

- **Course:** Computational Models
- **Time & Place:** Monday, Wednesday and Friday 2:00pm-3:10pm, E2 194.
- **Discussion Sections:**
 - tbd
 - tbd
- **Instructor:** Dean Bailey; office: E2 249B; phone: 831-459-1339, e-mail: dbailey@soe.ucsc.edu
- **Teaching Assistant:** Jennifer Flynn, email: jfly@soe.ucsc.edu
- **Office Hours:**
 - Bailey: Tuesdays and Thursdays, 2:00pm-4:00pm, E2 249B.
 - Flynn: tbd
- **Textbook:** *Introduction to the Theory of Computation*, by Michael Sipser, 2nd Edition.
- **Goal:** To cover most of the material contained in Chapters 0, 1, 2 and 3.
- **Syllabus:** The following is a tentative syllabus for the course:
 - Overview
 - Tools: Mathematical Objects and Proof Techniques
 - Deterministic Finite Automata
 - Non-deterministic Finite Automata
 - Rabin-Scott Theorem
 - Regular Languages and Regular Expressions
 - Kleene's Theorem
 - Non-regular Languages
 - Pumping Lemma
 - Myhill Nerode Theorem
 - Minimizing States
 - Push Down Automata
 - Context-free Grammars and Languages
 - Normal forms
 - Non-context-free languages
 - Pumping Lemma for context-free languages
 - Turing Machines and Recursively Enumerable Languages
 - Church-Turing Thesis
- **Evaluation:** The course work will be weighted as follows:

Final Examination	40%
One Midterm Examination	30%
Four in-class Quizzes	20%
Homework Assignments	10%

N.B. Passing grades in **all** four parts are required to pass the course.

- **Examination and Quiz Schedule:**

1. Final Examination, Tuesday, June 12, 4:00pm-7:00pm
2. Midterm Examination on Monday, May 7, 2:00pm-3:10pm
3. Quizzes:
 - Quiz 1: Friday, April 13
 - Quiz 2: Friday, April 27
 - Quiz 3: Friday, May 18
 - Quiz 4: Friday, June 1

The examination and quiz schedule is fixed. In particular, requests for changes in the schedule will not be accommodated; if you have conflicts with this schedule, please do not enroll in the class. Also, *no* time extension will be given for late arrivals on quiz day or examination day.

- **Academic Integrity:** No form of academic dishonesty will be tolerated. Incidents of academic dishonesty will be reported according to UCSC's policy on academic integrity, the full text of which can be found at <http://oasas.ucsc.edu/avcue/integrity>. Specifically for this class, if you are caught turning in work as your own, that is not solely your own, or assisting others in doing so, a formal written report will be sent to your Department, the School of Engineering, and to your Provost and academic preceptor. Furthermore you will get a failing grade for the course and the incident will be noted in your evaluation.

- **Miscellanea**

- All homework assignments are to be handed in at the beginning of Class on Mondays.
- Solutions to homework problems will be presented in the discussion sections. They will not be posted.
- Attendance at discussion sections is required.
- We will provide solutions to the problems in the quizzes and in the midterm examination, after the grading has been completed.
- We will *not* distribute or post “sample” examination problems or “sample” quiz problems.