

BS ENVIRONMENTAL SCIENCES SCHEME OF STUDIES FOR (4-YEARS) FOR SESSION 2023

Course No.	Title	Credit Hours
SEMESTER 1		
ES-101	Introduction to Environmental Science	3(3,0)
ES-102	Environmental Biochemistry	3(2,1)
MA-110	Basic Mathematics	3(3,0)
HU-111L	Communication Skills	1(0,1)
IS-101 or HU-101	Islamic and Pakistan Studies – I (Muslim students) or Ethics and Pakistan Studies – I (non-Muslim students)	3(3,0)
CS-101 & CS-101L	Computing Fundamentals	3(2,1)
	Subtotal	16(13,3)
SEMESTER 2		
ES-103	Introduction to Earth Sciences	3(2,1)
MGT-102	Sociology	3(3,0)
ES-104	Psychology & Ethics	2(2,0)
MA-123	Calculus	3(3,0)
PHY-113 & PHY-113L	Applied Physics	3(2,1)
CY-221 & CY-221L	Inorganic and Organic Chemistry	3(2,1)
QT-101	Translation of Holy Quran-1	1(1, 0)
	Subtotal	18(15,3)
SEMESTER 3		
ES-201	Occupational Safety, Health & Environment	3(2,1)
PHY-211	Environmental Physics	3(3,0)
ES-202	Economic Aspects of Environmental Protection	3(3,0)
ES-203	Basics of Environmental Pollution	3(3,0)

CY-142 & CY-142L	Physical and Analytical Chemistry	3(2,1)
IS-201 or HU-201	Islamic and Pakistan Studies – II (Muslim students) or Ethics and Pakistan Studies – II (non-Muslim students)	3(3,0)
	Subtotal	18(16,2)
SEMESTER 4		
ES-204	Ecology & Environment	3(3,0)
ES-205	Microbiology and Environment	3(2,1)
ES-206	Environmental Chemistry	3(2,1)
ES-207	Climatology	3(3,0)
HU-221	Technical Writing and Presentation Skills	3(3,0)
QT-201	Translation of Holy Quran-2	1(1, 0)
	Subtotal	14(12, 2)
SEMESTER 5		
ES-301	Environmental Toxicology	3(2,1)
ES-302	Environmental Profile of Pakistan	2(2,0)
ES-303	Population and Environment	2(2,0)
ES-304	Analytical Techniques in Environmental Sciences	3(2,1)
ES-305	Project Planning & Management	3(3,0)
ES-306	Hydrology & Water Pollution	2(2,0)
ES-307	Energy & Environment	3(2, 1)
	Subtotal	18(15,3)
SEMESTER 6		
ES-308	Cleaner Production Techniques	3(3,0)
CRP-302	GIS and Remote Sensing	3(2,1)
ES-309	Environmental Management Systems	3(2,1)
ES-310	Biodiversity & Conservation	3(2,1)
ES-311	Solid Waste Management	2(2,0)

ES-312	Soil and Environment	3(3,0)
QT-301	Translation of Holy Quran-3	1(1, 0)
	Subtotal	18(15,3)
SEMESTER 7		
ES-401	Air Pollution	2(2,0)
ES-402	Environmental Impact Assessment	3(2,1)
ES-403	Research Methods in Environmental Sciences	3(3,0)
ES-404	Environmental Sampling & Monitoring	3(2, 1)
	Elective Course - I	2(2,0)
ES-496	Final Year Project-I	3(0,3)
QT-401	Translation of Holy Quran-4	1(1, 0)
	Subtotal	17(12,5)
SEMESTER 8		
ES-405	Environmental Governance	2(2,0)
ES-406	Climate Change	3(3,0)
ES-407	Public Health and Environment	2(2,0)
ES-408	Pollution Control Technologies	2(2,0)
ES-409	Natural Resource Management	2(2,0)
ES-410	Hazardous waste Management	2(2,0)
	Elective Course II	2(2,0)
ES-498	Final Year Project-II	3(0, 3)
	Subtotal	18(15,3)
ELECTIVE COURSES		
ES-411	Ecotourism	2(2,0)
ES-412	Agro-ecology	2(2,0)
ES-413	Urban Environmental Management	2(2,0)
ES-414	Environmental Nanotechnology	2(2,0)

ES-415	Marine Environmental Pollution	2(2,0)
Total		137(113,24)