Hagerstown Community College Master Syllabus
ELE 206: Electronics Communications

Course Information
Course #: ELE 206 Electronic Communications
3 Credits
Fall 2019

Instructor Information

Course Description
This course teaches students electronic communication circuits and systems, as it applies to typical industry systems. Students will study electro-magnetic frequency spectrum, resonant waveforms, LC circuits, band-pass filters, power and tuned voltage amplifiers, and oscillators. Topics covered also include bandwidth allocations, AM, FM, SSB modulations, antennas, cellular telephony, wireless, microwave communication, satellite systems, and fiber optics. Total of 45 hours of lecture.

Textbook and Course Materials

Student Learning Outcomes
Upon successful completion of this course, students should be able to:
• Understand the purpose of signal modulation methods.
• Explain the difference between analog and digital communication systems.
• Demonstrate understanding of concept difference between a wired and wireless communication system.
• Characterize fundamental parameters of communication systems like s/n ratio, db gain/loss, and propagation errors.

Course Content Objectives
• Understand the fundamental parameters of a communication system.
• Have a solid understanding of the electronics devices and circuitry used in electronic communication.
• Be able to perform gain/loss calculations on a system level scale.
• Understand the design constraints of electronic communications circuitry.
Definition of Credit Hour: Classroom Courses

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute academic hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours in the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to complete at least 2 hours of coursework outside of class for each hour of in-class coursework.

<table>
<thead>
<tr>
<th>Classwork type</th>
<th>Direct Faculty Instruction</th>
<th>Student Work Out of Classroom</th>
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</thead>
<tbody>
<tr>
<td>In-class lecture and discussion</td>
<td>45 hours</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td>48 hours</td>
</tr>
<tr>
<td>Quiz/exam studying</td>
<td></td>
<td>12 hours</td>
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<tr>
<td>Reading question completion</td>
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<td>8 hours</td>
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<tr>
<td>Paper writing</td>
<td></td>
<td>18 hours</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>45 hours</strong></td>
<td><strong>86 hours</strong></td>
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Services for students with disabilities: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.