



## MASTER'S DEGREE IN ENVIRONMENTAL AND LAND ENGINEERING DEGREE PROGRAMME 2015/2016

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

### Common courses


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

Teaching course	SSD*	TAF*	Credits	h
Numerical Calculus and Applied Mathematics	MAT/08	C	8	80
Environmental Geoengineering	ING-IND/28	B	6	60
Applied Geophysics	GEO/11	B	6	60
Computer Science Lab	ING-INF/05	F	5	50
Gis and Geostatistics Lab	GEO/09	F	5	80
Total Credits 1 <sup>st</sup> year – 1 <sup>st</sup> semester			30	

#### 1<sup>st</sup> year – 2<sup>nd</sup> semester

Teaching course	SSD	TAF	Credits	h
Integrated Course: Remediation and Chemical-Physical Treatment of Soils - Module: Contaminated Sites Remediation - Module: Chemical-Physical Treatment of Soils	ICAR/03 ING-IND/29	B B	6 6	60 60
Hydrogeology	GEO/05	B	6	60
Environmental Hydraulics	ICAR/01	B	6	60
Impact Assessment and Environmental Rehabilitation	ING-IND/28	B	6	60
Total Credits 1 <sup>st</sup> year – 2 <sup>nd</sup> semester			30	

#### 2<sup>nd</sup> year - one choice among:

Teaching course	SSD	TAF	Credits	h
Water Supply and Sewerage (2 <sup>nd</sup> semester)	ICAR/02	C	6	60
Geochemical characterization (2 <sup>nd</sup> semester) 	GEO/09	C	6	60
Photogrammetry (2 <sup>nd</sup> semester)	ICAR/06	C	6	60
Foundations and Earth Retaining Structures (1 <sup>st</sup> semester)	ICAR/07	C	6	60
Recovery of Secondary Raw Materials (1 <sup>st</sup> semester)	ING-IND/29	C	6	60
Safety and Project Management at Construction Sites (2 <sup>nd</sup> semester)	ING-IND/28	C	6	60




**Curriculum Environmental remediation technologies**

**2<sup>nd</sup> year – 1<sup>st</sup> semester**

Teaching course	SSD	TAF	Credits	h
Solid waste management 	ICAR/03	B	9	90
Wastewater Treatment Plants	ICAR/03	B	9	90

**2<sup>nd</sup> year – 2<sup>nd</sup> semester**

Teaching course	SSD	TAF	Credits	h
Integrated Course: Treatment of Fluids and Waste Gases - Module: Treatment of Fluids	ING-IND/29	B	6	60
- Modulo: Control and treatment of atmospheric emissions 	ICAR/03	B	6	60

**Curriculum Geo-engineering and Land protection**

**2<sup>nd</sup> year – 1<sup>st</sup> semester**

Teaching course	SSD	TAF	Credits	h
Integrated Course: Hydrogeological Protection - Module: Watershed and Stream Restoration Engineering	ICAR/02	B	6	60
- Module: Slope Instability and Hydrogeological Risk	GEO/05	B	6	60
Integrated Course: Rock Engineering - Module: Rock Mechanics	ING-IND/28	B	6	60

**2<sup>nd</sup> year – 2<sup>nd</sup> semester**

Teaching course	SSD	TAF	Credits	h
Integrated Course: Rock Engineering - Module: Excavation Engineering and Underground Works	ING-IND/28	B	6	60
<i>Choose between:</i> Coastal Hydraulic	ICAR/01	B	6	60
Design and Management of Geoengineering Works for Environment Protection	ING-IND/28	B	6	60

**Curriculum Spatial and Environmental Planning**

**2<sup>nd</sup> year – 1<sup>st</sup> semester**

Teaching course	SSD	TAF	Credits	h
Integrated Course: Strategic Environmental Planning - Module: Environmental Planning	ICAR/20	B	6	60
- Modulo: Strategic planning 	ICAR/20	B	6	60
Spatial Planning	ICAR/20	B	6	60



2<sup>nd</sup> year – 2<sup>nd</sup> semester

Teaching course	SSD	TAF	Credits	h
Integrated Course: Georesources Planning				
- Module: Regional Planning of Georesources	ICAR/20	B	6	60
- Module: Georesources	GEO/09	C	6	60

Additional credits to be acquired	TAF	Credits
Elective activities <sup>1</sup>	D	9
Final Exam	E	15

**Total credits                    120**

**\*Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity

- (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:

Laboratory	SSD	Credits
Geology Lab	GEO/09	3
Laboratory of Environmental Geophysics in Coastal Areas	GEO/11	3
Sanitary and Environmental Engineering Laboratory	ICAR/03	2
Laboratory of Safety and Project Management at Construction Sites	ING-IND/28	3

Other optional activities can be communicated on course web site.