

1st Year: Core Curriculum

Sem 1: Sept to Feb (S5)

Title	ECTS	Student hours
UE_1501 - Chemistry 1	5	50
GENERAL CHEMISTRY		20
ORGANIC CHEMISTRY		30
UE_1502 - Chemistry 2	5	74
CHROMATOGRAPHY ANALYSIS		15
SPECTROSCOPY ANALYSIS		15
PRACTICAL ANALYTICAL CHEMISTRY INSTRUMENTATION		44
UE_1503 - Physics 1	5	64,5
FLUID MECHANICS 1		18
THERMODYNAMICS 1		18,5
MATERIAL RESISTANCE		28
UE_1504 - Engineering Science 1	5	62
SCIENTIFIC ENGINEERING BASES		26
IT, ALGORITHMICS AND DATA TREATMENT		16
NUMERICAL MATHEMATICAL METHODS		20
UE_1505 - Engineer in a company 1	5	55
ECONOMICAL ENVIRONMENT, ENTERPRISES AND MARKETS		14
HEALTH AND SAFETY		11
ACCOUNTING MANAGEMENT		21
CONTRACT AND COMPANY RIGHTS		9
UE_1506 - Engineer in a company 2	5	73
ENGLISH 1		31
COMMUNICATION		12
INTRODUCTION TO DOCUMENT RESEARCH		20
SUSTAINABLE DEVELOPMENT		4
HUMANITIES CONFERENCE		6

1st Year: Core Curriculum

Sem 2: Feb to June (S6)

Title	ECTS	Student Hours
UE_1601 - Polymer Science 1	5	63
MATERIAL ANALYSIS		24
INTRODUCTION TO POLYMERS		22
INTRODUCTION TO SPECIALISATION TRADES		17
UE_1602 - Chemistry 3	5	60
MATERIAL PROPERTIES		20
PHOTOCHEMISTRY		20
THERMOCHEMISTRY - KINETICS		20
UE_1603 - Physics 2	5	56
FLUID MECHANICS 2		18
THERMODYNAMICS 2		22
HEAT TRANSFER		16
UE_1604 - Engineering Science 2	5	45
STATISTICS		18
EXPERIMENTAL RESOLUTION METHODOLOGY		18
INDUSTRIAL DRAWING 1		9
UE_1605 - Engineer in a Company 3	5	46
INTRODUCTION TO BUSINESS START-UPS		2
WORK LEGISLATION		9
CHEMICAL NORMS AND REACH PROGRAMME		4.50
MARKETING		15
NEGOCIATION		15.50
UE_1606 - Engineer in a Company 4	5	58
HUMANITIES 1: ASPECTS OF INNOVATION		24
ENGLISH 2		29
PREPARATION FOR INTERNATIONAL EXPERIENCES		4
SEMESTER ABROAD BRIEFING		1

2nd YEAR: Sem 1: Sept to Jan (S7)

Core Curriculum

Exchange Semester with 1 of 3 Partner Universities

Faculty of Chemical Engineering and Technology (FCET)

University of Zagreb (Croatia)

Title	ECTS	Student Hours
UE_1711 - Polymers Science 2	5	135
POLYMERS AND POLYMERIZATION PROCESSES		45
POLYMER PHYSICS AND MORPHOLOGY		60
ADDITIVES FOR POLYMER MATERIALS		30
UE_1713 - Physical Chemistry 1	5	50
POLYMER MATRIX COMPOSITES		15
INTRODUCTION TO NANOTECHNOLOGY		15
APPLIED RHEOLOGY		20
UE_1713 – Physical Chemistry 2	5	61
SURFACE ENGINEERING		30
COLORIMETRY		11
COLLOIDS		20
UE_1704 - Research and Innovation 1	5	70
TECHNOLOGY WATCH / BIBLIOGRAPHY		70
UE_1715 - Engineer in a company 5	5	54
HUMANITIES 2 : GLOBALISATION AND DIVERSITY		24
PROJECT MANAGEMENT		30
UE_1706 - International Experience	5	1
INTERNATIONAL INTERNSHIP EXPERIENCE		1

2nd YEAR: Sem 1: Sept to Jan (S7)

Core Curriculum

Exchange Semester with 1 of 3 Partner Universities

Atlântica University (Portugal)

