Rachel Johnson, M.S. in collaboration with HKN Honor Society
Electrical & Computer Engineering Department
October 19, 2016

EGN 1935: ADVENTURES IN ECE DESIGN
Spring 2017

Catalog Data: ECE Adventures. Credits: 2.

Times and locations: Class meets M 8-9 in MAEA 327 and lab meets M 8-9 in WECE Maker Garage on the 2nd floor of the New Engineering Building (NEB)

Description: Students get a closer look into some of the prominent fields of ECE applications such as biomedical, energy, audio, and computers through lectures by experienced students and professors within the department. They will also get hands-on experience through labs that will include an element the students must design themselves. The course meets once a week so the class will either be a lecture or a lab as laid out in the weekly schedule below. Grades are based on attendance and class participation. No exams.

Textbook: None

Contact: Rachel Johnson: rayjohnson@ufl.edu
Seth Kittles: skit13@ufl.edu

Supervisor: **Dr. Harris** (Chair of ECE department)

Coordinators: **Rachel Johnson –** Second year Electrical Engineering graduate student, concentration is Computer Hardware. Completed undergraduate here at UF in Electrical Engineering. Has been a teaching assistant (TA) for several courses in the department (EEL 3744, EEL 3701, EGN 1002). Researched with several professors including Dr. Mishra (CISE dept.) and Dr. Stitt and now working for Dr. Harris on several projects, this course being one.

HKN Curriculum Chair, Seth Kittles – Electrical Engineering Senior, study emphasis on wireless networking and digital signal processing. Member of the Electrical and Computer Engineering Undergraduate Curriculum committee. Curriculum chair for Eta Kappa Nu. Eta Kappa Nu (HKN) Epsilon Sigma Chapter is the Electrical and Computer Engineering Honor Society at the University of Florida. HKN gives back to the department by offering exam reviews, designing new ECE courses, and serving as a point of contact between students and faculty.

Goals: Students will learn about applications of Electrical and Computer Engineering in the various fields in industry and will gain some experience in designing these applications. Students will be exposed to ECE applications in the fields of biomedicine, energy, computers, and audio.

Prerequisites: None

Topics:

1. Introduction to Circuits
2. Energy/Power
3. Computers
4. Biomedicine
5. Audio

Grading

Grades are based on attendance as well as laboratory and class participation. No exams, quizzes or homework. Attendance is taken in all classes and labs. Students are allowed 1 absence during the semester. A second absence will result half a letter grade drop, a third absence will be a whole letter grade, etc.

Percentage breakdown:

Attendance – 32.5%
Lab questions – 40.5%
Module Surveys – 27%

Grading scale:

90 – 100: A
88 – 89: A-
85 – 87: B+
80 – 84: B
78 – 79: B-
75 – 77: C+
70 – 74: C
68 – 69: C-
65 – 67: D+
60 – 64: D
58 – 59: D-
<= 57: E

WEEK	DATE	Lecture #	LAB #	Tentative Weekly Topics / Comments	Lecturer
1	Jan, 9	1		Course Syllabus, Intro to Circuits Lecture (1)	Rachel Johnson and Seth Kittles
2	Jan, 23	2		Intro to Circuits Lecture (2)	Rachel Johnson
3	Jan, 30		1	Intro to Circuits lab	
4	Feb, 6	3		Energy Lecture	**Keith Rambo** - rambo@ufl.edu - https://www.ece.ufl.edu/users/rambo-keith-j
5	Feb, 13		2	Energy Lab	
6	Feb, 20	4		Computers Lecture (1)	Rachel Johnson
7	Feb, 27	5		Computers Lecture (2)	Rachel Johnson
8	Mar, 13		3	Computers Lab	
9	Mar, 20	6		Biomedical Lecture	**Dr. Karmin Oweiss** - koweiss@ufl.edu - http://oweisslab.ece.ufl.edu/ & **Dr. Judy Jack** – Jack.judy@ufl.edu - http://nimet.ufl.edu/
10	Mar, 27		4	Biomedical Lab	
11	Apr, 3	7		Audio Lecture	Nathan Miller, Sebastian Betancur, and Seth Kittles
12	Apr, 10		5	Audio Lab	
13	Apr, 17	8		Final Lecture, Questions	Rachel Johnson and Seth Kittles