

**BACHELOR OF SCIENCE IN INFORMATICS ENGINEERING (BSIE)**

CURRICULUM PLAN EFFECTIVE SY2017-2018

**REMEDIAL CLASSES**

COURSE CODE	COURSE TITLE	LEC Hrs	LAB Hrs	CREDIT UNITS	PRE-REQUISITES
MATH300	Remedial Mathematics	3	0	0	
ENGL301	Speaking and Listening	9	0	0	
ENGL302	Grammar and Vocabulary	9	0	0	

**FIRST YEAR**
**FIRST TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CHEM400	General Chemistry 1	2	2	3	
CENG411	Introduction to Computing	2	2	3	
SOCI400	Sociology	3	0	3	
ENGL401	English Communication Skills 1	3	0	3	
MATH401	College Algebra	3	0	3	
MATH402	Plane and Spherical Trigonometry	3	0	3	
EUTH400	Euthenics 1	1	0	0	
		<b>TOTAL</b>		<b>18</b>	

**SECOND TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
ARAB400A	Arabic Language	3	0	3	
CHEM401	General Chemistry 2	2	2	3	CHEM400
HUMR400	Human Rights	3	0	3	SOCI400
ENGL402	English Communication Skills 2	3	0	3	ENGL401
MATH406	Differential Calculus with Analytic Geometry	5	0	5	MATH401, MATH402
EUTH401	Euthenics 2	1	0	0	EUTH400
				<b>17</b>	

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**THIRD TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
SCIE400	Biology	2	2	3	
ENGL403	Speech and Oral Communication	2	2	3	ENGL402
HIST400	History of Bahrain and GCC Region	3	0	3	
MATH501	Integral Calculus with Differential Equations	5	0	5	MATH406
PHYS501	University Physics 1	2	2	3	MATH406
		TOTAL		17	

**SECOND YEAR**
**FIRST TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG511	Computer Programming	2	2	3	CENG411
ENGL502	Technical Writing	3	0	3	ENGL402
ENVS400	Environmental Science	3	0	3	SCIE400
MATH503	Discrete Mathematics	3	0	3	MATH401
ENGG410A	Engineering Drawing	2	2	3	
PHYS502	University Physics 2	2	2	3	PHYS501,MATH501
		TOTAL		18	

**SECOND TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG522	Data Structures and Algorithm	2	2	3	CENG511
ENGG531	Electric Circuit Theory 1	2	2	3	PHYS502,MATH501
MATH502	Advanced Mathematics	2	2	3	MATH501
MATH409	Probability and Statistics	3	0	3	MATH503
CENG523	Advanced Programming	2	2	3	CENG511
PHYS503	University Physics 3	2	2	3	PHYS502
		TOTAL		18	

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**THIRD TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
ENGG534	Electronics 1	2	2	3	ENGG531
CENG534	Principles of Communications	2	2	3	CENG522
ENGG611	Electric Circuit Theory 2	2	2	3	ENGG531
ENGG522	Engineering Economy	3	0	3	MATH406
MATH504	Multivariate Calculus	2	2	3	MATH501
MATH505	Numerical Methods and Analysis	2	2	3	MATH502
		TOTAL		18	

**THIRD YEAR**
**FIRST TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
ENGG625	Logic Circuit & Switching Theory	2	2	3	ENGG534
CENG611	Data Communication and Networking 1	2	2	3	CENG534
ENGG613	Electronics 2	2	2	3	ENGG534
ENGG640	Signals and Systems	2	2	3	ENGG611, MATH504
ENGG612	Electromagnetics	3	0	3	ENGG611
MATH506	Linear Algebra	2	2	3	MATH504
		TOTAL		18	

**SECOND TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG622	Data Communication and Networking 2	2	2	3	CENG611
CENG623	Advanced Logic Circuits and Design	2	2	3	ENGG625
MATH508	Partial Differential Equations	3	0	3	MATH505
ENGG614	Control Systems	2	2	3	ENGG640
CENG624	Computer Organization and Architecture	3	0	3	ENGG625
CENG625	Power Electronics	2	2	3	ENGG613
		TOTAL		18	

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**THIRD TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG636	Data Communication and Networking 3	2	2	3	CENG622
ENGG638	Engineering and Project Management	3	0	3	ENGG522
CENG637	Operating System	2	2	3	CENG624
CENG638	Digital Control Systems	2	2	3	CENG624
CENG639	Microprocessor Systems	2	2	3	CENG625
MATH507	Optimization Methods	3	0	3	MATH505
		TOTAL		18	

**FOURTH YEAR**
**FIRST TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG641	Digital System Design	2	2	3	CENG639
CENG642	System Analysis and Design	2	2	3	CENG636
CENG643	Technopreneurship	3	0	3	ENGG638
CENG644	Data Communication and Networking 4	2	2	3	CENG636
CENG645	Real Time Embedded Systems	2	2	3	CENG638
ENGG501	Safety Engineering	2	0	2	ENGG611
		TOTAL		17	

**SECOND TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
ENGG639	Professional Ethics and Engineering Laws	3	0	3	ENGG501
CENG656	Network Security	2	2	3	CENG641
CENG657	Industrial Attachment	0	6	6	CENG645
CENG658	Software Engineering	2	2	3	CENG641
CENG659	Computer Engineering Design Project A	0	6	3	CENG645
		TOTAL		18	

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**THIRD TRIMESTER**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG661	Major Elective 1	2	2	3	SEE LIST BELOW
CENG662	Computer Engineering Design Project B	0	6	3	CENG659
CENG663	Major Elective 2	2	2	3	SEE LIST BELOW
		TOTAL		9	
		Grand Total		<b>204</b>	

**ELECTIVE COURSES**
**MAJOR ELECTIVE 1**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG661A	Wireless Communication System	2	2	3	CENG644
CENG661B	Digital Signal Processing	2	2	3	ENGG640
CENG661C	Digital Communication	2	2	3	ENGG640

**MAJOR ELECTIVE 2**

COURSE CODE	COURSE TITLE	LEC	LAB	CREDIT	PREREQUISITE/S
		Hrs	Hrs	Units	
CENG663A	Special Topics in Computer Engineering	2	2	3	CENG645
645CENG663B	Robot Kinematics, Dynamics and Control	2	2	3	CENG641
CENG663C	Machine Vision	2	2	3	CENG645

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