

3	Boolean Algebra
4	Karnaugh Map
5	Digital Combinational Logic
6	Sequential Logic And Flip-Flops
7	Sequential Circuit Analysis And Design, counters, registers

5- Teaching and Learning Methods

- 5.1- Lectures
- 5.2- Class activity
- 5.3- Case study
- 5.4- Assignments / homework

6- Teaching and Learning Methods of Disables

- 6.1- None

7- Student Assessment

a- Student Assessment Methods

1	Assignments to assess knowledge and intellectual skills.
2	Quiz to assess knowledge, intellectual and professional skills.
3	Mid-term exam to assess knowledge, intellectual, professional and general skills.
4	Oral exam to assess knowledge and intellectual skills.
5	Final exam to assess knowledge, intellectual, professional and general skills.

b- Assessment Schedule

No.	Assessment	Week
1	Assessments	3,6
2	Exercise	2,4,5,7
3	Mid Term Exam	8
4	Assessments	9,11
5	Report	3,7,10
6	Final Exam	16

c- Weighting of Assessments

Assessment	Weight
Mid_Term Examination	10 %
Final_Term Examination	60 %
Oral Examination	10 %
Practical Examination	10 %
Semester work	5 %
Other types of assessment	5 %
Total	100 %

8- List of References

a- Course Notes

- 1- Logic Design : Circuits and systems.

b- Recommended Books

- 1- M. Morris Mano, "Computer Engineering Hardware Design", Prentice-Hall International Editions, 2006

c- Web Sites

- 1- <http://www.logiccircuit.org/>

- Course Coordinator : Dr. islam

- Head of Department : Prof/ Sayed Abo-Elsood Sayed War



Faculty of
Engineering at
Shoubra

Model No.11A Course Specifications : Logic Circuits

University : Benha university

Faculty : Faculty of Engineering at Shoubra

Department : Electrical Engineering Department

Matrix of Knowledge and Skills of the course

No.	Topics	week	Basic Knowledge	Intellectual Skills	Pr
1	Number Systems And Codes	1	A-2		
2	Logic Gates	2	A-1, A-2, A-3	B-1, B-2, B-3	C-
3	Boolean Algebra	3	A-2		
4	Karnaugh Map	4	A-2		
5	Karnaugh Map	5	A-2		
6	Digital Combinational Logic	6	A-1, A-2, A-3	B-1, B-2, B-3	C-
7	Digital Combinational Logic	7	A-1, A-2, A-3	B-1, B-2, B-3	C-
8	Mid term exam	8			
9	Sequential Logic And Flip-Flops	9	A-1, A-2, A-3	B-1, B-2, B-3	C-
10	Sequential Logic And Flip-Flops	10	A-1, A-2, A-3	B-1, B-2, B-3	C-
11	Sequential Logic And Flip-Flops	11	A-1, A-2, A-3	B-1, B-2, B-3	C-
12	Sequential Circuit Analysis And Design, counters, registers	12	A-1, A-2, A-3	B-1, B-2, B-3	C-
13	Sequential Circuit Analysis And Design, counters, registers	13	A-1, A-2, A-3	B-1, B-2, B-3	C-
14	Sequential Circuit Analysis And Design, counters, registers	14	A-1, A-2, A-3	B-1, B-2, B-3	C-
15	Final exam	15			

- Course Coordinator : Dr. islam

- Head of Department : Prof/ Sayed Abo-Elsood Sayed Ward



Faculty of
Engineering at
Shoubra

Model No.11A Course Specifications : Logic Circuits

Matrix of course content and ILO's



Faculty of
Engineering at
Shoubra

Model No.11A Course Specifications : Logic Circuits

University : Benha university

Faculty : Faculty of Engineering at Shoubra

Department : Electrical Engineering Department

Matrix of course aims and ILO's

Course aims	ILO's 1	ILO's 2	ILO's 3	ILO's 4	ILO's 5	ILO's 6	ILO's 7	ILO's 8	ILO's 9	ILO's 10
Understand and use different number systems.	A-3									
Get acquainted with coding schemes	B-1	C-2	D-1							
Understand how to minimize a Boolean function	B-1	B-3	C-1	C-2	D-1					
Understand the concept of combinational logic and MSI. Functions	A-1	A-2	A-3	B-1	B-2	B-3	C-1	C-2	D-1	
Using of different combinational logic decoders, encoders.	A-1	A-2	A-3	B-1	B-2	B-3	C-1	C-2	D-1	D-2

- **Course Coordinator** : Dr. islam

- **Head of Department** : Prof/ Sayed Abo-Elsood Sayed Ward