

Curriculum

Industrial Engineering & Management

First year first semester

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits
0300101	Calculus 1 מבוא למתמטיקה	4	2	-	6	5
5000221	Scientific and technological literacy	2	-	-	2	1
5050101	Linear Algebra מבוא למתמטיקה	3	1	-	4	3.5
5050111	Principles of Probability מבוא למתמטיקה	3	2	-	5	4
5050202	Introduction to Information Systems	3	1	-	4	3.5
0400051	Introduction in physics 1 מבוא למתמטיקה	4	2	-	6	0
6500000	Microcomputer Applications	-	-	3	3	0
	Total for Semester	19	8	3	31	17

First year second semester

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits
0300102	Calculus 2 Prereq :Calculus 1	4	2	-	6	5
0400101	Physics 1 Prereq :introduction in physics 1 ,Calculus 1	3	1	-	4	3.5
0400011	Laboratory in Physics 1	-	-	1	1	0.25
5050112	Statistical Inference Prereq :Principles of Probability	3	2	-	5	4
5050302	Principles of Accounting	3	1	-	4	3.5
0400011	introduction in physics 2 Prereq :introduction in physics 1	3	2	-	5	0
5000237	(Access) – Basics of Databases Prereq : Microcomputer Applications	-	-	2	2	0.5
	Total for Semester	16	8	3	27	16.75

Second year first semester

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits
5050301	Principles of Microeconomics	3	2	-	5	4
5000102	Principles of Programming Prereq :Microcomputer Applications	3	-	3	3	3.75
0400102	Physics 2 Prereq :Physics 1 ,introduction in physics 2	3	1	-	4	3.5
0400012	Laboratory in Physics 2	-	-	1	1	0.25
5050102	Operation Research Prereq :Linear Algebra	3	2	-	5	4
5050305	Marketing Management	3	-	-	3	3
5050801	Organizational Behavior	3	-	-	3	3
	Total for Semester	18	6	3	27	21.75

Second year second semester

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits
5050303	Management Economics Prereq :Principles of Accounting	3	1	-	4	3.5
5050103	Operation Research Stochastic Prereq :Operation Research ,Principles of Probability	3	2	-	5	4
5050304	Principles of Finance Prereq :Principles of Accounting ,Principles of Microeconomics	3	1	-	4	3.5
5050802	Human Resource Management	3	-	-	3	3
5050113	Applied Statistics Prereq :Statistical Inference	3	2	-	5	4
5050803	Introduction to operation management Prereq :Organizational Behavior	3	-	-	3	3
5050204	Visual Programming and Internet Prereq :Principles of Programming	-	-	3	3	0.75
0200004	advanced English II	4	-	-	4	2
	Total for Semester	22	5	3	31	23.75

Obligatory courses Third year

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits
5051703	Work Study 1	3	-	2	5	3.5
5050810	Production Planning and Control 1 Prereq :Calculus 2	3	2	-	5	4
5050114	Design of Experiments Prereq :Applied Statistics	3	2	-	5	4
5050807	Total Quality Management Prereq :Statistical Inference	3	-	-	3	3
5050004	Reliability Engineering Prereq :Statistical Inference	3	-	-	3	3
5050005	Ergonomics	3	2	-	5	3.5
5050800	Project Preparation	3	-	-	3	0
5050804	Project Management Prereq :Introduction to operation management	3	2	-	5	4
5051702	Statistical Quality Control Prereq :Total Quality Management	3	1	-	4	3.5
	Total for Semester	27	9	2	38	28.5

Fourth year Obligatory courses

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits
5050808	Final Project Stage a Prereq :Project Preparation	-	-	-	-	4
5050811	Production Planning and Control 2 Prereq :Production Planning and Control , Operation Research Stochastic	2	2	-	4	3
5050809	Final Project Stage b Prereq : Final Project Stage a	-	-	-	-	4
	General courses	2	-	-	2	2
5050909	Industrial Applications of Information Systems Prereq :Production Planning and Control 1	2	2	2	6	3
5050701	Simulation Methods Prereq :Operation Research Stochastic , Production Planning and Control 2	2	-	2	4	2.5
	Total for Semester	8	4	4	16	18.5

Electives

Third and fourth year - at least 35.5 credit points taken from the following list of courses (notice possible prerequisites).

