

# STUDY PLAN OF BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING

==== Feb 2022 ====

## FIRST YEAR (Freshmen)

First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
ENG 101	English Essay Writing	3	ORN 05R ORN 05C	STT 103	Probability and Statistics	3	MTH 001 ORN 03R ORN 03C
MTH 104	Calculus I	3	MTH 001 ORN 03R ORN 03C	MTH 211	Calculus II	4	MTH 104
xxx	Humanities / Social Science Electives	3	ORN 04R ORN 04C	PHY 203	Physics - II (EM + Electronics)	4	PHY 103
PHY 103	Physics - I (Mechanics)	4	ORN 04R	CHM 101	General Chemistry	4	ORN 04R
MGT 101	Introduction to Management	3	ORN 04R				
ARB 102	Communication Skills in Arabic	2	ORN 02R ORN 02C				
<b>Sub-Total</b>		<b>18</b>		<b>Sub-Total</b>		<b>15</b>	

## SECOND YEAR (Sophomore)

First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
MTH 301	Linear Algebra	3	MTH 001 ORN 03R ORN 03C	CIS 103	Programming Fundamentals -1	4	MTH 104
MTH 105	Discrete Mathematics	4	MTH 001 ORN 03R ORN 03C	MTH 302	Differential Equations	4	MTH 211
ENR 201	Engineering Drawing and CAD	3	ENG 101	IEG 201	Introduction to Engineering Design	2	ENR 201
ENR 203	Statics and Strength of Materials	3	MTH 104 PHY 103	IEG 311	Production and Inventory Systems	3	STT 103
MEG 211	Fundamentals of Materials Engineering	3	PHY 103 CHM 101	IEG 301	Design of Experiments	3	STT 103
ISL 101	Foundation of Islamic Culture	2	ORN 02R ORN 02C				
<b>Sub-Total</b>		<b>18</b>		<b>Sub-Total</b>		<b>16</b>	

## THIRD YEAR (Junior)

First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
IEG 302	Engineering Reliability	2	IEG 301	IEG 345	Industrial Control Systems and Automation	3	CIS 103 PHY 203
ARB 202	Writing Skills in Arabic	2	ORN 02R ORN 02C	IEG 322	Operation Research-2	3	IEG 321
IEG 303	Quality Control	3	IEG 301	IEG 332	Work Design and Analysis	3	IEG 341
IEG 312	Operation Management	3	IEG 311	IEG 323	Systems Simulation	3	IEG 321
IEG 321	Operation Research-1	3	MTH 301 CIS 103	ISL 201	Foundation of Islamic Economy	2	ORN 02R ORN 02C
IEG 341	Manufacturing Processes-1	3	MEG 211	IEG 342	Manufacturing Processes-2	3	IEG 341
<b>Sub-Total</b>		<b>16</b>		<b>Sub-Total</b>		<b>17</b>	

## FOURTH YEAR (Senior)

First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
IEG 351	Manufacturing Systems	3	IEG 302 IEG 312	ISL 301	Work Ethics in Islam	2	ORN 02R ORN 02C
IEG 304	Engineering Economy and Costing	3	MTH 302	IEG 400	Product Development and Innovation	3	IEG 201 IEG 303
IEG 431	Ergonomics	3	IEG 332	IEG 411	Project Management	3	IEG 312
IEG 450	Industrial Facility Design and Material Handling	3	IEG 322 IEG 332	IEG xxx	Elective Cours-2	3	
IEG xxx	Elective Course-1	3		IEG 491	Graduation Design Project-2	2	IEG 490
IEG 490	Graduation Design Project-1	2	Pass Successfully 90 Cr. Hrs	CSK 001	Career Skills	0	
<b>Sub-Total</b>		<b>17</b>			<b>Sub-Total</b>	<b>13</b>	

### Co-OP (SUMMER AND SEMESTER)

Code	Course Title	CR	Pre-Requisite
IEG 497	Co-op practical training (*)	6	Pass Successfully 90 Cr. Hrs

(\*) CSK 001 is recommended as pre-requisite to IEG 497

### Humanities / Social Science Electives

(one course from this list)

Code	Course Title	CR	Pre-Requisite
SOS 102	Introduction to Social Science	3	ORN 04R ORN 04C
PHL 101	Critical Thinking	3	ORN 04R
PSY 101	Principle of Psychology	3	ORN 04C
SOS 101	Saudi Heritage	3	ORN 04R
FRE 106	Conversational French 1	3	ORN 04C

### Industrial Engineering Electives

(two courses from this list)

Code	Course Title	CR	Pre-Requisite
IEG 403	Six Sigma and Lean Operations	3	IEG 301 IEG 303
IEG 413	Supply Chain	3	IEG 312
IEG 414	Production System Operations	3	IEG 312
IEG 430	Safety Engineering	3	IEG 431
IEG 433	Ergonomic Design	3	IEG 332 IEG 431
IEG 446	Direct Digital Manufacturing	3	IEG 342
IEG 447	Computer Integrated Manufacturing	3	IEG 345
MIS 312	Database Management	3	CIS 103