ECE2100
ECE Integrated Sophomore Experience II
Autumn 2014

Instructor:

Furrukh Khan, khan.1@osu.edu
Caldwell Lab. 377

**ECE2100-10:** (in-class lecture, no recitation)

**Lecture times:**
MWF, 4:10 p.m.-5:05 p.m., 113 Dreese Lab

**Lecture GTA:**
Rich Adam, rich.178@osu.edu
Office: Dreese Labs 607

**Lab supervisor/GTA:**
Gregg Chapman, chapman.415@osu.edu
Office: Caldwell Lab. 237

Anil Ozyalcin, ozyalcin.1@buckeyemail.osu.edu
Office: Caldwell Lab. 237

**ECE2100-20 (-401/-402/-403):** (online lecture with recitations)

**Recitation Sessions and Times:**

**ECE2100-401**
**Instructor:** Haj-ahmed, Mohammed A., haj-ahmed.1@buckeyemail.osu.edu
**Office:** Caldwell Labs 363
**Recitation hours:**
Monday 12:40PM-2:00PM - Knowlton Hall 0190

**ECE2100-402**
**Instructor:** Fakhimi, Parastou, fakhimi.1@buckeyemail.osu.edu
**Office:** Caldwell Labs 263
**Recitation hours:**
Thursday 8:00AM-9:20AM - Baker Systems 0188
ECE2100-403
Instructor: Ria Mazumder, mazumder.4@buckeyemail.osu.edu
Office: Caldwell Labs 372
Recitation hours:
Th 8:00AM-9:20AM, Bolz Hall 0436

Office Hours (any student can go to any office hour):

Haj-ahmed, Mohammed A. (Caldwell Labs 363):
   Thursdays 12:00 – 2:00pm
Fakhimi, Parastou (Caldwell Labs 263):
   Tuesdays 1:00-3:00pm
Ria Mazumder (Caldwell Labs 372):
   Fridays 9:00-11:00am
Rich Adam (Dreese Labs 607):
   Wednesdays, 11:00-1:00pm
Furrukh Khan:
   By Appointment (khan.1@osu.edu)

If none of the GTAs can resolve your question/problem then please contact me

Textbooks:


Assignments and Exams:

- Lab reports: 20%
- HWs: 20%
  All HWs are weighted equally (Not all HW problems will be graded, only a selection of HW problems will be graded)
- Midterm 1
  (Mon. Oct. 13, 6:30pm - 7:25pm, Sullivant Hall 0220): 15%
- Midterm 2
  (Mon. Nov. 17, 6:30pm - 7:25pm, Sullivant Hall 0220): 20%
- Final (Mon. Dec. 15, 6:00pm-7:45pm, McPherson 1000): 25%

Midterms and Final will be open-book, open notes and closed technology
One HW with the lowest grade will be dropped
Exams Make-up Policies:

- The final examination may only be taken at the scheduled time. You must not make travel plans that conflict with the final exam schedule.
- Midterm and final examination may be made up only due to illness on the days of the exam (a doctor’s note is required) or by advance arrangement (a written request at least one week in advance of the exam is required). The instructor reserves the right to deny any advance request for a make-up exam.

Lecture Topics and Coverage:

- Review (1)
- Lowpass, Highpass and Bandpass Discrete Filters (3)
- z-Transforms, Properties, Convolution and the inverse z-Transform (4)
- IIR Filters, Difference Equations (4)
- Charge, Current, Voltage, Power, Circuit Elements (1)
- Ohms Law, Kirchoff’s Laws – KCL, KVL (1)
- Nodal, Mesh, Thevenin, Norton, Superposition, Maximum Power Transfer (3)
- RC and RL First Order Circuits, Natural and Total Response (2)
- General Solution of Second Order Circuits (2)
- Phasor Domain Analysis, Impedance Transformations, Average and Complex Power (3)
- RC, RL, RLC Frequency Response vs Transient Response (2)
- Bode Plots (2)
- Ideal Op Amp, Active Filters, Cascaded Active Filters (2)
- Laplace Transforms, Properties, Pole – Zero Diagrams and Inverse Laplace Transform (3)
- Scaling Properties, Initial and Final Value Theorems (1)
- System Transfer Function – Impulse Response, Step Response, Sinusoidal Response (2)
- Convolution Integral (1)
- Fourier Transform, Fourier Transform Pairs (3)

Academic Misconduct Statement:

Academic Misconduct will be handled seriously!

Any student found to have engaged in academic misconduct, as set forth in the Code of Student Conduct Section 3335-23-04, Prohibited Conduct, will be subject to disciplinary action by the university. Academic misconduct is any activity that tends to compromise the academic integrity of the university, or subvert the educational process.
**Student Conduct:**

Students are expected to abide by the provisions in the Code of Student Conduct. The University’s Code of Student Conduct and Sexual Harassment Policy are available on the OSU Web page.

**Disabilities Statement:**

Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructor privately to discuss specific needs. Please contact the OSU Office for Disability Services for assistance in verifying the need for accommodations and developing accommodation strategies.