Università degli Studi di Cagliari
FACOLTA' DI INGEGNERIA E ARCHITETTURA

MASTER'S DEGREE IN CIVIL ENGINEERING

DEGREE PROGRAMME 2017/2018

Course contents are available at this link

1st year

Sem	Teaching course	SSD*	TAF*	Credits	h
Common courses					
1	Mathematical Models and Methods in Engineering	MAT/09	C	6	60
1	Spatial Planning	ICAR/20	C	6	60
	Integrated Course: Construction Theory 2 and Testing, Monitoring and Ispection of Structures				
1	- Module: Construction Theory 2	ICAR/08	B	6	60
2	- Module: Testing, Monitoring and Ispection of Structures	ICAR/09	B	6	60
	Alternative courses (*)				
	Integrated Course: Construction of Road, Railways and Airport 2 and Transportation Planning				
1	- Module: Construction of Road, Railways and Airport 2	ICAR/04	B	6	60
2	- Module: Transportation Planning	ICAR/05	B	6	60
	Integrated Course: Road, Airfield and Railway Pavements and Transportation Planning				
2	- Module: Road, Airfield and Railway Pavements	ICAR/04	B	6	60
2	- Module: Transportation Planning	ICAR/05	B	6	60
Hydraulics Curriculum					
	Integrated Course: Hydraulics 2 and Maritime Hydraulics				
2	- Module: Hydraulics 2	ICAR/01	B	6	60
2	- Module: Maritime Hydraulics	ICAR/01	B	6	60
Structures Curriculum					
2	Theory and Design of Steel Construction	ICAR/09	B	6	60
Transportations Curriculum					
	Integrated Course: Transport System Design and Theory and Technology Traffic Flow				
2	- Module: Transport System Design	ICAR/05	B	6	60
2	- Module: Theory and Technology Traffic Flow	ICAR/05	B	6	60

(*) Integrated Course: Road, Airfield and Railway Pavements and Transportation Planning is available only for students that passed the exam of Construction of Road, Railways and Airport 2 during the bachelors' degree (ex D.M. 509/99)

2nd year

Sem	Teaching course	SSD*	TAF*	Credits	h
Common courses					
1	Foundations and Earth Retaining Structures	ICAR/07	C	6	60
1	Watershed and Stream Restoration Engineering	ICAR/02	B	6	60
	Integrated Course: Computational Structural Analysis and Design and Theory and Technology of Structures 2				
1	- Module: Computational Structural Analysis and Design	ICAR/09	B	6	60
2	- Module: Theory and Technology of Structures 2	ICAR/09	B	6	60
Hydraulics Curriculum					
1	Hydrological Models	ICAR/02	B	6	60
2	Water Systems Planning and Management	ICAR/02	B	6	60
2	Maritime Engineering	ICAR/02	B	6	60
Structures Curriculum					
1	Theory and Design of Bridges	ICAR/09	B	6	60
2	Advanced Solid and Structural Mechanics	ICAR/08	B	6	60
2	Dynamics of Structures and Seismic Engineering	ICAR/08	B	12	120
Transportations Curriculum					
2	Road, Airfield and Railway Pavements	ICAR/04	B	6	60
	Choose between:				
2	Air Transport	ICAR/05	B	6	60
2	Logistic and Freight Transportation	ICAR/05	B	6	60
	Choose between:				
2	Urban and Metropolitan Transport	ICAR/05	B	6	60
2	Rail Transport	ICAR/05	B	6	60

Additional credits to be acquired

Sem	Activity	SSD*	TAF*	Credits	h
	Elective activities[1]		D	12	
	Other activities		F	4	
	Final Examination		E	14	

TOTAL CREDITS 120

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

Other optional activities:

Sem	Laboratories	SSD*	TAF*	Credits	h
1	Traffic Simulation Model Laboratory	ICAR/05	F	2	30
1	Structures Finite Element Modeling	ICAR/09	F	2	30
2	Laboratory of Maritime Hydrodinamics Modelling	ICAR/01	F	2	30
2	Laboratory of Integrated Design of Roads, Railways and Airports	ICAR/04	F	2	30
2	Watershed and Stream Restoration Engineering Laboratory	ICAR/02	F	2	30
2	Structural Reconditioning: Analysis, Diagnosis, Retrofitting	ICAR/09	F	2	30

***Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity