



Bachelor of Industrial Engineering

Y	Course Code	Course Title	Pre-requisites	Credit Hours	Course Code	Course Title	Pre-requisites	Credit Hours
FIRST YEAR	First Level				Second Level			
	CHEM 101	General Chemistry I		4	MATH 102	Calculus II	MATH 101	4
	COMM 101	Communication Skills		2	PHYS 102	Physics II	PHYS 101	4
	MATH 101	Calculus I	MATH 001	4	STAT 102	Probability Theory	STAT 101	3
	PHYS 101	General Physics		4	IE 201	Introduction to Engineering Design I		3
	STAT 101	General Statistics		3	IE 260	Engineering Graphics		3
	Total Credit Hours			17	Total Credit Hours			17
SECOND YEAR	Third Level				Fourth Level			
	ARAB 101	Arabic I		3	MATH 204	Differential Equations I	MATH 207	3
	MATH 207	Calculus III for Engineers	MATH 102	4	MATH 241	Linear Algebra	MATH 207	3
	STAT 250	Applied Probability and Random Processes	STAT 102	3	IE 321	Fundamentals of Computer Systems	IE 261	3
	IE 202	Introduction to Engineering Design II	IE 201	2	IE 322	Computer Applications in Industrial Engineering I	IE 261	3
	IE 255	Engineering Economics	MATH 101	3	IE 256	Engineering Management	IE 255	2
	IE 261	Structured Computer Programming		3	IE 262	Basic Electrical Engineering	PHYS 102	4
	Total Credit Hours			18	Total Credit Hours			18
THIRD YEAR	Fifth Level				Sixth Level			
	ISLS 101	Islamic Studies I		3	IE 342	Human Factors Engineering	IE 341	3
	IE 263	Basic Workshop	IE 260	2	IE 352	System Analysis and Design	IE 351	3
	IE 311	Operations Research I	MATH 241 MATH 204	3	IE 411	Operations Research II	IE 311	3
	IE 323	Computer Applications in Industrial Engineering II	IE 322	3	IE 422	Industrial System Simulations	IE 322 STAT 250	3
	IE 341	Work Study	STAT 102	3	IE 432	Design of Industrial Experiments	STAT 250	3
	IE 351	Industrial Management	IE 256	3	IE XXX	Major Elective		3
	Total Credit Hours			17	Total Credit Hours			18
FOURTH YEAR	Summer				Eighth Level			
	IE 390	Summer Training	Department Approval	2	GEE XXX	General Education Elective		3
FORTH YEAR	Seventh Level				IE 441	Industrial Safety Engineering	IE 342	3
	IE 395	IE Seminar	IE 351	1	IE 453	Facilities Planning	IE 342 IE 352	3
	IE 431	Industrial Quality Control	IE 351	3	IE 492	Senior Project II	IE 491	2
	IE 451	Production Planning and Control	IE 351	3	IE XXX	Major Elective		3
	IE 491	Senior Project I	IE 422 IE 432 IE 351	2	IE XXX	Major Elective		3
	IE XXX	Major Elective		3	Total Credit Hours			17
	IE XXX	Major Elective		3	Total Credit Hours			17
	Total Credit Hours			15	Total Credit Hours			17

Major Electives

Course Code	Course Title	Pre-requisites	Credit Hours
IE 412	Decision Analysis	IE 255, STAT 250	3
IE 413	Network Analysis	IE 311, STAT 250	3
IE 415	Project Management	IE 351	3
IE 433	Reliability Engineering	STAT 250	3
IE 434	Industrial Stochastic Systems	STAT 250	3
IE 435	Queuing Systems	STAT 250	3
IE 436	Dynamic Forecasting	STAT 250	3
IE 442	Industrial Hygiene Engineering	IE 342	3
IE 443	Industrial Environmental Engineering	IE 342	3
IE 444	Occupational Biomechanics	IE 342	3
IE 450	Marketing Management and Research	IE 351	3
IE 452	Maintenance and Replacement Policies	IE 351, STAT 250	3
IE 454	Engineering Cost Analysis	IE 255	3
IE 455	Material Handling and Packaging	IE 255, STAT 250	3
IE 456	Feasibility Studies	IE 255, IE 352	3
IE 457	Supply Chain Management and Optimization	IE 351	3
IE 458	Strategic Management in Industry	IE 351	3
IE 459	Introduction to Entrepreneurship	IE 351	3
IE 460	Occupational Safety and Health Management	IE 351	3
IE 461	System Eng. Safety and Risk Assessment	STAT 250	3
IE 462	Safety Regulation and Accident Investigation Control	IE 341	3
IE 463	Safety Technology and Innovation	IE 323	3
IE 464	Safety and Security in Cyber Systems	IE 323	3
IE 465	Management of Business Logistics	IE 351	3
IE 466	Distribution and Warehouse Management	IE 351	3
IE 467	Logistics and Transportation Systems	IE 311, STAT 250	3
IE 468	Negotiation and Dispute Resolution	IE 411	3

General Education Electives (Free Electives)

