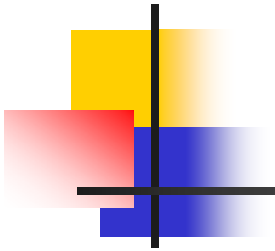
EE242 ILOs

ILO #	Description
1	Review all types of Flip Flops used in sequential circuits and represent their functions by state diagrams.
2	Convert verbally stated design problems into state diagrams and hence state tables.
3	Differentiate between Mealy and Moore finite state machines.
4	Follow up the design procedure of sequential circuits starting from implication tables through partition tables, state transition tables, excitations maps and eventually the hardware implementation.
5	Use the Verilog/VHDL language to design some known logic circuits, combinational and/or sequential.
6	Comprehend and design synchronous and asynchronous counters, serial and parallel Registers.
7	Understand the operation and design of registers.
8	Carry out a project using the NI- LabVIEW software package to design and test combinational circuits, if time allows.



LOGIC CIRCUIT DESIGN EE242

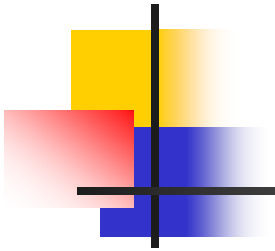
Term**: FALL** 2023

Instructors: Drs. M. El-Banna and Nayera Sadek

Classes : Dr. Nayera WED 02:20 – 03:40
Dr. Banna THUR 12:10 - 01:50

Topics to be covered:

Chapter 3: Sequential Circuits



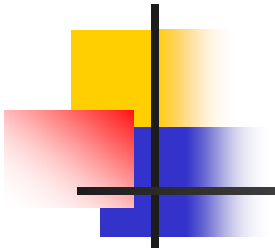
LOGIC CIRCUIT DESIGN EE242

Chapter 4: Design of Synchronous Sequential Circuits

Chapter 5: Introduction to Counters, Registers, and HDL language

Chapter 6: Design of Asynchronous Sequential Circuits

Text Book: Contemporary Digital Design, Johnson and Karim



LOGIC CIRCUIT DESIGN EE242

Further Reading: Fundamental Logic Design,
Thomson, Charles Roth

Grading Policy:

Midterm 20%

LAB 20% (10%-LAB, 5%-VHDL, 5%-LabVIEW)

Final 60%

EEC242 ILOs

Useful Codes and links:

Course code: **qs530yb**

Website :
http://eng.staff.alexu.edu.eg/staff/mbanna/public_html/

Youtube channel: BannaElectronics

https://www.youtube.com/channel/UCaKy_Y0LJaPieD4ve59LZEQ/playlists