CURRICULAR MAP

ENVIRONMENTAL ENGINEERING

▸▸ COMPETENCY LEVELS 1 = BEGINNER 2 = INTERMEDIATE 3 = ADVANCED

COURSE NAME	CREDITS	TYPE OF COURSE	CORE COMPETENCIES: Written Communication	Oral Communication	Critical Thinking	Quantitative Reasoning	Information Literacy	Citizenship	Innovative Thinking	SPECIFIC COMPETENCIES: A. Science Knowledge Application	B. Planning and Conducting Experiments	C. Planning and Conducting Experiments	D. Multidisciplinary Teamwork	E. Engineering Problem-Solving	F. Ethical and Professional Responsibility	G. Effective Communication	H. Engineering Solution Impact Analysis	I. Continuous and Autonomous Learning	J. Contemporary Knowledge	K. Use of Modern Engineering Tools	REQUIREMENTS
▸▸ TERM 1 CRD 18																					
Basic Mathematics	6	CORE				1															MA393 Mathematics Remedial or having passed the Mathematics placement test
Ethics and Citizenship	2	CORE					1														HU24 Language Remedial or having passed the Language placement test
Introduction to Environmental Management Engineering	3	PROGRAM		1		1								1							Does not have requirements
Creativity Workshop	3	CORE						1													Does not have requirements
Language Production and Comprehension 1	4	CORE	1																		HU24 Language Remedial or having passed the Language placement test
▸▸ TERM 2 CRD 23																					
Calculus 1	6	CORE				1															MA420 Basic Mathematics
Academic Research Seminar 1	2	CORE	1		1		1														HU03 Language Production and Comprehension 1
Chemistry	4	CORE			1	1															MA393 Mathematics Remedial or having passed the Mathematics placement test
Environmental Biology	3	PROGRAM			1					1											Does not have requirements
Language Comprehension and Production 2	4	CORE	2		1																HU03 Language Production and Comprehension 1
Applied Ecology	4	PROGRAM									1					1		1			Does not have requirements
▸▸ TERM 3 CRD 21																					
EME Calculus	6	PROGRAM				2			2												MA262 Calculus 1
Physics 1	4	CORE			1																MA95 Physics Remedial or having passed the Language placement test and MA262 Calculus 1
Physical geography	3	PROGRAM				2										1					IG37 Applied Ecology
Applied Statistics 1	4	CORE			1																MA420 Basic Mathematics
Environmental Chemistry	4	PROGRAM				2				2											MA465 Chemistry and MA526 Environmental Biology
▸▸ TERM 4 CRD 22																					
Fundamentals of Environmental Microbiology	4	PROGRAM				2												1			MA530 Environmental Chemistry
Physics 2	6	PROGRAM				2															MA466 Physics 1
Environmental and Natural Resources Law	3	PROGRAM	2				2							1							HU316 Ethics and Citizenship
Soil Pollution and Quality Control	3	PROGRAM					2						1								MA530 Environmental Chemistry and IG39 Physical geography
Engineering Drawing 1	3	PROGRAM			1												1				60 approved credits
Matter and Energy Balance	3	PROGRAM				2			2												MA527 EME Calculus and MA530 Environmental Chemistry
▸▸ TERM 5 CRD 18																					
Ecoefficient Process Management and Analysis (PML)	4	PROGRAM			2													2			80 approved credits
Technologies for Atmospheric Pollution Control	4	PROGRAM						2											1		MA530 Environmental Chemistry
Environmental Project Management	4	PROGRAM	2			2						1									80 approved credits, MA469 Applied Statistics 1 and DE37 Environmental and Natural Resources Law
Socio-environmental Conflict Negotiation and Manageement	3	PROGRAM		1			2								2						DE37 Environmental and Natural Resources Law
Fluid Flow	3	PROGRAM			2						1										IG11 Matter and Energy Balance and MA462 Physics 2
▸▸ TERM 6 CRD 22																					
Wastewater Treatment Operations and Processes	6	PROGRAM				2							2								IN170 Engineering Drawing 1 and IG16 Fluid Flow and IG01 Fundamentals of Environmental Microbiology
Urban Solid Waste Management and Treatment	4	PROGRAM					2			2											IG12 Ecoefficient Process Management and Analysis (PML)
Environmental Impact Assessment (EIA)	4	PROGRAM				2										2					IG14 Environmental Project Management, IG10 Soil Pollution and Quality Control and IG13 Technologies for Atmospheric Pollution Control
Environmental Management System	4	PROGRAM					2										2				IG12 Ecoefficient Process Management and Analysis (PML)
Corporate Social Responsibility (ISO 26000, GRI)	4	PROGRAM		2		2							2								IG15 Socio-environmental Conflict Negotiation and Management
▸▸ TERM 7 CRD 19																					
Cleaner Production Tools	4	PROGRAM					2												2		IG20 Environmental Management Systems (ISO 14000), IG18 Urban Solid Waste Management and Treatment
Environmental Business and Finance	4	PROGRAM		2		2					2										IG 19Environmental Impact Assessment (EIA) and IG21 Corporate Social Responsibility (ISO 26000, GRI)
Environmental Health	3	PROGRAM		2			2							2							IG20 Environmental Management Systems (ISO 14000)
Biofuel Technology	5	PROGRAM					2		2												IG14 Environmental Project Management
Program Electives	3	ELECTIVE																			
▸▸ TERM 8 CRD 22																					
Energy Management (ISO 50000)	4	PROGRAM						2											2		IG20 Environmental Management Systems (ISO 14000)
Clean Energies	3	PROGRAM					2											2			IG22 Cleaner Production Tools
Clean Development Mechanisms (CDM)	3	PROGRAM		2		2							2								IG19 Environmental Impact Assessment (EIA) and IG21 Corporate Social Responsibility (ISO 26000,GRI)
Environmental Biotechnology	6	PROGRAM			2														2		IG24 Environmental Health, IG17 Wastewater Treatment Operations and Processes and IG25 Biofuel Technology
Academic Research Seminar 2 (ENG.)	3	PROGRAM	2	2		2											2				HU61 English 5, HU159 Academic Research Seminar 1, 140 approved credits
Program Electives	3	ELECTIVO																			
▸▸ TERM 9 CRD 19																					
Economic Assessment of Environmental Projects	5	PROGRAM				3						2									IG26 Energy Management (ISO 50000) , IG28 Environmental Business and Finance and IG38 Clean Development Mechanisms
Ecodesign and Ecological Marketing	3	PROGRAM					3	3		2											IG27 Clean Energies
Environmental Research Project 1	5	PROGRAM	3	3	3		3			3				3	3		3				IG29 Environmental Biotechnology, IG27 Clean Energies, IN210 Academic Research Seminar 2 (Eng.), IG28 Environmental Business and Finance
Program Electives	3	ELECTIVO																			
Program Electives	3	ELECTIVO																			-
▸▸ TERM 10 CRD 16																					
Life Cycle Analysis (LCA)	3	PROGRAM					3									2					IG31 Ecodesign and Ecological Marketing
Environmental Strategic Planning	3	PROGRAM			3											2					IG30 Economic Assessment of Environmental Projects
Environmental Research Project 2	5	PROGRAM				3							2								IG32 Environmental Research Project 1
Environmental Project Simulation	2	PROGRAM	3	3			3		3	3		3	3			3		3	3		IG32 Environmental Research Project 1
Program Electives	3	ELECTIVO																			-

▸▸ COURSES 53 ▸▸ TOTAL CREDITS 200