To receive a specialization certificate, it is required to receive a grade not lower than 75 in all the courses that form that specialization list of courses.

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits	
5052210	Information Retrieval Prereq :Data Bases	3	-	-	3	3	2)
5052208	File Organization and Processing Prereq :Introduction to Information Systems	3	2	-	5	4	2)
5052209	Data Bases Prereq :File Organization and Processing <i>In parallel with:</i> Data Structures	3	2	-	5	4	2)
1050001	Engineering Graphics	2	2	2	6	3	1)
5010220	Labor Law	2	-	-	2	2	3)
5010444	Service Engineering and Management Prereq :Introduction to Information Systems	3	-	-	3	3	3)
5051906	Safety Engineering Prereq :Ergonomics	3	-	-	3	3	1) 3)
5051003	Mechanical parts Prereq :Fundamental of Materials Engineering	2	1	-	3	2.5	1)
5051904	Work Study 2 Prereq :Work Study 1	3	-	-	3	3	3)
5052001	Technologies of Service Oriented Architecture Prereq :Introduction to Information Systems	3	-	-	3	3	2)
	Implementation of Service Oriented Architecture	3	-	-	3	3	3)
6000581	Production Technologies Prereq :Intro to Chemistry	3	-	4	7	4	1) 3)
5051903	Business Entrepreneurship Prereq :Marketing Management	3	-	-	3	3	3)
3000001	Intro to Chemistry	2	1	-	3	2.5	1)
5051001	Fundamental of Materials Engineering Prereq :Intro to Chemistry	2	1	2	5	3	1)
5052207	Data Structures Prereq :Advanced Programming ,File Organization and Processing ,(Access) – Basics of Databases	3	2	-	5	4	2)
5052904	Data Mining Prereq :Information Retrieval	3	-	-	3	3	2)
5052212	Human-Computer Interaction Prereq :Ergonomics ,Visual Programming and Internet	3	-	-	3	3	2)

No.	Course	Lec.H.	Exe.H.	Lab.H.	Total H.	Credits	
	CIM – Computer Integrated Manufacturing	1	-	3	4	2.75	1)
5010161	Handling Systems and Plant Layout Prereq :Operation Research Stochastic	2	1	2	5	3	1)
5051901	Macro-economics Prereq :Principles of Microeconomics	3	-	-	3	3	3)
5051907	Maintenance management Prereq :Reliability Engineering	2	-	-	2	2	1)
5052214	Information Technologies Managemnet Prereq :Information Retrieval ,Information Systems Analysis and Design	3	-	-	3	3	2)
5010334	Logistic Management	2	-	-	2	2	3)
5052211	Information Systems Analysis and Design Prereq :Data Bases	3	1	-	4	3.5	2)
5051206	Information Systems Analysis Prereq :(Access) – Basics of Databases , Introduction to Information Systems	3	1	-	4	3.5	1) 3)
5051908	Decision-making Prereq :Operation Research Stochastic	3	-	-	3	3	3)
5050003	Robotics & Automation	2	1	2	5	3	1)
5010071	International technological marketing Prereq :Marketing Management	3	-	-	3	3	3)
5050660	Engineering Design management Prereq :Marketing Management ,Introduction to operation management	3	-	2	3	3.5	1)
5052203	Advanced Programming Prereq :Principles of Programming	2	1	2	5	3	2)
5052213	Computer Communications Prereq :Visual Programming and Internet	3	1	-	4	3.5	2)

- 1) Required for **industrial systems specialization**
2) Required for **Information systems specialization**
3) Required for **Management systems specialization**

5052906	Complex-systems	3	-	-	3	3
5010461	Heuristic Methods in Optimization	3	-	-	3	3