Title	ECTS	Student Hours
UE_1721 - Polymers Science 2	5	90
POLYMERS MORPHOLOGY AND ADDITIVES		30
POLYMER PHYSICS AND MORPHOLOGY		60
UE_1723 - Physical Chemistry 1	5	80
COMPOSITE MATERIALS		30
INTRODUCTION TO NANOTECHNOLOGIES		10
MECHANICS OF POLYMER MATERIALS		40
UE_1723 – Physical Chemistry 2	5	71
INTERFACE PHENOMENA		40
COLORIMETRY		11
APPLIED RHEOLOGY		20
UE_1704 - Research and Innovation 1	5	70
TECHNOLOGY WATCH / BIBLIOGRAPHY		70
UE_1725 - Engineer in a company 5	5	54
HUMANITIES 2 : GLOBALISATION AND DIVERSITY		24
PROJECT MANAGEMENT		30
UE_1706 - International Experience	5	1
INTERNATIONAL INTERNSHIP EXPERIENCE		1

2nd YEAR: Sem 1: Sept to Jan (S7)

Core Curriculum

Exchange Semester with 1 of 3 Partner Universities

Engineering School of East-Barcelona (EEBE)

Universitat Politécnica de Catalunya (UPC)
(Spain)

Title	ECTS	Student Hours
UE_1731 - Polymers Science 2	5	85
POLYMER PROCESSING AND COATING TECHNOLOGIES		20
EXPERIMENTATION AND INSTRUMENTATION		20
CHEMISTRY OF POLYMERIZATION		45
UE_1733 - Physical Chemistry 1	5	85
POLYMER PHYSICS		45
APPLIED RHEOLOGY		20
NANOTECHNOLOGY		20
UE_1733 – Physical Chemistry 2	5	71
ADVANCED MATERIALS		60
COLORIMETRY		11
UE_1704 - Research and Innovation 1	5	70
TECHNOLOGY WATCH / BIBLIOGRAPHY		70
UE_1735 - Engineer in a company 5	5	64
HUMANITIES 2 : GLOBALISATION AND DIVERSITY		24
TECHNOLOGICAL INNOVATION – MANAGEMENT AND ORGANIZATION		40
UE_1706 - International Experience	5	1
INTERNATIONAL INTERNSHIP EXPERIENCE		1

2nd YEAR: Sem 2: Feb to May (S8)

Specialisation

PLASTIC MATERIALS

Title	ECTS	Student Hours
UE_1801 - Research and Innovation 2	3	30
RESEARCH PROJECT 1		30
UE_1802 - Engineer in a Company 6	4	88
FUNCTIONNAL ANALYSIS		10
BUSINESS MODEL SIMULATION		18
ENGLISH 3		26
INDUSTRIAL PROPERTY (PATENTS)		9
PRODUCTION MANAGEMENT		25
UE_1803 – English Language Level Validation	3	3
ENGLISH TEST		3
UE_1831 - Plastic Materials 1	7	76
RAW MATERIALS (PLASTIC MATERIALS)		18
EXTRUSION 1		22
CHARACTERISATION 1		36
UE_1832 - Plastic Materials 2	7	103
INJECTION 1		58
COMPUTER AIDED CONCEPTION AND DESIGN		45
UE_1833 - Plastic Materials 3	6	38
INDUSTRIAL DRAWING 2 AND FUNCTIONAL DIMENSIONNING		20
OTHER IMPLEMENTATION PROCEDURES		18

3rd YEAR: Sem 1: Sept to Jan (S9)

Advanced Specialisation

PLASTIC MATERIALS

Title	ECTS	Student Hours
UE_1901 - Engineering Internship	8	1
ENGINEERING INTERNSHIP		1
UE_1902 - Engineer in a company 7	3	49
HUMANITIES 3 : WORK ENVIRONMENT OF ENGINEERING		18
INFORMATION SECURITY		3
PROFESSIONAL ENGLISH		20
PREPARATION FOR A PROFESSIONAL CARREER - EMPLOYMENT		8
UE_1903 - Engineer in a company 8	4	50
QUALITY		13
HR MANAGEMENT		23
SUSTAINABLE DEVELOPMENT, LIFE CYCLE ANALYSES, ECO-CONCEPTION		13
UE_1904 - Research and Innovation 3	4	120
RESEARCH PROJECT		120
UE_981 - Plastic Materials 4	4	60
EXTRUSION 2		14
PLASTIC MANUFACTURING PRACTICALS		33
COMPOSITE REINFORCEMENT AND CONCEPTION		13
UE_982 - Plastic Materials 5	4	82
INJECTION 2		50
PM CONFERENCES		10
FINISHING TCHNIQUES		22
UE_983 - Plastic Materials 6	3	89,5
CONTAINER-CONTENT REGULATION (PACKAGING)		5,5
PIECEWORK CONCEPTION AND EQUIPMENT		68
COMPUTER AIDED CONCEPTION – RHEOLOGY SIMULATIONS		12
THERMAL		4

Sem 2: Feb to Aug (S10)

Title	ECTS
UE_1949 - Engineering Project	30
FINAL YEAR INTERNSHIP	