

Specialty: Materials Process Engineering

Semester 1 :

Teaching unit	Matter	Credit	Coefficient	weekly hourly volume			Semester Hours (15 weeks)	Others	evaluation	
				Course	TD	TP			continuous evaluation	Exam
TU Fundamental Code: TUF 1.1 Credits: 8 Coefficients: 4	Class and structure of materials	4	2	1h30	1h30		45h00	55h00	40%	60%
	Physical chemistry of silicates	4	2	1h30	1h30		45h00	55h00	40%	60%
TU Fundamental Code: TUF .1.2 Credits: 10 Coefficients: 5	Technical thermodynamics	4	2	1h30	1h30		45h00	55h00	40%	60%
	Crystallography	4	2	1h30	1h30		45h00	55h00	40%	60%
	Materials characterization	2	1	1h30			22h30	27h30		100%
TU Methodologies Code: TUM 1.1 Credit: 9 Coefficients: 5	Instrumentation and measurement	4	2	1h30		1h30	45h00	55h00	40%	60%
	Electrochemical methods	4	2	1h30		1h30	45h00	55h00	40%	60%
	Materials characterization	1	1			1h00	15h00	10h00	100%	
TU Discovery Code: TUD 1.1 Credits: 2 Coefficients: 2	Surfaces treatment	1	1	1h30			22h30	02h30		100%
	Nanomaterials and nanotechnology	1	1	1h30			22h30	02h30		100%
TU Transverse Code: TUT.1.1 Credits: 1 Coefficients: 1	Technical English and Terminology	1	1	1h30			22h30	02h30		100%
Total semester 1		30	17	15h00	6h00	4h00	375h00	375h00		

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Semester 2:

Teaching unit	Matter	Credit	Coefficient	weekly hourly volume			Semester Hours (15 weeks)	Others	evaluation	
				Course	TD	TP			continuous evaluation	Exam
TU Fundamental Code: TUF 2.1 Credits: 10 Coefficients: 5	Unit Operations II	4	2	1h30	1h30		45h00	55h00	40%	60%
	Transformation processes	4	2	1h30	1h30		45h00	55h00	40%	60%
	Shaping processes	2	1	1h30			22h30	27h30		100%
TU Fundamental Code: UEF 2.2 Credits: 8 Coefficients: 4	Phase diagrams	4	2	1h30	1h30		45h00	55h00	40%	60%
	Industrial furnace technologies	4	2	1h30	1h30		45h00	55h00	40%	60%
TU Methodologies Code: TUM 2.1 Credits: 9 Coefficients: 5	Aging and degradation of materials	4	2	1h30		1h30	45h00	55h00	40%	60%
	Surfaces and interfaces	3	2	1h30		1h00	37h30	37h30	40%	60%
	TP Elaboration of materials	2	1			1h30	22h30	27h30	100%	
TU Discovery Code: TUD 2.1 Credits: 2 Coefficients: 2	Recycling and recovery of materials	1	1	1h30			22h30	02h30		100%
	Glass and ceramics	1	1	1h30			22h30	02h30		100%
TU Transverse Code: TUT.2.1 Credits: 2 Coefficients: 2	Standards and rules of ethics and integrity	1	1	1h30			22h30	02h30		100%
Total semester 2		30	17	15h00	6h00	4h00	375h00	375h00		

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Semester 3:

Teaching unit	Matter	Credit	Coefficient	weekly hourly volume			Semester Hours (15 weeks)	Others	evaluation	
				Course	TD	TP			continuous evaluation	Exam
TU Fundamental Code: UEF 3.1 Credits: 10 Coefficients: 5	Porous and dispersed environments	4	2	1h30	1h30		45h00	55h00	40%	60%
	Polymeric and composite materials	6	3	3h00	1h30		67h30	82h30	40%	60%
TU Fundamental Code: UEF .3.2 Credits: 8 Coefficients: 4	Glass technology	4	2	1h30	1h30		45h00	55h00	40%	60%
	Ceramic and binder technologies	4	2	1h30	1h30		45h00	55h00	40%	60%
TU Methodologies Code: UEM 3.1 Credit: 9 Coefficients: 5	Application of materials in depollution	2	1			1h30	22h30	27h30	100%	
	Process modeling and optimization	3	2	1h30		1h00	37h30	37h30	40%	60%
	Application of catalytic materials to chemical reaction	2	1	1h30			22h30	27h30		100%
	Analysis of the life cycle of materials and calculation of the economic report	2	1	1h30			22h30	27h30		100%
TU Discovery Code: TUD 31 Credits: 2 Coefficients: 2	Biocompatible materials	1	1	1h30			22h30	02h30		100%
	Industrial safety	1	1	1h30			22h30	02h30		100%
TU Transverse Code: TUT.1.1 Credits: 1 Coefficients: 1	Documentary research and dissertation design	1	1	1h30			22h30	02h30		100%
Total semester 3		30	17	16h30	6h00	2h30	375h00	375h00		