

Institute of Soil and Environmental Sciences
STRUCTURE OF CURRICULUM FOR 4-YEAR B.SC. (HONS.) DEGREE IN
ENVIRONMENTAL SCIENCE

SEMESTER-I

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-301	INTRODUCTION TO ENVIRONMENTAL SCIENCE	3(3-0)	Major
ES-303	SOIL AND WATER POLLUTION	3(3-0)	Major
CS-305	APPLICATIONS OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)	3(2-1)	GE
*MATH-301/ *BIO-301	ELEMENTARY MATHEMATICS/ ESSENTIALS OF BIOLOGY	3(3-0) 3(2-1)	GE
ENG-313	COMPOSITION AND COMMUNICATION SKILLS / FUNCTIONAL ENGLISH	3(3-0)	GE
SSH-303	IDEOLOGY AND CONSTITUTION OF PAKISTAN	2(2-0)	GE
TGM-301	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credit	17	

* Pre-engineering students will take Bio-301 while pre-medical students will take Math-301

SEMESTER-II

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-302	GEOLOGY, SOIL AND ENVIRONMENT	3(2-1)	Major
ES-304	ENVIRONMENTAL PROFILE OF PAKISTAN	3(3-0)	Major
ES-306	ENVIRONMENTAL LAWS AND POLICIES	2(2-0)	Major
PY-302	ENVIRONMENTAL PHYSICS	3(2-1)	Major/Disciplinary
CHEM-306	BASIC CHEMISTRY	3(3-0)	Major/Disciplinary
MATH-408	QUANTITATIVE REASONING (I)	3(3-0)	GE
ENG-314	EXPOSITORY WRITING	3(3-0)	GE
TGM-302	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credits	20	

SEMESTER-III

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
BIOTECH-401	BASICS OF MOLECULAR BIOLOGY AND GENETICS	2(2-0)	Major/Disciplinary
IS-401/SSH-306	ISLAMIC STUDIES/ETHICS (FOR NON-MUSLIMS)	2(2-0)	GE
ARE-419	INTRODUCTION TO ENVIRONMENTAL ECONOMICS	3(3-0)	Allied
ES-403	PHILOSOPHY OF SUSTAINABLE ENVIRONMENT	3(3-0)	Major
IS-403	روحانیت	1(1-0)	(Audit)
STAT-408	QUANTITATIVE REASONING (II)	3(3-0)	GE
EDU-306	CIVICS AND COMMUNITY ENGAGEMENT	2(2-0)	GE
TGM-401	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credits	15	

SEMESTER-IV

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-402	APPLIED ECOLOGY	3(3-0)	Major
ES-404	ENVIRONMENTAL MONITORING	3(2-1)	Major
ES-406	ENVIRONMENTAL POLLUTION AND MANAGEMENT	3(3-0)	Major
ES-408	CARBON SEQUESTRATION AND ENVIRONMENT	3(3-0)	Major
ES-412	POLLUTANT MOVEMENT IN SOIL	3(2-1)	Major
IS-402	ترجمہ قرآن	1(1-0)	(Audit)
RS-409	RURAL SOCIOLOGY AND DEVELOPMENT	2(2-0)	GE
BMS-402	ENTREPRENEURSHIP	2 (2-0)	GE
HE-407	ART, CRAFT AND CALLIGRAPHY	2(1-1)	GE

TGM-402	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credits	21	

SEMESTER-V

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-501	ENVIRONMENTAL CHEMISTRY	3(2-1)	Major
ES-503	MUNICIPAL WASTE AND ITS TRANSFORMATIONS	2(2-0)	Major
ES-505	INSTRUMENTATION AND LABORATORY TECHNIQUES	3(2-1)	Major
ES-507	ENVIRONMENTAL GOVERNANCE	3(3-0)	Major
ES-509	AIR AND NOISE POLLUTION	2(2-0)	Major
ES-511	PSYCHOLOGY OF ENVIRONMENTAL SUSTAINABILITY	3(3-0)	Major
PHARM-503	ENVIRONMENTAL TOXICOLOGY	3(2-1)	Major/Disciplinary
TGM-501	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credits	19	

SEMESTER-VI

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-514	PREPARATION OF RESEARCH PROPOSAL AND SCIENTIFIC WRITING	3(2-1)	Major
ES-512	GIS AND REMOTE SENSING	2(1-1)	Major
ES-502	ENVIRONMENTAL MANAGEMENT SYSTEMS	3(3-0)	Major
FRW-607	BIODIVERSITY AND ENVIRONMENT	3(2-1)	Allied
ES-504	ENVIRONMENTAL MICROBIOLOGY	3(2-1)	Major

ES-506	PUBLIC HEALTH AND ENVIRONMENT	3 (3-0)	Major
ES-518	BIOLOGICAL DATA SCIENCE	3(2-1)	Major
TGM-502	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credits	20	

SEMESTER-VII

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-601	CLIMATE CHANGE AND ENVIRONMENT	2(2-0)	Major
SEE-606	ENVIRONMENTAL IMPACT ASSESSMENT	3(3-0)	Major/Disciplinary
ARE-611	MANAGEMENT OF NATURAL RESOURCES	3(3-0)	Allied
RS-605	POPULATION, ENVIRONMENT AND DEVELOPMENT	3(2-1)	Allied
ES-603	EXPERIMENTAL PLANNING	2(2-0)	Major
ES-605	DISASTER RISK MANAGEMENT	3(2-1)	Major
SEE-607	INDUSTRIAL POLLUTION AND ITS CONTROL	3(2-1)	Allied
TGM-601	TUTORIAL GROUP MEETING FOR SOFT SKILLS	NCC	Compulsory
	Total Credits	19	

SEMESTER-VIII

Curriculum being followed/proposed at ISES			
Course No	Course title	Credit hours	Course types
ES-602	INTERNSHIP	3(0-3)	Major
ES-604	CAPSTONE PROJECT	3(0-3)	Major
	Total Credits	06	

Sem.1	Sem.2	Sem.3	Sem.4	Sem.5	Sem.6	Sem.7	Sem.8	Total
17	20	15	21	19	20	19	06	137