<table>
<thead>
<tr>
<th>Course Title</th>
<th>Introduction to Communication Systems</th>
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<tbody>
<tr>
<td>Course Code</td>
<td>ECE 359</td>
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<tr>
<td>Course Type</td>
<td>Compulsory</td>
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<tr>
<td>Level</td>
<td>Undergraduate</td>
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<tr>
<td>Year / Semester</td>
<td>3rd Year/2nd Semester</td>
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<tr>
<td>Teacher’s Name</td>
<td>Ioannis Krikidis</td>
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<tr>
<td>ECTS</td>
<td>6</td>
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<tr>
<td>Lectures / week</td>
<td>2 x 1.5 hours (lectures) + 1 hour (tutorial) per week</td>
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<tr>
<td>Laboratories / week</td>
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**Course Purpose and Objectives**
- Provide basic knowledge and understanding of analog communication systems.
- Learn basic analog modulation and demodulation techniques.
- Provide basic knowledge of digital analog systems.
- Understand PCM and PAM systems.
- Learn basic digital modulation and demodulation/detection techniques.
- Learn to calculate probability of error in digital communications systems.
- Learn communication techniques for band-limited channels.
- Learn basic applications of communications systems.
- Work in teams to solve a design problem.

**Learning Outcomes**
- Understand basic analog and digital communications systems
- Demonstrate knowledge and understanding of transmitter and receiver components.
- Ability to analyze and design analog and digital communication systems.
- Understand the basic principles of analog and digital modulation.
- Ability to apply these components in applications.
- Learn to apply knowledge of mathematics, science and engineering.
- Demonstrate basic knowledge of the design process by applying it to solve engineering problems.
- Ability to learn computational tools.
- Ability to work in teams

**Prerequisites**
- ECE 220 | Required

**Course Content**
### Communication through band-limited channels: Pulse shaping, intersymbol interference, linear and non-linear equalization.

| Teaching Methodology      | Lectures  
|                          | Homework assignments. |
| Assessment                | Midterm Examination  
|                          | Final Examination  
|                          | Homework Assignments  
|                          | Project (Matlab).  
| Language                  | Greek |