

# Study Plan:

**AL-MANAR UNIVERSITY OF TRIPOLI**  
**Faculty of Engineering and Information Technology**  
**Engineering Diploma in Industrial Engineering**

<b>Year One</b>		
<b><i>First Semester:</i></b>		
1-	UR1	3 Credits
2-	Mechanics (PHY 203)	3 Credits
3-	Calculus III (MATH 202)	3 Credits
4-	Programming (CSC 203)	3 Credits
5-	Engineering Graphics (ENGR 211)	3 Credits
		<b>15 Credits</b>
<b><i>Second Semester:</i></b>		
6-	Free Elective 1	3 Credits
7-	UR2	3 Credits
8-	Linear Algebra (MATH 332)	3 Credits
9-	Calculus IV (MATH 203)	3 Credits
10-	Object Oriented Programming (IT381)	3 Credits
		<b>15 credits</b>

**AL-MANAR UNIVERSITY OF TRIPOLI**  
**Faculty of Engineering and Information Technology**  
**Engineering Diploma in Industrial Engineering**

<b>Year Two</b>		
<b><i>Third Semester:</i></b>		
11- UR3		3 credits
12- Free Elective 2		3 credits
13- Electric Circuits	(ELEC 221)	3 credits
14- Differential Equations	(MATH 342)	3 credits
15- Engineering Simulation	(ENGR 274)	3 credits
		<hr style="width: 20%; margin-left: auto; margin-right: 0;"/> 15 credits
<b><i>Fourth Semester:</i></b>		
16- UR4		3 credits
17- Free Elective 3		3 credits
18- Probability and Statistics	(MATH 352)	3 credits
19- Numerical Methods	(MATH 442)	3 credits
20- Material Sciences	(PHY 211)	3 credits
21- Manufacturing Technology Lab	(IM 111)	1 credit
		<hr style="width: 20%; margin-left: auto; margin-right: 0;"/> 16 credits

**AL-MANAR UNIVERSITY OF TRIPOLI**  
**Faculty of Engineering and Information Technology**  
**Engineering Diploma in Industrial Engineering**

<b>Year Three</b>			
<b><i>Fifth Semester:</i></b>			
22-	Engineering Economy	(EECN 303)	3 Credits
23-	Random & Stochastic Processes	(MATH 452)	3 Credits
24-	Enterprise Engineering	(IE 262)	3 Credits
25-	System Modeling and Optimization	(IE 282)	3 Credits
26-	Design and Manufacturing I	(IE 330)	3 Credits
27-	Automatics Lab	(AUT 202L)	2 Credits
			<b>17 Credits</b>
<b><i>Sixth Semester:</i></b>			
28-	UR5		3 Credits
29-	Electric Power and Machines	(ELEC 370)	3 Credits
30-	Engineering Experimental Design	(IE 355)	3 Credits
31-	Production Systems and Operations	(IE 432)	3 Credits
32-	Quality Engineering	(IE 456)	3 Credits
			<b>15 Credits</b>
<b><i>Sixth Semester:</i></b>			
33-	SUMMER INTERNSHIP	(ENG 499)	3 Credits

**AL-MANAR UNIVERSITY OF TRIPOLI**  
**Faculty of Engineering and Information Technology**  
**Engineering Diploma in Industrial Engineering**

**Year Four**

***Seventh Semester:***

34-	Free Elective 4		3 credits
35-	Electrical Engineering Elective (1/3)		3 credits
36-	Social Study Elective		3 credits
37-	IE Major Elective (1/3)		3 credits
38-	Introduction to Ergonomics	(IE 302)	2 credits
39-	Ergonomics Lab	(IE 302L)	1 credit
			<b>15 credits</b>

***Eighth Semester:***

39-	Engineering Ethics (EETH303)		3 credits
40-	Electrical Engineering Elective (2/3)		3 credits
41-	Applied Research Methods	(IE 483)	3 credits
42-	Decision Support Systems for Engineers	(IE 411)	3 credits
43-	Computer Aided Manufacturing	(IE 463)	3 credits
44-	Robotics Lab	(ROB 200L)	2 credits
45-	Project/Research Methodology	(FYP 594)	1 credit
			<b>18 credits</b>

**AL-MANAR UNIVERSITY OF TRIPOLI**  
**Faculty of Engineering and Information Technology**  
**Engineering Diploma in Industrial Engineering**

<b>Year Five</b>			
<b><i>Ninth Semester:</i></b>			
46-	Engineering Management	(EMGT 303)	3 Credits
47-	Electrical Engineering Elective (3/3)		3 Credits
48-	IE Major Elective (2/3)		3 Credits
49-	IE Major Elective (3/3)		3 Credits
50-	Microprocessor Lab	(ELEC 440L)	3 Credits
51-	Final Year Project Part 1	(FYP 595)	1 Credits
			<b>16 Credits</b>
<b><i>Tenth Semester:</i></b>			
52-	Final Year Project Part 2	(FYP 596)	5 Credits