Electronic System Design
BEE 2243
Class Introduction
Agenda

Course Information
- Course and Lecturer
- Synopsis
- General objective
- Syllabus
- References
- Assessments
Course & Lecturer

Course:
- **BEE 3233**: Electronic System Design
- **Credit Hour**: Lecture – 3 hours,
- **Pre-requisite**: BEE 1213 (Digital Electronics)

Lecturer:
- Dr. Nurul Hazlina Noordin
- FKEE
- E-mail : hazlina@ump.edu.my
- Website : ee.ump.edu.my/hazlina
Synopsis – Revised Syllabus

1. Implementation technologies
   1. Type – mealy moore
   2. Multi input output

Basic Logic
1. Counter
2. Multiplier / Adder

Arithmetic Logic
1. ISE software
2. HDL (Verilog/VHDL)
3. Spartan 3 Implementation

State Machines

FPGA Implementation
Course Outcome

**CO 01:** Gain the knowledge and understanding of different technologies to implement electronic computing systems.

**CO 02:** Demonstrate the principles of designing finite state machines (FSM).

**CO 03:** Design and implement digital electronic system on FPGA.

**CO 04:** Work in team and communicate effectively.
## CO/PO Mapping

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Program Outcomes

• **PO 1: Engineering Knowledge** - Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems;

• **PO 2: Problem Analysis** - Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences;

• **PO 3: Design/Development of Solutions** - Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations;

• **PO 11: Individual and Team Work** - Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings;
SYLLABUS

http://ee.ump.edu.my/hazlina

> teaching > syllabus
REFERENCES


4. Mano, ”Logic and computer design fundamentals”, USA: Prentice Hall.

ASSESSMENT

Final grade will be calculated as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tr>
<td>Quizzes</td>
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<tr>
<td>Laboratory/ Project</td>
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<td>Test</td>
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<td>Final Examination</td>
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<td><strong>Total</strong></td>
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CLASS HOURS

Lecture:
• Tues (12.00 pm – 1.50 pm) E20BK1
• Thurs (8.00 am – 9.50 am) E00DK2

Lab:
• Week 7/8
ACADEMIC HONESTY

• Your written assignments, lab and examinations must be your own work.
• Academic Misconduct will not be tolerated.
• To insure that you are aware of what is considered academic misconduct, you should review carefully the definition and examples provided in Student Handbook.
Grading

Passing marks is 40
Grading Timetable

Test
  Test 1 – 13 March 2016
  Test 2 – 17 May 2016

Quiz
  After every important topics.

Laboratory
  2

Mini Project
  1