Instructor: Benn Coifman coifman@ece.osu.edu (be sure to put ee 320 in the subject)
Lecture: MWF 9:30-10:30, Hitchcock 31
Office Hours: MWF 10:30-11:30, Caldwell 211 or by appointment

Teaching Assistant: TBA TBA@osu.edu
Discussion: time and location-TBA
Office Hours: time and location-TBA

Course web page: http://www.ece.osu.edu/~coifman/ee320sp09

Course e-mail list: TBA

HKN Tutor room: Caldwell 267, http://www.ece.osu.edu/HKN/tutor.html

Text: *Principles and Applications of Electrical Engineering,* Rizzoni, McGraw-Hill

Supplementary Text: *Schaum's Outline of Basic Electrical Engineering*, Cathey, J. J., ISBN: 0070113556 (come to first class before purchasing)

Tentative Schedule:

Date		Topic	Readings
M	3/30	Introduction	ch 2 & 3
W	4/1	Circuits review	ch 4
F	4/3	Circuits review	ch 5
M	4/6	Diodes	9.1-9.3
W	4/8	Diodes	9.4-9.6
F	4/10	Diodes	9.7
M	4/13	Bipolar transistors	ch 10
W	4/15	Bipolar transistors	
F	4/17	Field effect transistors	11.1-11.2
M	4/20	Field effect transistors	
W	4/22	Transistor amplifiers and switches	11.3-11.4
F	4/24	Transistor amplifiers and switches	
M	4/27	Transistor amplifiers and switches	
W	4/29	catch-up and/or review	
F	**5/1**	**Exam I**	
M	5/4	Operational amplifiers	8.1-8.2
Tu	5/5	don't forget to vote today	
W	5/6	Operational amplifiers	8.3-8.5
F	5/8	Operational amplifiers	8.6
M	5/11	Boolean logic	13.1-13.3
W	5/13	Boolean logic	
F	5/15	Karnaugh maps and logic implementation	13.4-13.5
M	5/18	Flip flops and memory circuits	14.1
W	5/20	Counters	14.1
F	5/22	Finate State Machines	14.2
M	5/25	Memorial Day - no class	
W	5/27	catch-up and/or review	
F	**5/29**	**Exam II**	
M	6/1	Finate State Machines	
W	6/3	TBA	
F	6/5	catch-up and/or review	
Tu	6/9	Final exam, 9:30 am - 11:18 pm (verify with registrar)	

Grading:

Exam I	25%
Exam II	25%
Final Exam	35%
Homework/Quizzes	15%

Exams:
This course includes three exams: two midterms and one final. All exams are closed book, however, students will be permitted one double sided, hand written sheet of notes (no photocopies or computer printouts). The exams will emphasize CONCEPTS presented in class, but may include some CONCEPTS that were only covered in reading or homework assignments. The emphasis of the exams will be integrating and applying concepts rather than simply repeating material covered earlier. **Note**- CS&E and ME students might be graded separately from Exam II onward since some of the material in ch 13-14 will be review for CS&E

Homework:
Homework will be assigned on a weekly basis and each assignment is due by the end of lecture, in class, on the specified date. The students are responsible for being familiar the material assigned. Solutions for all assigned problems will be made available in the main office (front desk in Dreese Labs 205). Only a select number of problems will be graded thoroughly. The remaining problems will simply be checked to verify that a reasonable effort has been made and they will receive a smaller weight. All homework assignments will be given equal weight when calculating the final grade. Your lowest homework score will be excluded from the calculation.

Neatness counts and you may loose points for sloppy work. In particular, illegible work will not receive credit. To keep from losing points over sloppiness, be sure to:
- Staple all homework pages together and write neatly or you will lose points
- Show sufficient detail in your solutions or you will lose points, e.g., Copy the original schematic from the book.
- Put your name on all pages and staple your homework together. Missing pages will be treated like missing a deadline.
- Etc.

Quizzes:
On any day that a homework assignment is due, the professor may elect to have a closed book, closed note pop quiz in class. Such a quiz will be counted as part of the assignment.

Attendance:
You are responsible for all assignments, changes of assignments, announcements, quizzes and all other course-related events that occur in class. You also have a responsibility to your classmates to provide a constructive learning environment. Disruptive students will be asked to leave for the day.

Cell phones:
They should either be in silent mode, turned off, or left at home. Any audible cell phones constitute an unnecessary class disruption.

