

## **ECE 101**

### **Introduction to Electrical & Computer Engineering**

#### **Overview**

**Course Catalog Description:** Insight into electrical engineering is gained through videos, hands-on experiments, use of computer software to learn basic problem-solving skills and a team-oriented design project.

**Prerequisites:** none

**Textbook:** none

**Class Goals:** To provide students that are considering entering ECE programs with a understanding of the requirements necessary to gain admittance to the these programs, an overview of the programs themselves, and detailed descriptions of the activities associated with each group within the ECE department. Additional topics are aimed at helping class participants achieve success as ECE students. For example, discussions of study habits, tutoring programs, and ethics will be woven into the lectures. Finally, lectures from distinguished members of the engineering community will be provided as a means of motivating students to study engineering.

**Course Coordinator:** Prof. Gregory L. Heileman

**Table I: Objectives and Implementation**

Objectives		Implementation	A	B	C	D	E	F	G	H	I	J	K
O <sub>1</sub>	Give potential ECE students an understanding of the requirements necessary to gain admittance to the ECE dept.	Lectures											
O <sub>2</sub>	Describe the types of activities that will likely lead to success as an ECE student.	Lectures											
O <sub>3</sub>	Provide a presentation and discussion of student ethics: cheating, plagiarism, project conflicts, proper use of computers.	Lectures/discussion						X					
O <sub>4</sub>	Presentations by student groups regarding the benefits of joining.	Lectures								X		X	
O <sub>5</sub>	Detailed presentations from each of the groups in the ECE Dept.	Lectures /Tours								X		X	
O <sub>6</sub>	Engineering-oriented presentations by distinguished members of the community.	Lectures								X	X	X	



## **Sample Course Schedule (Fall 2008)**

- 8/26/08** – Introduction to the ECE Undergraduate Programs  
Speaker: Greg Heileman & Chaouki Abdallah, ECE Dept.
- 9/02/08** – Keys to Success as an ECE Student  
Speaker: Greg Heileman & Chaouki Abdallah, ECE Dept.
- 9/09/08** – ECE Professions Greg Heileman & Chaouki Abdallah, ECE Dept.  
Speaker: Greg Heileman & Chaouki Abdallah, ECE Dept.
- 9/16/08** – SOE & ECE student organizations presentations:  
Speaker: IEEE, SWE, EWB and HESO student representatives
- 9/23/08** – Working for a large company:  
Speaker: Chris Peterson, Henry Jerez, Microsoft; Vince Cordoba, Procter & Gamble
- 9/30/08** – Working for a small company:  
Speaker: Kamil Agi, K&A Wireless Inc.; Randy Krall, Wellkeeper, Inc.
- 10/07/08** – UNM Business School, BS/MBA program and Cybersecurity program,  
Speaker: Alex Seazzu, UNM Business School  
– Students Ethics  
Speaker: Greg Heileman & Chaouki Abdallah, ECE Dept.
- 10/14/08** – Energy & Power Group Presentation  
Speaker: Olga Lavrova, ECE Dept.
- 10/21/08** – Computer Engineering Group Presentation
- 10/28/08** – Signals & Communications Group,  
Speaker: Yasamin Mostofi, ECE Dept.
- 11/04/08** – My Career as an Astronaut/Engineer,  
Speaker: Mike Mullane, Shuttle Commander  
– Controls Group Presentation  
Speaker: Chaouki Abdallah, ECE Dept.
- 11/11/08** – Engineering opportunities at the Air Force Research Labs  
Speaker: Col. Brad Smith, Director, Space Vehicles Directorate
- 11/18/08** – Electromagnetics Group Presentation, w/ Lab Tour,  
Speaker: Jamesina Simpson, ECE Dept.
- 11/25/08** – Optoelectronics Group Presentation, w/ CHTM Tour  
Speaker: Luke Lester, ECE Dept. (
- 12/02/08** – UNM MIND Institute Tour (confirmed)
- 12/09/08** – UNM ARTs Lab Tour