

ENERGY ENGINEERING COURSE STRUCTURE

2017-2018

Course code: (C)aratterizzante = Specific, (A)ffine = Related
ECTS=European Credit Transfer and Accumulation System

Curriculum: Energy Engineering (ENGLISH)

COURSE	SECTOR	ECTS	C	A	SEMESTER	YEAR
Dynamics of Electrical Machines & Drives	ING-IND/32	9	9		1	I
Smart Grids in Electric Power Systems	ING-IND/33					
<i>Or-option</i>		9	9		3	II
Nuclear Reactor Theory	ING-IND/19					
Experimental Fluid Mechanics	ING-IND/06					
<i>Or-option</i>		6		6	2	I
Plasma Physics and Nuclear Fusion	FIS01					
Sustainable Combustion Chemistry	CHIM/07					
Radiation Protection	ING-IND/20				2	
<i>Or-option</i>		6	6			I
Power Systems in Smart Buildings	ING-IND/33				1	
Advanced Heat and Mass Transfer	ING-IND/19	9	9		2	I
Electrical Energy Conversion from Renewable Sources	ING-IND/32					
<i>Or-option</i>		6	6		3	II
Computational Thermo-Fluids Analysis in Fluid Machinery	ING-IND/09					
Thermo-Economics and Sustainability	ING-IND/08	6	6		2	I
Electrical Power Systems	ING-IND/33	6	6		1	I
Thermomechanical Measurements for Energy Systems	ING-IND/12	9		9	2	I
<i>Or-option</i>						
Geothermal Energy	ING-IND/30	9		9	2	I
Modern Physics for Engineers	FIS01	9		9	1	I
Energy Management						
<i>Or-option</i>		6	6		3	II
Smart Cities	ING-IND/11					
Advanced Energy Conversion Systems	ING-IND/09	9	9		3	II
TOTAL		81	66	15		

Courses			81		
Fully Elective Courses			12		
Internship, training activities or substitutive laboratories 6 CFU to choose from:		CFU		SEMESTER	YEAR
Storage systems for electrical energy	ING-IND/33	3		3	2
Introduction to Ocean Energy	ING-IND/06	3		2	1
Fusion Reactor Technology	ING-IND/19	3		2	1
Neutronic design of nuclear systems	ING-IND/19	3		4	2
Introduction to modelling and simulation of turbulent transport processes	ING-IND/09	3		4	2
Renewable Energy System Design	ING-IND/09	3	6	3	2
Magnetic confinement of toroidal plasmas	ING-IND/19	3		1	1
Design of Building Electric Power Systems	ING-IND/33	3		3	2
Wind Technologies	ING-IND/09	3		2	1
Final Project			21		
TOTAL			120		

ECTS Summary	
Courses	81
Fully Elective Courses	12
AAF – Internship	6
Final Project	21
TOTAL	120

LECTURERS (2016/2017)

Curriculum: Energy Engineering (ENGLISH)

COURSE	LECTURER
Dynamics of Elec Machines & Drives	Giulio De Donato
Smart Grids in Electric Power Systems	Alberto Geri
Experimental Fluid Mechanics	Giovanni P. Romano
<i>Or-option</i>	
Plasma Physics and Nuclear Fusion	Stefano Atzeni
Radiation Protection	Romolo Remetti
<i>Or-option</i>	
Power Systems in Smart Buildings	Luigi Martirano
Advanced Heat and Mass Transfer	Gianfranco Caruso
Electrical Energy Conversion from Renewable Sources	Fabio Giulii Capponi
Thermo-Economics and Sustainability	Claudia Toro
Thermomechanical Measurements for Energy Systems	Zaccaria Del Prete
<i>Or-option</i>	
Geothermal Energy Modern Physics for Engineers	Claudio Alimonti Stefano Atzeni
Computational Thermo-Fluids Analysis in Fluid Machinery	Domenico Borello
<i>Or-option</i>	
Smart Cities	Fabio Bisegna
Energy Management	Livio De Santoli
Advanced Energy Conversion Systems	Franco Rispoli
<i>Or-option</i>	
Nuclear Reactor Theory	Renato Gatto
TOTAL	