the option to lower the grade or assign an F or WU grade.

Academic Adjustments for Students with Disabilities:

Students with disabilities who require reasonable accommodations or academic adjustments for this course must contact the Office of Services for Students with Disabilities. BMCC is committed to providing equal access to all programs and curricula to all students.

BMCC Policy on Plagiarism and Academic Integrity Statement:

Plagiarism is the presentation of someone else’s ideas, words or artistic, scientific, or technical work as one’s own creation. Using the idea or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source. Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.

Students who are unsure how and when to provide documentation are advised to consult with their instructors. The library has guides designed to help students to appropriately identify a cited work. The full policy can be found on BMCC’s website, www.bmcc.cuny.edu. For further information on integrity and behavior, please consult the college bulletin (also available online).