



## MASTER'S DEGREE IN ENVIRONMENTAL AND LAND ENGINEERING




### DEGREE PROGRAMME 2021/2022

Course contents are available at this [link](#)



#### 1<sup>st</sup> year

Sem	Teaching course	SSD*	TAF*	Credits	h
<b>Common courses</b>					
1	Numerical Computing: Methods, Models and Algorithm	MAT/08	C	6	60
1	Scientific Computing Workshop	MAT/08	F	2	20
1	Environmental Geoengineering	ING-IND/28	B	6	60
1	Environmental Hydraulics	ICAR/01	B	6	60
1	Computer Science Lab	ING-INF/05	F	5	50
1	Integrated Course: Remediation and Chemical-Physical Treatment of Soils				
1	- Module: Chemical-Physical Treatment of Soils	ING-IND/29	B	6	60
2	- Module: Contaminated Sites Remediation	ICAR/03	B	6	60
2	Applied Geophysics	GEO/11	B	6	60
2	Geodesign	ICAR/20	F	3	50
2	Hydrogeology	GEO/05	B	6	60
2	Impact Assessment and Environmental Rehabilitation	ING-IND/28	B	6	60

#### 2<sup>nd</sup> year

Sem	Teaching course	SSD*	TAF*	Credits	h
<b>Common courses</b>					
	<i>One course among:</i>				
1	Foundations and Earth Retaining Structures	ICAR/07	C	6	60
1	Photogrammetry	ICAR/06	C	6	60
1	Recovery of Secondary Raw Materials	ING-IND/29	C	6	60
2	Geochemical characterization	GEO/09	C	6	60
2	Water Supply and Sewerage	ICAR/02	C	6	60
2	Design of Environmental Remediation and Decontamination Systems	ICAR/03	C	6	60
2	Safety and Project Management at Construction Sites	ING-IND/28	C	6	60
<b>Curriculum Environmental remediation technologies</b>					
1	Sustainable Solid Waste Management 	ICAR/03	B	9	90
1	Wastewater Treatment Plants 	ICAR/03	B	9	90
2	Integrated Course: Treatment of Fluids and Waste Gases				
2	- Module: Treatment of Fluids	ING-IND/29	B	6	60
2	- Module: Control and treatment of atmospheric emissions 	ICAR/03	B	6	60



<b>Curriculum Geo-engineering and Land protection</b>					
1	Integrated Course: Hydrogeological Protection - Module: Watershed and Stream Restoration Engineering	ICAR/02	B	6	60
1	- Module: Slope Instability and Hydrogeological Risk	GEO/05	B	6	60
1	Integrated Course: Rock Engineering - Module: Rock Mechanics	ING-IND/28	B	6	60
2	- Module: Excavation Engineering and Underground Works	ING-IND/28	B	6	60
2	<i>Choose between:</i> Coastal Hydraulics	ICAR/01	B	6	60
2	Design and Management of Geoengineering Works for Environment Protection	ING-IND/28	B	6	60
<b>Curriculum Spatial and Environmental Planning</b>					
1	Integrated Course: Strategic Environmental Planning - Module: Environmental Planning 	ICAR/20	B	6	60
1	- Module: Strategic planning 	ICAR/20	B	6	60
1	Spatial Planning	ICAR/20	B	6	60
2	Integrated Course: Georesources Planning - Module: Regional Planning of Georesources	ICAR/20	B	6	60
2	- Module: Georesources	GEO/09	C	6	60

**Additional credits to be acquired**

Sem	Activity	SSD*	TAF*	Credits	h
	Other activities		F	2	
	Elective activities <sup>1</sup>		D	9	
	Final Examination		E	15	

**TOTAL CREDITS 120**

(1) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.

The Study Programme includes also the following laboratories which can be chosen by students to satisfy part of the credits of own free choice:

Sem	Laboratory	SSD*	TAF*	Credits	h
2	Environmental Geophysics Lab	GEO/11		3	30
2	Laboratory of Safety and Project Management at Construction Sites	ING-IND/28		3	25
2	Sanitary and Environmental Engineering Laboratory	ICAR/03		2	25
2	Laboratory of Chemistry for Environmental Engineering	CHIM/03		2	25
2	Workshop of Regional Planning	ICAR/20		3	45

Other optional activities can be communicated on course web site.

**\*Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity