GEORGE MASON UNIVERSITY
ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT

Spring 2017        ECE 333: Linear Electronics I

Time and location: Tuesday and Thursday 3:00 pm – 4:15 pm, David King Jr. Hall 1006
Instructor: Qiliang Li, Engineering Bldg, Room 3250, Tel. 703-993-1596, Email: qli6@gmu.edu
Office Hours: Friday 1:30 PM – 3:30 pm; other times by appointment.

COURSE DESCRIPTION
This course is to provide the principles of operation and applications of electron devices and linear circuits. Topics include properties of semiconductor, diodes, bipolar junction transistors, MOS field-effect transistors and transistor amplifiers. The lecture will cover knowledge on integrated circuits, feedback concepts and operational amplifiers.


Prerequisite: Grade of C or better in ECE 280 or in ECE 285

GRADING
Homework                           20%
Project                             10%
Midterm Exam#1 (1 hours 15 mins)  20%
Midterm Exam#2 (1 hours 15 mins)  20%
Final Exam (2.5 hours)            30%
Quiz                               Extra credits: 10 pts

COURSE OUTLINE AND SCHEDULE
Week 1.   Chapter 3 Semiconductors: 3.1, 3.2, 3.3
Week 2.   Chapter 3 Semiconductors: 3.3, 3.4, 3.6
Week 3.   Chapter 4 Diodes: 4.1, 4.2
Week 4.   Chapter 4 Diodes: 4.3, 4.4
Week 5.   Chapter 4 Diodes: 4.5, 4.6
Week 6.   First Midterm Exam and Chapter 5 MOS Field Effect Transistors: 5.1, 5.2
Week 7.   Chapter 5 MOS Field Effect Transistors: 5.3, 5.4
Week 8.   Chapter 5 MOS Field Effect Transistors: 5.5, 5.6, 5.7

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Week 9.   Chapter 5 MOS Field Effect Transistors: 5.7, 5.8, 5.9
Week 10.  Second Midterm Exam and Chapter 6 Bipolar Junction Transistors: 6.1, 6.2
Week 11.  Chapter 6 Bipolar Junction Transistors: 6.3, 6.4
Week 12.  Chapter 6 Bipolar Junction Transistors: 6.5, 6.6, 6.7
Week 13.  Chapter 6 Bipolar Junction Transistors: 6.7, 6.8, 6.9
Week 14 – 15.  Chapter 7 Transistor Amplifiers: 7.1, 7.2, 7.3
Week 16.  Final Exam

The dates of the Midterm exam will be announced in class at least two weeks before the exam, and will depend on the course progress.