Course Code	Course Title	Credit Hours
PSY 101	Introduction to Psychology	3
SCO 101	Introduction to Sociology	3
EI 101	Emotional Intelligence	3
ENG 204	Critical Thinking	3
ETH 101	Social Ethics	3
MKT 333	Public Relations	3
GD 286	Photography I	3
GED 100	Introduction of Design Software	3
NPS 101	Negotiation and Problem Solving	3
BUS 101	Essentials of Business	3
BUS 223	Research Methodology	3
BUS 425	Entrepreneurship	3
SPD 101	Soft Skills and Personality Development	3
LAW -101	Principles of Law	3
TEM -121	Introduction to Tourism and Hospitality	3
ID 274	Design Theories	3
ID 275	Art and Architecture History I	3
GD 088	Islamic Art	3
GFID 106	Digital Communications	3
CSIT 101	Digital Citizenship	3
CSIT 102	Foundations of Computers and Technology Information	3

Preparation Course

Course Code	Course Title	Credit Hours
MATH 001	Precalculus	NP

Total Credit Hours:	139
General Requirements:	45
Major Requirements:	76
Major Electives Requirements:	15
General Education Electives Requirements:	3



Industrial Engineering\Safety Engineering

Y	Course Code	Course Title	Pre-requisites	Credit Hours	Course Code	Course Title	Pre-requisites	Credit Hours
FIRST YEAR	First Level				Second Level			
	CHEM 101	General Chemistry I		4	MATH 102	Calculus II	MATH 101	4
	COMM 101	Communication Skills		2	PHYS 102	Physics II	PHYS 101	4
	MATH 101	Calculus I	MATH 001	4	STAT 102	Probability Theory	STAT 101	3
	PHYS 101	General Physics		4	IE 201	Introduction to Engineering Design I		3
	STAT 101	General Statistics		3	IE 260	Engineering Graphics		3
	Total Credit Hours			17	Total Credit Hours			17
SECOND YEAR	Third Level				Fourth Level			
	ARAB 101	Arabic I		3	MATH 204	Differential Equations I	MATH 207	3
	MATH 207	Calculus III for Engineers	MATH 102	4	MATH 241	Linear Algebra	MATH 207	3
	STAT 250	Applied Probability and Random Processes	STAT 102	3	IE 321	Fundamentals of Computer Systems	IE 261	3
	IE 202	Introduction to Engineering Design II	IE 201	2	IE 322	Computer Applications in Industrial Engineering I	IE 261	3
	IE 255	Engineering Economics	MATH 101	3	IE 256	Engineering Management	IE 255	2
	IE 261	Structured Computer Programming		3	IE 262	Basic Electrical Engineering	PHYS 102	4
	Total Credit Hours			18	Total Credit Hours			18
THIRD YEAR	Fifth Level				Sixth Level			
	ISLS 101	Islamic Studies I		3	IE 342	Human Factors Engineering	IE 341	3
	IE 263	Basic Workshop	IE 260	2	IE 352	System Analysis and Design	IE 351	3
	IE 311	Operations Research I	MATH 241 MATH 204	3	IE 411	Operations Research II	IE 311	3
	IE 323	Computer Applications in Industrial Engineering II	IE 322	3	IE 422	Industrial System Simulations	IE 322 STAT 250	3
	IE 341	Work Study	STAT 102	3	IE 432	Design of Industrial Experiments	STAT 250	3
	IE 351	Industrial Management	IE 256	3	IE XXX	Major Elective		3
	Total Credit Hours			17	Total Credit Hours			18
	Summer							
	IE 390	Summer Training	Department Approval	2				
FORTH YEAR	Seventh Level				Eighth Level			
	IE 395	IE Seminar	IE 351	1	GEE XXX	General Education Elective		3
	IE 431	Industrial Quality Control	IE 351	3	IE 441	Industrial Safety Engineering	IE 342	3
	IE 451	Production Planning and Control	IE 351	3	IE 453	Facilities Planning	IE 342 IE 352	3
	IE 491	Senior Project I	IE 422 IE 432 IE 351	2	IE 492	Senior Project II	IE 491	2
	IE XXX	Major Elective		3	IE XXX	Major Elective		3
	IE XXX	Major Elective		3	IE XXX	Major Elective		3
	Total Credit Hours			15	Total Credit Hours			17

Major Electives

Course Code	Course Title	Pre-requisites	Credit Hours
IE 442	Industrial Hygiene Engineering	IE 342	3
IE 443	Industrial Environmental Engineering	IE 342	3
IE 444	Occupational Biomechanics	IE 342	3
IE 460	Occupational Safety and Health Management	IE 351	3
IE 461	System Eng. Safety and Risk Assessment	STAT 250	3
IE 462	Safety Regulation and Accident Investigation Control	IE 341	3
IE 463	Safety Technology and Innovation	IE 323	3
IE 464	Safety and Security in Cyber Systems	IE 323	3

General Education Electives (Free Electives)

