

# **Bachelor of Science in Environmental and Sustainability Engineering**

**2024-2025**

**Major Sheet**

جامعة  
عبدالله السالم  
Abdullah Al Salem  
University

## 1. General Program Presentation

Graduating with a Bachelor of Science in Environmental and Sustainability Engineering (EES) necessitates the successful completion of a total of 132 credit hours (CH). These credit hours are distributed across different requirements, encompassing courses that are essential as well as those that can be chosen as elective courses. The table below shows how 132 credit hours are distributed across requirements:

**Table 1:** EES credit hours distribution.

Requirements	Credit hours (CH)
General Education Requirements	36
College Requirements	43
Program Requirements	53 (Including 9 CH electives)
Total Credit Hours	132

## 2. General Education (36 Credits)

Students here are required to complete 36 credit hours distributed over five sections as follows:

### 2.1. Communication (9 Credits)

**Table 2.1:** Compulsory courses.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
ENL101	English for Academic Studies	3	3	IEP099 or Equivalent	DPS095*
ENL102	English Composition	3	3	ENL101 DPS095	
ENL201	Writing and Research	3	3	ENL102	

\*Preparatory Program; Digital and Professional Skills (DPS095).

### 2.2. Innovation and Creativity (6 Credits)

**Table 2.2.1:** Compulsory course.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
GEN150	Professionalism and Ethics	3	3		

**Table 2.2.2:** Elective courses, students should select one course from the following list.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
GEN131	Creativity and Problem Solving	3	3		
BUS101	Entrepreneurship Essentials	3	3		
ENI110	Intro. to Innovation and Creativity	3	3		

ENI140	Design Thinking	3	3
ENI150	Innovation in Business Models	3	3
ENI160	Innovation and Globalization	3	3

### 2.3. Global Citizen (6 Credits)

**Table 2.3.1:** Compulsory course.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
INF120	Computers and Information Systems	3	3	DPS095	

**Table 2.3.2:** Elective courses, students should select one course from the following list.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
GEN201	Globalization and Sustainability	3	3		
GEN202	Global Citizenship in the Digital Age	3	3		
BUS201	Global Economics and Trade	3	3		

### 2.4. Art and Humanities (9 Credits)

**Table 2.4.1:** Compulsory course.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
HST101	Islamic Culture and Values	3	3		

**Table 2.4.2:** Elective courses, group I, students should select one course from the following list.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
HST102	Kuwait History	3	3		
ARB101	Arabic Communication Skills	3	3		
ART101	Art Appreciation	3	3		
ART102	Intro. to Media and Communication	3	3		

**Table 2.4.3:** Elective courses, group II, students should select one course from the following list.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
PHL101	Introduction to Philosophy	3	3		
LAW101	Law and Society	3	3		
PSY101	Introduction to Psychology	3	3		
SOC101	Introduction to Sociology	3	3		

BUS300	Career Planning	3	3		
--------	-----------------	---	---	--	--

## 2.5. Math and Science (6 Credits)

**Table 2.5:** Compulsory courses.

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
MAT101	Calculus I	3	3	IMP099* or Equivalent	
PHY101	Physics I	3	3		MAT101

\*Preparatory Program; Precalculus (IMP099).

## 3. College Requirements (43 Credits)

**Table 3.1:** Compulsory courses for Math and Science (21 Credits).

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
PHY105	Physics Lab I	1	3		PHY101
MAT102	Calculus II	3	3	MAT101	
MAT201	Calculus III	3	3	MAT102	
PHY102	Physics II	3	3	PHY101 MAT101	
PHY107	Physics II Lab	1	3	PHY105	PHY102
CHM101	Chemistry I	3	3	IMP099 or Equivalent	
CHM105	Chemistry I Lab	1	3		CHM101
MAT202	Linear Algebra	3	3	MAT101	
MAT240	Differential Equations	3	3	MAT102	

**Table 3.2:** Compulsory courses for Engineering (22 Credits).

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
ENG205	Electrical and Electronic Circuits	3	3	PHY102 MAT102	
ENG206	Electrical and Electronic Circuits Lab	1	3	ENG205 PHY107	
ENG207	Programming	3	3	MAT202	
ENG208	Introduction to Energy and Sustainability	3	3	PHY102 CHM105	
ENG209	Statics and Strength of Materials	3	3	PHY102 CHM101	
ENG304	Engineering Probability & Statistics	3	3	MAT102	
ENG308	Numerical Methods	3	3	MAT202	

				MAT240
ENG309	Engineering Project	3	3	ENG207
	Management and Economics			ENG208

#### 4. Program Requirements (53 Credits)

**Table 4.1:** Compulsory courses (44 Credits).

Course Code	Course Title	Credit hours	Contact hours	Pre-requisite	Co-requisite
BIO101	Biology I	3	3	IMP099 or Equivalent	
ESE301	Thermodynamics	3	3	MAT240 PHY102	
ESE302	Thermo-fluid systems	3	3	ESE301 ENG308	
ESE305	Thermal Systems Lab	1	3	ESE302	
EES301	Environmental Chemistry	3	3	CHM101 CHM105	
EES302	Environmental Management Systems	3	3	ENG208	
EES303	Sustainability Fundamentals and Development Strategy	3	3	ENG208 BIO101	
EES304	Water Supply and Sewerage Engineering	3	3	ESE302	
EES305	Water Supply and Sewerage Engineering Lab	1	3		EES304
EES306	Air and Water Pollution Control and Waste-Water Treatment	3	3	BIO101 EES301	
EES307	Soil, Solid, and Hazardous Waste Control	3	3	ENG209 EES301	
EES308	Waste Management and Conversion Technology	3	3	ENG208 EES301	
EES401	Environmental Impact Assessment and Practices	3	3	ESE302 ENG304	
EES402	Sustainable Buildings Design	3	3	ENG208 EES303	
EES490	Capstone Design 1	3	3	Pass 96 CH	
EES491	Capstone Design 2	3	3	EES490	

**Table 4.2:** Elective courses, students should select three courses (9 Credits) from the following list.

<b>Course Code</b>	<b>Course Title</b>	<b>Credit hours</b>	<b>Contact hours</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>
EES451	Carbon Footprint Analysis and Reduction	3	3	EES302 EES303	
EES452	Economics for environmental policy and management	3	3	EES302 EES303 EES401	
EES453	Climate Changes and Mitigation	3	3	EES302 EES303 EES401	
EES454	Natural Ecosystems and Resources Conservation	3	3	EES302 EES303 EES401	
EES455	Introduction to risk assessment and management	3	3	ENG309	
EES461	Kuwait's Environmental Issues	3	3	EES302 EES303	
EES480	Internship	3	3	Program Approval	
EES495	Special Topics in Environmental Engineering	3	3	Program Approval	
EES496	Special Topics in Sustainability Engineering	3	3	Program Approval	

- **Students may take up to 3 credits of program electives from another college at the 300 level or above to replace one of their program electives, provided they obtain the approval of both the program and the college.**