Honor System:
Since the primary purpose of the homework and exams are to help you build analysis skills, discussions on homework and related course material is encouraged. However, **all written homework turned in must be your own**. If you are in doubt then ask the instructor, you may have gone too far. You are better off not turning in an assignment than getting caught copying from another student. Plagiarism is a serious offence and may lead to expulsion.

Academic Misconduct:

[as reported at http://www.osu.edu/offices/oaa/procedures/1.0.html]
Academic misconduct is defined as any activity which tends to compromise the academic integrity of the institution, or subvert the educational process. Examples of academic misconduct include, but are not limited to:

- violation of course rules as contained in the course syllabus or other information provided the student; violation of program regulations as established by departmental committees;
- providing or receiving information during quizzes and examinations such as course examinations and general examinations; or providing or using unauthorized assistance in the laboratory, at the computer terminal, or on field work;
- **submitting plagiarized work for an academic requirement. Plagiarism is the representation of another's works or ideas as one's own; it includes the unacknowledged word for word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas;**
- falsification, fabrication, or dishonesty in reporting research results;
- serving as, or enlisting the assistance of, a "ringer" or substitute for a student in the taking of examinations;
- alteration of grades or marks by the student in an effort to change the earned grade or credit; and
- alteration of University forms used to drop or add courses to a program, or unauthorized use of those forms

Regrading:
You may request a regrade on any assignment, exam or quiz within one week of the assignment being handed back to the class. Note that the regrade will be over the entire document in question, not just a selected problem.

Missing a deadline:
If you are unable to attend a lecture when a particular homework is due, you can turn it in early. You may do this in person during class or by placing it in Professor Coifman's mailbox in the electrical engineering main office. Note that any homework assignment collected from our mailboxes after the scheduled lecture will be considered late, regardless of when it was deposited (hint, you can send e-mail asking me to check the mailbox). Furthermore, any "lost" or "missing" assignments must be redone and will be considered late.

Late homework will receive the following penalties:

30% will be deducted from homework handed in after the class period in which it is due, or,
50% will be deducted from homework handed in after the solutions have been posted, or,
no credit for homework handed in a week after the solutions are posted.

Except in the event of an emergency, ADA accommodations, or medical condition, you will only be allowed to take the exams and quizzes during the assigned periods. You must provide sufficient proof, e.g., a signed letter from a doctor, to be considered for an exception.

Tips:

1) Welcome to the world of engineering, this course is likely your first step in making the move from knowledge you can read in a textbook, to ill-posed problems you will face as an engineer. As painful as it may seem, the textbook is a good resource and you should use it. But it is not the only resource you will need to survive this course, e.g., you may find the supplementary text beneficial. In engineering, usually there is no one right answer and often you have to be resourceful to find a good answer.

2) I would be doing a disservice to you and to the department if I did not challenge your abilities and help you expand your skills (hint, the tests will expect you to synthesize what you have learned). Since there is a wide range of expertise in this class, some of you will need to utilize office hours, some of you will breeze through the course with ease. For those of you in the latter group, please make yourselves available as informal tutors for those in the former group. You will all learn a lot more this way.

3) **If you do not understand something, ask**. Your grade in this course and subsequent courses depend on it. Fortunately, you have over 6 hours a week set aside to meet with the instructor or TA outside of class. Be proactive and do your homework before it is due so you can see us about any problems.

4) Similarly, if you have other problems, you can discuss them with the instructor or TA. Or if need be, you can also drop an anonymous note in one of our mailboxes. We are here to help you learn, so your feedback is important.

5) As you read the assigned material, ask yourself, "why are the authors presenting this information?" After finishing a section, go back and ask yourself, "what were the important points?"

6) Do not limit your exploration to the assigned readings, look through the entire textbook, and consider other books or other courses. For example, you will find tutorials and solutions in the back of the course. Of course you should do your best to solve a problem before turning to the solution, you will not have this resource on the exams. Also learn to use the index at the end of the book to quickly find answers to your questions.

7) If you get stumped and a homework problem does not have a solution at the end of the book, you may be able to gain some insight by doing a similar problem that does have a solution. You are expected to go beyond the minimum course requirements.

8) When you come in to ask about a problem, be prepared to demonstrate that you have attempted to start the problem. Your effort will help us focus our reply.

9) Homework and tests are artificial constructs but they are literally "exercises". Reviewing the material on more than one occasion is part of the learning process and the material you turn in offers an opportunity to demonstrate what you have learned.

10) At first glance, this course may appear to simply be on circuits. But it is so much more, it is a class on systems. Pay attention to how we build a logical argument and how we consolidate similar concepts. The system theory I learned in a similar course serves as the foundation of many tools I continue to use on a daily basis.