

M= mandatory; E=elective

ETCS for THESIS = 12

ETCS for INTERNSHIP = 6



UPM STUDENTS => CUA

THE ETCS THAT THE UPM STUDENTS MUST GET AT CUA FOR THE DOUBLE DEGREE ARE:

30 ETCS by mandatory courses + 12 ETCS by elective courses + thesis + internship = 60 ETCS

OR

36 ETCS by mandatory courses + 18 ETCS by elective courses + internship = 60 ETCS

The following tables are effective for the ACADEMIC YEARS: 2019-2020 and 2020-2021

ETCS AND COURSES THAT THE UPM STUDENTS DO NOT ATTEND at UPM DURING THE II YEAR OF MS

MANDATORY COURSES	YEAR	SEM	ECTS
STRUCTURAL GEOLOGY	2	2	6
HYDRAULIC ENGINEERING AND RENEWABLE ENERGY	2	2	9
CIRCULAR PROCESSES AND CHEMICAL-ENVIRONMENTAL PLANTS	2	1	9
OPTIMIZATION OF CHEMICAL-ENVIRONMENTAL PLANTS	2	2	6
GEOMATICS ENGINEERING	2	1	9
TOTAL NOT ACQUIRED MANDATORY ECTS			39

ELECTIVE COURSES	YEAR	SEM	ECTS
SLOPE STABILITY	2	2	6
IMPACT AND SAFETY OF TRANSPORTATION SYSTEMS	2	1	6
REGIONAL PLANNING AND DEVELOPMENT	2	1	6
APPLIED HYDROGEOLOGY	2	1	6
TOTAL NOT ACQUIRED ELECTIVE ECTS			12

ETCS AND COURSES THAT THE UPM STUDENTS HAVE TO ATTEND at CUA

MANDATORY COURSES	SEM	ECTS	M/E
CEE 591 Engineering hydrogeology and groundwater flow	1	6	M
CEE 564 Surface Water Quality	2	6	M
CEE 565 Water Resources Engineering	1	6	M
CEE 597 Water and Wastewater Treatment Engineering	1	6	M
CEE 574 Environmental Processes	1	6	M
CEE 511 Geographical Information Systems	1	6	M
TOTAL MANDATORY ECTS TO BE ACQUIRED AT UCA		36	

ELECTIVE COURSES		SEM	ECTS
ENGR 538	Introduction to Environmental Engineering	2	6
CEE 571	Solid Waste Management	1	6
ME 529	Environmental Protection for Energy Systems	1or2	6
CEE 563	Applied Hydrology	1or2	6
ENGR 521	Partial Differential Equations for graduate students	1	6
ENGR 518	Experimental Methods in Engineering	2	6
CMGT 575	Introduction to Systems Analysis	1	6
CMGT 547	Engineering Economics	2	6
ENGR 516	Computational Methods in Engineering	1	6
CEE 526	Introduction to Finite Elements	1	6
CEE 583	Engineering Entrepreneurship	2	6
CEE 408/508	Transportation characteristics	1or2	6
TOTAL ELECTIVE ECTS TO BE ACQUIRED AT UCA			18

The following tables are effective from the **ACADEMIC YEARS 2021-2022 FORWARD**

ETCS AND COURSES THAT THE UPM STUDENTS DO NOT ATTEND at UPM DURING THE II YEAR OF MS

MANDATORY COURSES	YEAR	SEM	ECTS
GASEOUS EMISSIONS AND TREATMENT PLANTS	2	2	6
HYDRAULIC ENGINEERING AND RENEWABLE ENERGY	2	2	9
CIRCULAR PROCESSES AND CHEMICAL-ENVIRONMENTAL PLANTS	2	1	9
OPTIMIZATION OF CHEMICAL-ENVIRONMENTAL PLANTS	2	2	6
GEOMATICS ENGINEERING	2	1	9
TOTAL NOT ACQUIRED MANDATORY ECTS			39

ELECTIVE COURSES	YEAR	SEM	ECTS
SLOPE STABILITY	2	2	6
IMPACT AND SAFETY OF TRANSPORTATION SYSTEMS	2	1	6
REGIONAL PLANNING AND DEVELOPMENT	2	1	6
APPLIED HYDROGEOLOGY	2	1	6
TOTAL NOT ACQUIRED ELECTIVE ECTS			12

ETCS AND COURSES THAT THE UPM STUDENTS HAVE TO ATTEND at CUA

MANDATORY COURSES		SEM	ECTS	M/E
ME 537	Air pollution and control	2	6	M
CEE 564	Surface Water Quality	2	6	M
CEE 565	Water Resources Engineering	1	6	M
CEE 597	Water and Wastewater Treatment Engineering	1	6	M
CEE 574	Environmental Processes	1	6	M
CEE 511	Geographical Information Systems	1	6	M
TOTAL MANDATORY ECTS TO BE ACQUIRED AT UCA			36	

ELECTIVE COURSES		SEM	ECTS
ENGR 538	Introduction to Environmental Engineering	2	6
CEE 571	Solid Waste Management	1	6
ME 529	Environmental Protection for Energy Systems	1or2	6
CEE 563	Applied Hydrology	1or2	6
ENGR 521	Partial Differential Equations for graduate students	1	6
ENGR 518	Experimental Methods in Engineering	2	6
CMGT 575	Introduction to Systems Analysis	1	6
CMGT 547	Engineering Economics	2	6
ENGR 516	Computational Methods in Engineering	1	6
CEE 526	Introduction to Finite Elements	1	6
CEE 583	Engineering Entrepreneurship	2	6
CEE 408/508	Transportation characteristics	1or2	6
TOTAL ELECTIVE ECTS TO BE ACQUIRED AT UCA			18