CS 5104  Computability and Formal Languages  
Wednesday 7:00 pm – 9:45 pm

Instructor:  Jianping Zhang,  
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Textbook:  Introduction to Automata Theory, Languages, and Computation (Second Edition)  
J. E. Hopcroft, R. Motwani, and J. D. Ullman  
ADDISON WESLEY, 2001

Content  Automata are mathematical models for computational systems. Computer science embodies many examples of state systems. This course will cover the basic principles of regular languages, regular expressions, deterministic and non-deterministic finite automata, context free grammars, pushdown automata, Turing machines, formal language theory, and computability. Specifically, Chapter 1 to Chapter 10 in the text book will be covered, but not all sections in these chapters will be introduced.

Exam:  Midterm Exam and Final Exam.  
Midterm Exam.: March 10.  
Final Exam: May 2, 7:00 pm to 9:00 pm (tentative)

Homework:  There will be six homework assignments. These assignments must be done individually. Generally, late assignments will be penalized 10% per day (with weekends counting as one day).

Grading:  The final grade will be determined based on the following components:

- Homework 30%
- Midterm 30%
- Final 40%
Honor Code Policy

Adherence to Virginia Tech's honor code is expected in all phases of this class. Programming and written assignments are expected to be solely the work of you. You are not to collaborate with other students on these assignments. Exams are expected to be your original work. You may discuss general concepts, such as software issues, hardware configurations, Internet resources, or class topics, with others. However, any discussion or copying of assignment solutions, specific code or data is an honor code violation. All source material used in code must be properly cited. If you are using a shared computer or disk, it is an honor code violation to leave your source or other files on the computer where others may access them and it is an honor code violation to access other students' files. Please discuss any concerns about the honor code or any questions that you may have about what is or is not permitted with your instructor.

Special Needs or Circumstances

Please feel free to meet with or otherwise contact your instructor if you have any special needs, including need for accommodation of any religious or ethnic holidays.