

**BACHELOR OF SCIENCE IN ENVIRONMENTAL ENGINEERING (BSEnE)  
CURRICULUM PLAN EFFECTIVE SY2022-2023**

**REMEDIAL CLASSES**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
ENGL301	Effective Speaking	9	0	0	-
ENGL302	Grammar and Effective Writing	9	0	0	-
MATH300	Remedial Mathematics	3	0	0	-
<b>Total Units</b>				<b>0</b>	

**FIRST YEAR – FIRST TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisite
MATH401	College Algebra	3	0	3	-
ENGG400	Engineering Drawing	2	2	3	-
CHEM400	General Chemistry 1	2	2	3	-
ENGL401	English Communication Skills 1	3	0	3	-
CENG411	Introduction to Computing	2	2	3	-
SOCI400	Sociology	3	0	3	-
EUTH400	Euthenics 1	1	0	0	-
<b>Total Units</b>				<b>18</b>	

**FIRST YEAR – SECOND TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
MATH402	Plane and Spherical Trigonometry	3	0	3	-
SCIE400	Biology	2	2	3	-
CHEM421	Inorganic Chemistry	2	2	3	CHEM400
ENGL402	English Communication Skills 2	3	0	3	ENGL401
ARAB400A	Arabic Language	3	0	3	-
CENG511	Computer Programming 1	2	2	3	CENG411
EUTH401	Euthenics 2	1	0	0	EUTH400
<b>Total Units</b>				<b>18</b>	

**FIRST YEAR – THIRD TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
MATH406	Differential Calculus with Analytic Geometry	5	0	5	MATH401
ENGL403	Speech and Oral Communication	2	2	3	ENGL402
CHEM432	Organic Chemistry	3	2	4	CHEM421
ENVE400	Elementary Surveying	2	2	3	MATH402
HIST400	History of Bahrain and GCC	3	0	3	-
<b>Total Units</b>				<b>18</b>	

**SECOND YEAR – FIRST TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
HUMR400	Human Rights	3	0	3	SOCI400
CHEM513	Analytical Chemistry	3	2	4	CHEM421
MATH501	Integral Calculus with Differential Equations	5	0	5	MATH406
ENGL502	Technical Writing	3	0	3	ENGL402
PHYS501	University Physics 1	2	2	3	MATH406
<b>Total Units</b>				<b>18</b>	

**SECOND YEAR – SECOND TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
MATH409	Probability and Statistics	3	0	3	MATH406
ENGG532	Thermodynamics	3	0	3	PHYS501
CHEM524	Environmental Biochemistry	2	2	3	SCIE400
ENGG522	Engineering Economy	3	0	3	MATH401
PHYS502	University Physics 2	2	2	3	PHYS501
ENVE532	Fundamentals of Environmental Engineering	3	0	3	SCIE400
<b>Total Units</b>				<b>18</b>	

**SECOND YEAR – THIRD TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
MATH506	Linear Algebra	2	2	3	MATH501
CHEM535	Physical Chemistry	2	2	3	CHEM513
ENGG501	Safety Engineering	2	0	2	-
ENVE613	Unit Operation: Fluid Mechanics	2	2	3	ENGG532
SCIE501	Environmental Microbiology	2	2	3	SCIE400
ENGG521	Engineering Mechanics	3	0	3	PHYS501
<b>Total Units</b>				<b>17</b>	

**THIRD YEAR – FIRST TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
CHEM616	Water Chemistry	2	2	3	CHEM524
MATH502	Advanced Mathematics	2	2	3	MATH501
ENGG520	Engineering Materials	3	0	3	CHEM400
ENVE614	Unit Operation: Heat Transfer	2	2	3	ENGG532
ENGG511	Professional Ethics in Engineering Education	1	0	1	-
CHEM627	Atmospheric Chemistry	3	0	3	CHEM432
<b>Total Units</b>				<b>16</b>	

**THIRD YEAR – SECOND TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
ENVE625	Water Resources Engineering	3	0	3	CHEM616
ENVE626	Instrumentation and Control	2	2	3	CHEM513
ENVE627	Unit Operation: Mass Transfer	2	2	3	ENVE614
MATH505	Numerical Methods and Analysis	2	2	3	MATH502
ENVE628	Air Pollution and Prevention	3	0	3	ENVE532
ENVE641	ENVE Unit Operation: Physical and Chemical Treatment	2	2	3	ENVE613
<b>Total Units</b>				<b>18</b>	

**THIRD YEAR – THIRD TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
ENVE639	Air Quality Engineering	3	0	3	ENVE628
ENVE640	Soil Engineering	3	0	3	ENVE625
ENVE645	Environmental Engineering Laws and Regulations	3	0	3	ENVE532
ENVE642	Environmental Quality Systems Engineering	3	0	3	ENVE532
ENVE643	ENVE Unit Operation: Biological Treatment	2	2	3	SCIE501
ENVE648	Technopreneurship	3	0	3	ENGG522
<b>Total Units</b>				<b>18</b>	

**FOURTH YEAR –FIRST TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
ENVE646	Methods of Research with Inferential	3	0	3	MATH409
ENVE647	Project and Engineering Management (Risk Analysis)	3	0	3	ENGG522
ENVE649	Engineering Hydrology	3	0	3	ENVE625
ENVE650	Oil and Gas Technology 1	3	0	3	ENVE625
ENVE6XX	Elective 1	2	2	3	ENVE642
ENVE6XX	Elective 2	2	2	3	ENVE642
<b>Total Units</b>				<b>18</b>	

**FOURTH YEAR – SECOND TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
ENVE6XX	Elective 3	2	2	3	ENVE642
ENVE657	Environmental Planning and Design	3	0	3	ENVE642
ENVE651	Industrial Attachment	0	12	6	4 <sup>th</sup> year
ENVE652	Environmental Engineering Project Design A	3	0	3	ENVE647
<b>Total Units</b>				<b>15</b>	

**FOURTH YEAR – THIRD TRIMESTER**

Course	Course Title	Lec Hrs	Lab Hrs	Credit Units	Prerequisites
ENVE654	Wastewater Engineering	3	0	3	ENVE643
ENVE655	Oil and Gas Technology 2	3	0	3	ENVE650
ENVE656	Environmental Impact Assessment	3	0	3	ENVE642
ENVE653	Environmental Engineering Project Design B	3	0	3	ENVE652
<b>Total Units</b>				<b>12</b>	
<b>Grand Total</b>				<b>204</b>	

**TECHNICAL ELECTIVES**

Course Code	Course Title	Units
ENVE6XX(658)	Renewable Energy	3
ENVE6XX(659)	Climate and Global Warming	3
ENVE6XX(660)	Remote Sensing	3
ENVE6XX (661)	Hazardous Waste Management and Remediation	3
ENVE6XX(662)	Introduction to GIS	3
ENVE6XX(663)	Advanced Topics in Environmental Engineering	3
<b>Total Units</b>		<b>9</b>