Discrete Structures
Spring 2016
General Information
Class Time: Tuesday-Thursday 1:30-2:45 PM
Location: SEC A-0235

ABET OUTCOME: A0: ACQUIRING MATHEMATICAL SKILLS FOR COMPUTER SCIENCE

Instructor: Dr. K. Thulasiraman
Office: DEH 235
Office Phone: 325-0566 (voice mail available)
Email: thulasi@ou.edu
Office Hours: Tuesday and Thursday 3:00-4:30 PM

Teaching Assistant: The teaching assistant will grade all homework. Any questions about homework grading should be first addressed to the teaching assistant

Objectives
This course is a continuation of CS 2603 on Applied Logic and covers other topics in discrete mathematics. It is assumed that the students are familiar with fundamental concepts and techniques in logic, sets, and proof techniques. This course will cover topics from mathematical induction, combinatorics, recurrences, relations, functions and graphs.

Topics:
Review of Logic, sets and Proof Techniques: Chapters 1-3.
- Mathematical Induction: Chapter 4.
- Introductory Counting: Chapter 8.
- Advanced Counting Chapter 9.
- Additional topic in Counting: Principle of Inclusion and Exclusion (Notes will be given)
- Additional Topic: Solving Recurrence Relations (Notes will be provided)
- Relations and Functions; Chapter 5. Section 11.1
- Graphs: Chapter 12, Chapter 13 and sections 15.1 and 15.2
- Additional Topic: Shortest Path and Transitive Closure Algorithms

Course Policies
Class Attendance: Class attendance is important because we will discuss concepts and examples that are not in the textbook. Another student’s notes are an inadequate substitute for class attendance. Students are responsible for all material covered in class.

Homework: Homework will be assigned every Thursday. The assigned homework will be due at the beginning of class the next Thursday. Late homework will not be accepted. If class attendance is impossible on a day when
homework is due, it may be placed in my departmental mailbox before that start of class. Following grading, solutions to all of the problems will be available on D2L.

**Tests:** In addition to the final exam, there will be two tests during the term. The dates for the test will be announced in class. Missing a test without a previously approved excuse will result in a grade of zero for that test.

**Grading:** There are four components to the course grade. They are weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests (2)</td>
<td>50</td>
</tr>
<tr>
<td>Homework</td>
<td>20</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30</td>
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</tbody>
</table>

The grading scale will be no higher than the following. It may be lower at the discretion of the instructor.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90+</td>
</tr>
<tr>
<td>B</td>
<td>80-89</td>
</tr>
<tr>
<td>C</td>
<td>70-79</td>
</tr>
<tr>
<td>D</td>
<td>55-69</td>
</tr>
<tr>
<td>F</td>
<td>Otherwise</td>
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</tbody>
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**Academic Misconduct:** All work submitted for an individual grade, such as homework and projects should be the work of that single individual, not their friends or their tutor. Students who fail to do their own work not only violate the Code of Conduct for the University of Oklahoma, but also may fail to learn critical learning objectives for the class.

- Do not show another student a copy of your homework or projects before the submission deadline.
- Do not email your project to another student, even if they promise they will not copy it.
- The penalties for knowingly permitting your work to be copied are the same as the penalties for copying someone else’s work.

Upon the first documented occurrence of collaborative work, I will report the academic misconduct to the Campus Judicial Coordinator. The procedure to be followed is documented in the University of Oklahoma Academic Misconduct Code. In the unlikely event that I elect to admonish the student, the appeals process is described re: [http://integrity.ou.edu/summary_of_the_process.html](http://integrity.ou.edu/summary_of_the_process.html).

**Accommodation of Disabilities:** Any student in this course 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 his or her educational opportunities.

**Adjustments for Pregnancy/Childbirth Related Issues:**

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact me as soon as possible to discuss. Generally, modifications will be made where medically necessary and similar in scope to accommodations based on temporary disability. Please see [http://www.ou.edu/content/eoo/pregnancyfaqs.html](http://www.ou.edu/content/eoo/pregnancyfaqs.html) for commonly asked questions.

**Title IX Resources:**

For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24/7, counseling services, mutual no contact orders, scheduling adjustments and disciplinary sanctions against the perpetrator. Please contact the Sexual Misconduct Office 405-325-2215 (8-5) or the Sexual Assault Response Team 405-615-0013 (24/7) to learn more or to report an incident.