CENG 241 – Digital Design I

Term – Fall 2016 (201609)

Instructor
Dr. David W. Capson, P.Eng.
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E-mail: capson@uvic.ca

Office Hours
Days: by appointment via email
Location: EOW 419

Course Objectives
To understand fundamental concepts in analyzing and designing combinational and sequential logic circuits.
To gain experience with implementation and testing of digital systems.

Learning Outcomes
Understanding Boolean algebra and its applications. Understanding binary and hexadecimal number systems. Understanding the characteristics and behavior of logic gates and acquiring the capability to analyze and design combinational and sequential logic circuits. Gaining an introductory experience with implementation and testing of digital logic systems together with supporting software development tools.

Syllabus

Lectures
A-Section(s):
A01 / CRN 10424
A02 / CRN 10425
Days: Mondays, Thursdays
Time: 10:00am – 11:20am
Location: BWC A104

Labs
(Location: ELW A359)
B01 Mon 12:00-15:00 Ali (jooya@ece.uvic.ca)
B02 Tue 13:30-16:30 Amanda (adash42@uvic.ca)
B03 Wed 13:30-16:30 Amir (andaliby@uvic.ca)
B04 Thu 12:00-15:00 Babak (babak@ece.uvic.ca)
B05 Fri 13:30-16:30 Robert (rjcprior@gmail.com)
B06 Thu 15:30-18:30 Awas (aws_kanan@yahoo.com)
B07 Mon 16:30-19:30 Saman (samankh@uvic.ca)

Required Text
Title: Digital Design
with an Introduction to the Verilog HDL, 5th Edition
Author: Mano and Ciletti
Publisher: Pearson
Year: 2013

Optional Text
none specified

References: none specified
### Assessment

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Details</th>
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<tbody>
<tr>
<td>Labs</td>
<td>30%</td>
<td>as per Lab sections schedule</td>
</tr>
<tr>
<td>Assignments (4 @ 2.5% each)</td>
<td>10%</td>
<td>Due dates to be determined.</td>
</tr>
<tr>
<td>Test #1</td>
<td>15%</td>
<td>Date: October 6, 2016, 10:00am – Room BWC A104</td>
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<tr>
<td>Test #2</td>
<td>15%</td>
<td>Date: November 14, 2016, 10:00am – Room BWC A104</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
<td>to be scheduled during exam period</td>
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**Notes:** Failure to complete all laboratory requirements will result in a grade of N being awarded for the course. Failure to pass the final exam will result in a failing grade for the course.

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

**There will be no supplemental examination for this course.**


**Note to Students:**

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair’s Secretary to set up an appointment.

**Accommodation of Religious Observance**

[http://web.uvic.ca/calendar2016-09/general/policies.html](http://web.uvic.ca/calendar2016-09/general/policies.html)

**Policy on Inclusivity and Diversity**

[http://web.uvic.ca/calendar2016-09/general/policies.html](http://web.uvic.ca/calendar2016-09/general/policies.html)

**Standards of Professional Behaviour**

You are advised to read the Faculty of Engineering document *Standards for Professional Behaviour*, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

[https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf](https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf)

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.

[http://web.uvic.ca/calendar2016-09/undergrad/info/regulations/academic-integrity.html](http://web.uvic.ca/calendar2016-09/undergrad/info/regulations/academic-integrity.html)

**Course Lecture Notes**

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.

*Updated July 19, 2016*