Course Title: Applied Logic for Hardware and Software

Instructor: Rafal Jabrzemski, rjabrzemski@ou.edu

Class Hours: Tuesday, Thursday 9:00-10:15, Carson 117
Office Hours: Tuesday, Thursday 5:15-6:45, Devon 225

There is also the “Kindle Edition” of this book at Amazon.

Students should read ahead the chapters that are expected to be covered in the class period. (Students should also read bits of Chapter 1 as needed to reinforce mathematical notations from the lectures. Students should always bring their textbooks with them to class periods, including lectures and exams.

Communication: The primary means of transmitting class information to the students will be through announcements during class time and
through D2L web pages. You are responsible for announcements made through either or both of these means. Occasionally, urgent information may be sent via email. You must ensure that the email address the University has on file for you is valid and is monitored by you. A test of the email addresses provided by the University will be made during the second week of class. You are responsible for notifying the instructor if you do not receive this test email.

The best way for students to communicate with the teaching staff is to come to scheduled office hours. Email can also be used but a quick or detailed personal response is unlikely as we get a lot of email and responding to email can be very time consuming. Moreover, emails will get a lower priority than in-person visits.

One way for students to communicate with one another is through the discussion forums of the Desire2Learn web site for the class. Details of all of the communication methods follow.

**Email:**
Students should use the email addresses listed above. Note that we get a lot of email. Do not expect a reply in minutes; one or two days is more likely in most cases. If you have not heard back within five days, please resend your message, if it is still relevant.

**Expectations and Goals:**
The prerequisites for this course are CS 1323 - Introduction to Computer Programming and Mathematics 1823 - Calculus and Analytic Geometry I with a C or better. (If you have not taken these courses, you will need instructor permission to take 2603.) Students will study fundamental elements of hardware and software, including sets, sequences, circuits, and functions. Successful students will be able to apply mathematical logic to verify properties of hardware and software. For topics covered, see the schedule.
Specific Outcomes of Instruction:
The general learning objectives for this course include the following ABET Outcomes:

- **A:** An ability to apply knowledge of mathematics, science, and engineering.
- **C:** An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired standards.
- **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.

Computer Accounts and Software:
Many of the required homework problems involve using software such as the Hugs interpreter for Haskell, a formal language for mathematics, and special tools supporting the concepts of the course. Download this software through the course website.

Requirements:
The graded assignments and their contribution to a student's grade are given in the table below. (Subject to change.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Note</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>Requires attendance</td>
<td>10%</td>
</tr>
<tr>
<td>Homework</td>
<td>Do HW or you’ll probably fail exams</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 1</td>
<td></td>
<td>20%</td>
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<tr>
<td>Exam 2</td>
<td></td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td></td>
<td>40%</td>
</tr>
</tbody>
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All homework and exams in this course are to be done ALONE;
the work submitted by a student MUST be the student's own. You are responsible for the material covered during the lectures sessions, whether or not it is also found in your textbooks or other assigned reading materials. Similarly, you are responsible for the material found in your textbooks and other assigned reading materials, whether or not it is also covered during the lectures sessions. In other words, you are responsible for the UNION of these sources of knowledge, as depicted by the shaded region of the Venn diagram below, not merely their intersection.

All work on homework assignments must properly cite sources. For example, if you quote a source in your homework, you must include the quotation in quotation marks and clearly indicate the source of the quotation.
Homework assignments will be due at the start of class (9:00am) on the due date. Late assignments will be penalized 20% per day late. (All parts of days will be rounded up.) After five days, you will not be able to turn in that assignment for credit. If you are worried about turning in the assignment late and losing points, turn it in the assignment ahead of time.
All exams will be open book/open notes. NO electronic devices will be permitted in the testing area.
Copying another's work, or possession of electronic computing or communication devices in the testing area, is cheating and grounds for penalties in accordance with school policies.
Please see the University’s web pages on academic integrity.

Accommodations:
Any student with a disability should contact the instructor so that reasonable accommodations may be made for that student.

**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/eoo/faqs/pregnancy-faqs.html](http://www.ou.edu/eoo/faqs/pregnancy-faqs.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.

**Drop Policy:**
Students who do not attend the first week of class may be dropped from the course to make room for additional students to enroll.

**Holidays:**
It is the policy of the University to excuse the absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional
related class work that may fall on religious holidays.

**Related Documents:**
Students should also read the related documents on Replacement Assignments or Extensions and Discussions of Scores and Grades.