Massachusetts Institute of Technology

Department of Electrical Engineering and Computer Science

6.012 Electronic Devices and Circuits

Fall 1999

GENERAL INFORMATION

Staff:

LECTURER:	Prof. C.G. Sodini	Rm. 39-527B	x3-4938	sodini@mtl.mit.edu
INSTRUCTORS:	Prof. Clif Fonstad	Rm. 13-3050	x3-4634	fonstad@mtl.mit.edu
	Prof. Rajeev Ram	Rm. 36-487	x3-4182	rajeev@mit
TA's:	R. Erich Caulfield			rerichc@mit
	Andrew Chen			achen@mit
	Erik Deutsch			edeutsch@mit
	Iliana Fujimori			fujimori@mtl.mit.edu
SECRETARY:	Patricia Varley	Rm. 39-527	x3-6857	pel@mtl.mit.edu

Lectures: Tuesday and Thursdays, 11 AM, Rm. 34-101

Recitations: Wednesdays and Fridays, 10 AM, 11 AM, 12 AM, Rm. 13-3101.

Tutorials: The TA's will conduct one-hour tutorial sessions each week for small groups of students. Times and rooms to be arranged shortly.

Required Text: R.T. Howe and C.G. Sodini, "Microelectronics: An Integrated Approach," Prentice Hall, 1997.

Reference Text: C.G. Fonstad, "Microelectronic Devices and Circuits", McGraw-Hill, 1994, Neudeck and Pierret, "Modular Series on Solid State Devices," Vols. 1-4 (Addison-Wesley, 1983), Sedra and Smith, "Microelectronic Circuits", (Oxford, 1998), Horenstein, "Microelectronic Circuits and Devices", (Prentice-Hall, 1990).

Handouts: Lecture notes will be handed out at the beginning of lecture. The lecture notes will also be available at the 6.012 web site.

GRADING

All the items below will enter into the computation of the final grade.

Quizzes: Two evening quizzes will take place on Wednesday, October 13 and Wednesday, November 17 from 7 to 9 PM in Walker Memorial. There will be no formal recitation sessions on October 13 and November 17. The instructors will be available in their offices to entertain your questions on those days. Quizzes are open book and a calculator is required.

Final Exam: To be scheduled by the Registrar within the period of December 13-17. The final is a three hour exam, open book, calculator required.

Homework: A total of eight Problem Sets will be handed out. The homework must be at the TA's office by 5 PM sharp on the due date. A 50% penalty will be applied to homework turned in after 5 PM. Homework turned in later than when solutions are distributed (≈ 3 days) will be graded but no credit will be given. All exceptions to this policy have to be approved by the lecturer. All homework sets will weigh equally towards the final grade.

Design Problems: Two Design Problems will be handed out during the course. The same policy as late Homework will be applied to Design Problems turned in late.

The course grade will be established in consideration of the following weight factors:

QUIZ 1	15%
QUIZ 2	15%
FINAL EXAM	30%
HOMEWORK	15%
DESIGN PROBLEMS	25%

The final letter grade will also take into consideration non-numerical assessments of your command of the subject matter as evaluated by lecturer, instructors, and TA's.

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Policy for Academic Conduct

The homework and design problems in 6.012 are prepared with the aim to complement lectures and recitation sessions and reinforce key material. It should be no surprise to you that there typically is a strong correlation between the homework grade and the total course grade. You are far better off doing your homework in a timely manner. There should be no doubt to you that working on the problem sets and design problems is extremely effective in assuring your command of the course material.

Yet the credit you receive for your homework is part of the final course grade. This brings up questions as to what constitutes ethical and unethical behavior to the foreground.

Our judgement is that the primary learning purpose of homework is best served by allowing and encouraging collaboration with fellow students. Modern engineering is, after all, almost exclusively a team effort. However, fairness requires us to be able to assess your own contribution. That also provides you with feedback that help you correct misunderstandings. Therefore, the written material that you hand in must be your own work, and any discussions or collaborations with fellow students must be identified in writing on your solution (by noting, for example, that "the solution to problem #2 benefited from discussions with John Moll", say, or "the optimization strategy of design problem #3 was worked out together with Jim Early"). All collaborations should be acknowledged by both parties. It should be clear to you that it is a large parameter space for the solution. We will view two nearly identical solutions from two different students that do no cross-reference each other's designs as statistically "unlikely" and worthy of further probe.

This policy is intended to help you make the most out of 6.012 by freely working with your class mates. If you have doubts as to what constitutes ethical or unethical behavior please contact any member of the staff. We will be happy to assist you in your judgement. Violations to this policy will be handled with the maximum severity allowed by the Institutes Rules and Regulations.