Course Code	Course Title	Credit Hours
PSY 101	Introduction to Psychology	3
SCO 101	Introduction to Sociology	3
EI 101	Emotional Intelligence	3
ENG 204	Critical Thinking	3
ETH 101	Social Ethics	3
MKT 333	Public Relations	3
GD 286	Photography I	3
GED 100	Introduction of Design Software	3
NPS 101	Negotiation and Problem Solving	3
BUS 101	Essentials of Business	3
BUS 223	Research Methodology	3
BUS 425	Entrepreneurship	3
SPD 101	Soft Skills and Personality Development	3
LAW -101	Principles of Law	3
TEM -121	Introduction to Tourism and Hospitality	3
ID 274	Design Theories	3
ID 275	Art and Architecture History I	3
GD 088	Islamic Art	3
GFID 106	Digital Communications	3
CSIT 101	Digital Citizenship	3
CSIT 102	Foundations of Computers and Technology Information	3

Preparation Course

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MATH 001	Precalculus	NP

Total Credit Hours:	139
General Requirements:	45
Major Requirements:	76
Major Electives Requirements:	15
General Education Electives Requirements:	3



Industrial Engineering\Supply Chain and Logistics Engineering

Y	Course Code	Course Title	Pre-requisites	Credit Hours	Course Code	Course Title	Pre-requisites	Credit Hours
FIRST YEAR	First Level				Second Level			
	CHEM 101	General Chemistry I		4	MATH 102	Calculus II	MATH 101	4
	COMM 101	Communication Skills		2	PHYS 102	Physics II	PHYS 101	4
	MATH 101	Calculus I	MATH 001	4	STAT 102	Probability Theory	STAT 101	3
	PHYS 101	General Physics		4	IE 201	Introduction to Engineering Design I		3
	STAT 101	General Statistics		3	IE 260	Engineering Graphics		3
	Total Credit Hours			17	Total Credit Hours			17
SECOND YEAR	Third Level				Fourth Level			
	ARAB 101	Arabic I		3	MATH 204	Differential Equations I	MATH 207	3
	MATH 207	Calculus III for Engineers	MATH 102	4	MATH 241	Linear Algebra	MATH 207	3
	STAT 250	Applied Probability and Random Processes	STAT 102	3	IE 321	Fundamentals of Computer Systems	IE 261	3
	IE 202	Introduction to Engineering Design II	IE 201	2	IE 322	Computer Applications in Industrial Engineering I	IE 261	3
	IE 255	Engineering Economics	MATH 101	3	IE 256	Engineering Management	IE 255	2
	IE 261	Structured Computer Programming		3	IE 262	Basic Electrical Engineering	PHYS 102	4
	Total Credit Hours			18	Total Credit Hours			18
THIRD YEAR	Fifth Level				Sixth Level			
	ISLS 101	Islamic Studies I		3	IE 342	Human Factors Engineering	IE 341	3
	IE 263	Basic Workshop	IE 260	2	IE 352	System Analysis and Design	IE 351	3
	IE 311	Operations Research I	MATH 241 MATH 204	3	IE 411	Operations Research II	IE 311	3
	IE 323	Computer Applications in Industrial Engineering II	IE 322	3	IE 422	Industrial System Simulations	IE 322 STAT 250	3
	IE 341	Work Study	STAT 102	3	IE 432	Design of Industrial Experiments	STAT 250	3
	IE 351	Industrial Management	IE 256	3	IE XXX	Major Elective		3
	Total Credit Hours			17	Total Credit Hours			18
FOURTH YEAR	Summer				Eighth Level			
	IE 390	Summer Training	Department Approval	2	GEE XXX	General Education Elective		3
FORTH YEAR	Seventh Level				IE 441	Industrial Safety Engineering	IE 342	3
	IE 395	IE Seminar	IE 351	1	IE 453	Facilities Planning	IE 342 IE 352	3
	IE 431	Industrial Quality Control	IE 351	3	IE 492	Senior Project II	IE 491	2
	IE 451	Production Planning and Control	IE 351	3	IE XXX	Major Elective		3
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	IE XXX	Major Elective		3	Total Credit Hours			17
	IE XXX	Major Elective		3	Total Credit Hours			17
	Total Credit Hours			15	Total Credit Hours			17

Major Electives

Course Code	Course Title	Pre-requisites	Credit Hours
IE 413	Network Analysis	IE 311, STAT 250	3
IE 435	Queuing Systems	STAT 250	3
IE 455	Material Handling and Packaging	IE 255, STAT 250	3
IE 457	Supply Chain Management and Optimization	IE 351	3
IE 465	Management of Business Logistics	IE 351	3
IE 466	Distribution and Warehouse Management	IE 351	3
IE 467	Logistics and Transportation Systems	IE 311, STAT 250	3
IE 468	Negotiation and Dispute Resolution	IE 411	3

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NPS 101	Negotiation and Problem Solving	3
BUS 101	Essentials of Business	3
BUS 223	Research Methodology	3
BUS 425	Entrepreneurship	3
SPD 101	Soft Skills and Personality Development	3
LAW -101	Principles of Law	3
TEM -121	Introduction to Tourism and Hospitality	3
ID 274	Design Theories	3
ID 275	Art and Architecture History I	3
GD 088	Islamic Art	3
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