01286112

DIGITAL SYSTEM FUNDAMENTALS

Lecturer

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Detials (Theory Part)

- Introduction
- Number systems & Logic gates
- Binary Addition & Adding circuit
- Boolean Algebra
- Logic Simplification:
  - Karnaugh Map (K Map)
  - Quine McCluskey (QM) Technique
- Binary Codes & Combinational Logic Circuits
- Flip-Flops

Detials

- Registers
- Counters
- MSI: MUX & Decoder
- Programmable Logic Devices
- Sequential Circuits: Analysis
- Sequential Circuits: Design
- Sequential Circuits: State Optimization

Score Activities

- **Theory Part** — **80 %**
  - **Examinations**
    - **Mid-term** — **30 %**
    - **Final** — **40 %**
  - **Class Attention+Homework** — **10 %**
- **Laboratory Part** — **20 %**
  - **Experiments and Reports** — **10 %**
  - **Examinations** — **10 %**

References

- My Power Points: Digital System Designs by S. Somkuarnpanit
- M. Morris Mano and Michael D Ciletti, *Digital Design*, 6th Ed., Pearson, 2017.
- Charles H. Roth, Jr "*Digital Systems Design Using VHDL*", 3rd Ed., Prentice Hall, 2018.
- Charles H. Roth, Jr "*Fundamentals of Logic Design*", 7th Ed., Prentice Hall, 2014
- Stephen Brown and Zvonko Vranesic " *Fundamentals of Digital Logic with VHDL Design*", 3rd Ed., McGraw-Hill, 2014.