Fall 2015

ENEE 2582

V. P. Jilkov

University of New Orleans

Follow this and additional works at: http://scholarworks.uno.edu/syllabi

Recommended Citation

http://scholarworks.uno.edu/syllabi/364

This Syllabus is brought to you for free and open access by ScholarWorks@UNO. It has been accepted for inclusion in University of New Orleans Syllabi by an authorized administrator of ScholarWorks@UNO. For more information, please contact scholarworks@uno.edu.
**Instructor:** Dr. V. P. Jilkov, Riley Parker Endowed Professor  
Office EN844: Tue & Thu 3:15pm – 5:00pm, Wed 3:00pm – 5:00pm, or by appointment  
Phone: 280-6179, Email: vjilkov@uno.edu

**Classes:** Tuesday & Thursday 2:00pm - 3:15pm, EN 317


**Prerequisite:** CSCI 1205, concurrent registration in ENEE2586

**Catalog Description:** The characterization and design of digital, logic, and switching networks with emphasis on integrated circuits. 3Cr.

**Learning Outcomes:**

This course will introduce the fundamental concepts of digital logic circuits. The topics covered include number systems and conversions, basics and application of the Boolean algebra, use of the Karnaugh maps, flip-flops, multiplexers, counters and state machines. After passing this course the students should be capable to analyze and design combinational and sequential logic circuits.

**Schedule:**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number Systems and Conversion (Ch. 1)</td>
<td>1</td>
</tr>
<tr>
<td>2. Boolean Algebra (Ch. 2 &amp; Ch 3)</td>
<td>1.5</td>
</tr>
<tr>
<td>3. Minterm and Maxterm Expansions (Ch. 4)</td>
<td>1</td>
</tr>
<tr>
<td>4. Karnaugh maps (Ch. 5)</td>
<td>1</td>
</tr>
<tr>
<td>5. Multi-Level Gate Circuits. NAND and NOR Gates (Ch. 7)</td>
<td>1</td>
</tr>
<tr>
<td>6. Combinational Circuit Design (Ch. 8)</td>
<td>1</td>
</tr>
<tr>
<td>7. Multiplexers, Decoders and Programmable Logic Devices (Ch. 9)</td>
<td>1</td>
</tr>
<tr>
<td>8. Introduction to VHDL (Ch. 10)</td>
<td>1</td>
</tr>
<tr>
<td>9. Latches and Flip-Flops (Ch. 11)</td>
<td>1</td>
</tr>
<tr>
<td>10. Registers and Counters (Ch. 12)</td>
<td>1</td>
</tr>
<tr>
<td>11. Analysis of Clocked Sequential Circuits (Ch. 13)</td>
<td>1</td>
</tr>
<tr>
<td>12. State Machine Design (Ch. 14, Ch. 15 &amp; Ch. 16.1-2)</td>
<td>2.5</td>
</tr>
</tbody>
</table>
Assignments & Grading:

Class participation (5%)

Homework (10%): Eight HWs will be assigned. Due in one week. Late HWs not accepted.

Quizzes (10%): Five in-class quizzes (15min each) will be assigned.

Exam I (20%): In-class exam, after Ch. 7. Closed book.

Exam II (20%): In-class exam, after Ch. 12. Closed book.

Final Exam (35%): December 10, 3:00pm - 5:00pm, EN 317, Closed book.

Attendance:

1. Class attendance is required and will be recorded. You must sign in on a sign-in sheet passed around during class. You should contact the instructor in advance if you cannot make a class. Unsatisfactory attendance may lead to 5% decrease in your final score.

2. **No make-up tests** will be given except for illness or bonafide emergencies. If you cannot make a midterm test due to some excusable reason you must contact the instructor in advance (or ASAP) to see if some arrangement can be made. Otherwise you will receive 0 points on the test.

Student Conduct in Class:

All students are expected to know the UNO Student Code of Conduct and adhere to it in this class (please, refer to [http://www.studentaffairs.uno.edu](http://www.studentaffairs.uno.edu)). Among other things, students should come in class on time and have their cell phones turned off. Students are highly encouraged to get actively involved in class and ask questions, but this should not be done in a disruptive manner.

Academic Integrity:

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at [http://www.studentaffairs.uno.edu](http://www.studentaffairs.uno.edu).

Class Communications:

**Moodle** will be widely used for communication, announcements, posting course notes, assignments, solutions, grades, etc. Students must have Internet access to the course Moodle site at [http://www.uno.edu/moodle](http://www.uno.edu/moodle).

Accommodations for Students with Disabilities:

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to [http://www.ods.uno.edu](http://www.ods.uno.edu).
Academic Dishonesty Policy


Safety Awareness Facts and Education

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:
http://www.uno.edu/student-affairs-enrollment-management/

UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at http://www.uno.edu/counseling-services/. First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through http://www.uno.edu/ryo/uno-cares.aspx.

Emergency Procedures

Sign up for emergency notifications via text and/or email at E2Campus Notification: http://www.uno.edu/ehso/emergency-communications/index.aspx. All emergency and safety procedures are explained at the Emergency Health and Safety Office: http://www.uno.edu/ehso/.

Diversity at UNO

As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university’s efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities:
http://diversity.uno.edu/index.cfm

Learning and Support Services

Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at http://www.uno.edu/lrc/.

Affirmative Action and Equal Opportunity

UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO’s compliance with federal and state regulations regarding EEOC in its Policies and Resources website: http://www.uno.edu/human-resource-management/policies.aspx