• **Course:** Computational Models

• **Time & Place:** MWF, 11:00am to 12:10pm, Engineering 2, Room 192.

• **Discussion Sections:** TBD

• **Instructor:** Dean Bailey;

• **Contact Information:** Office: E2, 249B; Phone: 459-1339; e-mail: dbailey@cse.ucsc.edu

• **Office Hours:** Mondays, 12:15pm-1:30pm, Tuesdays 12:15pm-1:30pm

• **Teaching Assistant:** Carlos Goldsmith

• **Office Hours:** Thursdays, 3:00pm-4:00pm, Fridays, 5:00pm-6:00pm.

• **Prerequisites:** CIS 101


• **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 minute each) 20%  
  Homework Assignments 10%

  A passing grade is required in *all* four categories to pass the course.
• **Examination and Quiz Schedule:**

  - **Quiz 1:** Friday, October 6, 2006, 11:00am-11:20am.
  - **Quiz 2:** Friday, October 20, 2006, 11:00am-11:20am.
  - **Midterm:** Friday, October 27, 2006, 11:00am-12:10pm.
  - **Quiz 3:** Wednesday, November 8, 2006, 11:00am-11:20am.
  - **Quiz 4:** Wednesday, November 22, 2006, 11:00am-11:20am.
  - **Final:** Monday, December 4, 2006, 4:00pm-7:00pm.

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/svcue/integrity](http://oasas.ucsc.edu/svcue/integrity). Specifically, if you are caught submitting work as your own in this class, 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 the due date.
  - Solutions to homework problems will be presented in the discussion sections. They will not be posted.

• **Other interesting textbooks, NOT required:**