Instructor: Dr. C. Kim, DEH 253, ckim@ou.edu.

Class Meetings: TR 3PM – 4:15PM, Cross Hall 123.

Office Hours: TR 1:30PM – 2:30PM.

Teaching Assistant: Mr. Sudhindra Gopal and Mr. Rohit Vavaldas.

Prerequisites: CS 2413 (Data Structures) and CS 2813 (Discrete Structures).


Course Content: The course covers fundamentals of abstract machine theory, formal language theory, and computability and complexity theory. Specific topics include Turing machines and their restrictions such as finite/pushdown automata, deterministic versus nondeterministic computations, Chomskian grammars such as regular/context-free grammars, and mathematical properties of these systems such as their relations, closure properties, and decision properties.

Student Activities:

- Homework Assignments (30 %): Will be given at the end of each chapter.
- Two Midterm Exams (20 % each): Sept 27 (R) and Nov 13 (T).
- Final Exam (30 %): Dec 13 (R) 4:30PM – 6:30PM.

Remarks:

1. Students are required to attend all class meetings.

2. Assignments must be submitted on the due dates in class. All student activities are individual and cheating of any form will result in a formal academic misconduct charge.

3. Any student who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

4. The College of Engineering utilizes student ratings as one of the bases for evaluating the teaching effectiveness of each of its faculty members. The results of these forms are important data used in the process of awarding tenure, making promotions, and giving salary increases. In addition, the faculty uses these forms to improve their own teaching effectiveness. The original request for the use of these forms came from students, and it is students who eventually benefit most from their use. Please take this task seriously and respond as honestly and precisely as possible, both to the machine-scored items and to the open-ended questions. On-line evaluation of this course can be done at http://eval.ou.edu.

5. ABET Outcome J: An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.