

## Course Information

Welcome to CMPS 132, Computability and Complexity. The course meets TuTh from 4:00 to 5:45 in Baskin Engineering 372.

My office is in the E2 building, room 345b. I can be reached by e-mail ([dph@cse.ucsc.edu](mailto:dph@cse.ucsc.edu)) and through the class newsgroup. Also, feel free to drop by my office anytime with questions about the class material.

The main goal of the class is to promote the understanding of computation and its limits. Many parts of the course are rather abstract, so students should have good mathematical skills and interest in the theoretical aspects of computing.

**Prerequisites:** All students must have successfully completed CMPS 130, or have seen me to get a permission code.

**Main text:** *Introduction to the Theory of Computation* second edition, by Sipser.

**Course Work:** There will be regular (weekly) written homeworks, an in-class midterm during the quarter, and a final exam. These will be weighted to obtain an overall performance as follows.

Midterm	30%
Homeworks	30%
Final	40%

Incompletes are only available in certain circumstances. Contact the instructor as soon as possible if you feel an incomplete may be appropriate.

**Assignments:** The first assignment is to be done individually. However, the other assignments are to be done in small groups (of 1-2 or 2-3 students depending on class size), with each group submitting a single set of solutions. Please rotate groups, so that the same group is not repeated. Any help or ideas (other than from the text or instructor) *must* be appropriately acknowledged in your solutions.

**Expectations:** I expect that every student will attend lectures, keep up with the reading, and fully understand their group's solutions to the assignments. The material is very subtle, and often must be read several times before full understanding is acquired. Students are encouraged to ask questions in lectures and in my office. The goal of this course is not just for the students to learn what the various theorems say, but to understand *why* they are true and *how* they are proven.

Students should check the class newsgroup ([ucsc.class.cmp132](mailto:ucsc.class.cmp132)) and webpage (<http://www.cse.ucsc.edu/classes/cmps132/>) regularly (say every other day) for updates/clarifications to assignments.

**Syllabus:** I plan to cover chapters 3 through 9 of the text (in order). However, this is the first time I am using this text, and I am unsure how much of the earlier material has been covered in 130.

Assigned reading for week one: Chapter 3.