

# Hagerstown Community College Master Syllabus

## ELE 206: Electronic Communications Systems

### Course Information

Course #: ELE 206 Electronic Communications Systems

3 Credits

Fall 2018

### Instructor Information

Instructor: Juan C Luna

### 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

*Electronic Communications. A System Approach. Beasley, Hymer and Miller. 1st edition. Pearson. ISBN: 9780132988636.*

### Student Learning Outcomes

- 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.

### 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.

Classwork type	Direct Faculty Instruction In-class <b>37.5 hours required</b>	Student Work Out of Classroom <b>75 hours required</b>
In-class lecture and discussion	45 hours	
Reading		48 hours
Quiz/exam studying		12 hours
Reading question completion		8 hours
Paper writing		18 hours
<b>Total</b>	<b>45 hours</b>	<b>86 hours</b>

**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](mailto:dss@hagerstowncc.edu) or at 240-500-2530.