

APPROVED



Awards					
Honours Bachelor Degree					
Programme Code:	DK_SENVI_8	Mode of Delivery:	Full Time	No. of Semesters:	8
NFQ Level:	8				
Programme Credits:	240				
Programme Short Title:	B.Sc. (Hons) Env Bio				
Language of Instruction:	English				
Department:	Applied Sciences				

Programme Outcomes

On successful completion of this programme the learner should be able to :

PO1	Knowledge - Breadth	
	(a)	Detailed knowledge and understanding of the essential facts, major concepts, principles and theories associated with the sub-field of Environmental Bioscience
PO2	Knowledge - Kind	
	(a)	Detailed knowledge of the terminology, nomenclature and/or classification systems appropriate to the subject area
	(b)	Detailed knowledge of the theories, paradigms, defining concepts and underlying principles of the subject area
	(c)	Detailed knowledge of advanced methods for acquiring, interpreting and analysing subject-specific information with a critical understanding of the appropriate contexts for their use through the study of texts and original papers.
	(d)	Detailed knowledge of the identification, definition and resolution of complex problems
	(e)	Detailed knowledge of the relevant legal and regulatory frameworks
	(f)	Detailed knowledge of current issues of concern to society and an understanding of the philosophical and ethical issues involved
	(g)	Detailed knowledge of some aspects of the defining elements of the subject area as a result of in-depth individual study or research
	(h)	Detailed knowledge of the current knowledge and development of the subject area (including current limits of theoretical and applied knowledge).
PO3	Skill - Range	
	(a)	Ability to solve complex technical problems
	(b)	Ability to employ advanced data analysing, synthesising and summarising skills in a scientific work setting
	(c)	Ability to source, interpret and apply appropriate and referenced literature and other information sources
	(d)	Ability to work independently within defined time and resource boundaries
	(e)	Ability to effectively and safely operate a range of complex laboratory and other relevant equipment
	(f)	Ability to apply advanced numerical and statistical analysis skills
	(g)	Ability to maintain detailed records of activities and to communicate scientific information in a variety of forms to specialist and non-specialist audiences

	(h)	Ability to design a relevant programme of investigation
PO4	Skill - Selectivity	
	(a)	Ability to think independently and make effective decisions
	(b)	Ability to recognise and respect the views of others
	(c)	Ability to contribute fully to the day-to-day operations of a scientific industry or other scientific work setting
	(d)	Ability to make decisions in relation to a complex or highly regulated environment
	(e)	Ability to formulate and test hypotheses
	(f)	Appreciation of limits of knowledge in a scientific area and ability to respond appropriately
PO5	Competence - Context	
	(a)	Ability to use advanced scientific skills to critically interpret existing knowledge and apply in new situations
	(b)	Ability to make and report appropriate decisions and take responsibility for such decisions
	(c)	Ability to behave ethically in a range of work settings
	(d)	Ability to present and engage in debate relating to general scientific issues
PO6	Competence - Role	
	(a)	Ability to plan for effective project implementation and manage the organisation of tasks, people and resources
	(b)	Ability to participate constructively in a complex team environment within a scientific field
	(c)	Ability to reflect on own practices, accept responsibility for the work of self and others and develop and train staff to meet changing technical needs
PO7	Competence - Learning to Learn	
	(a)	Ability to identify knowledge gaps and source and undertake self-learning to fill the gaps
	(b)	Awareness of the need for enhanced technical competencies and continuing professional development
	(c)	Ability to evince a commitment to continuing education and lifelong learning

PO8	Competence - Insight	
	(a)	Capacity for social responsibility and ability to contribute to the development of the role of scientist in society
	(b)	Capacity to draw complex information together and present in an understandable format
	(c)	Capacity to acknowledge the current issues of concern to society and an understanding of the philosophical and ethical issues involved
	(d)	Questioning attitude to the assumptions, both overt and covert, underlying modern science

Semester Schedules

Stage 1 / Semester 1

Mandatory	
Module Code	Module Title
CHEM S7Z04	Fundamental Chemistry
MATH S7Z01	Mathematics 1
PHYS S7Z03	Physics Through PBL 1
BIOL S8Z01	Biology (Part 1 of 2)
HLSTS8Z01	Health and Safety and Academic Skills (Part 1 of 2)

Stage 1 / Semester 2

Mandatory	
Module Code	Module Title
CHEM S7Z05	Chemistry
MATH S7Z02	Mathematics 2
PHYS S7Z04	Physics Through PBL 2
BIOL S8Z01	Biology (Part 2 of 2)
HLSTS8Z01	Health and Safety and Academic Skills (Part 2 of 2)

Stage 2 / Semester 1

Mandatory	
Module Code	Module Title
BIOL S7009	Fundamental Microbiology
CHEM S7003	Intro to Organic Chemistry
INST S7Z02	Analytical Science
SCIAS7Z01	Molecular Bioscience (Part 1 of 2)

Stage 2 / Semester 2

Mandatory	
Module Code	Module Title
SCIAS7003	Microbial Pathogenesis and Control
ENVR S7008	Applied ecology
DATA S7Z01	Statistics and Data Analysis
SCIAS7Z01	Molecular Bioscience (Part 2 of 2)

Stage 3 / Semester 1

Mandatory	
Module Code	Module Title
MCBL S7001	Applied Microbiology
53595	Environmental Communication and Critique
53567	Plant Science
ENVR S8016	Aquatic Sciences
BITC S7011	Biotechnology (Part 1 of 2)

Stage 3 / Semester 2

Mandatory	
Module Code	Module Title
QUAL S7Z01	Quality Management
53597	Habitat and Wildlife Ecology
53606	Environmental Chemistry
BITC S7011	Biotechnology (Part 2 of 2)

Stage 4 / Semester 1

Mandatory	
Module Code	Module Title
SCIA S8002	Soil and Water Management
RESA S8002	Research Design, Stats & Ethics
ENVR S8012	Data Handling and GIS
53598	Ecotoxicology
ENVR S8014	Environmental Biosciences Project (Part 1 of 2)

Stage 4 / Semester 2

Mandatory	
Module Code	Module Title
ENVR S8009	Environmental Risk Assessment
ENVR S8010	Environmental Biotechnology
ENVR S8015	Environmental Monitoring and Modelling
ENVR S8014	Environmental Biosciences Project (Part 2 of 2)