

# Ingegneria Energetica e Nucleare - Renewable Energy Systems

## PIANO DI STUDI INGEGNERIA ENERGETICA

### PRIMO ANNO

INSEGNAMENTO	SSD POLITO	CFU	CODICE	PD
Solar photovoltaic systems	ING-IND/33 (6)	6	01TVAND	I
Thermal design and optimization	ING-IND/10 (12)	12	03QGYND	I
Thermal machines and structural mechanics	ING-IND/08 (7); ING-IND/14 (5)	12	01TUZND	I
Solar thermal technologies (track 1st year)	ING-IND/11 (5); ING-IND/19 (3)	8	01TVCND	II
Energy storage	ING-IND/10 (6)	6	01TVHND	II
Energy economics	SECS-P/06 (6)	6	01TVFND	II
Energy systems lab	ING-IND/19 (2); ING-IND/08 (2); ING-IND/10 (2)	6	01TVIND	II

### SECONDO ANNO

Energy networks	ING-IND/10 (5); ING-IND/33 (3)	8	01TVJND	I
Wind and ocean energy plants	ING-IND/13 (5); ING-IND/33 (1)	6	01TVKND	I
Fundamentals of Environmental Geosciences	ICAR/01 (2), ICAR/02 (2), GEO/11 (2)	6	01DSZND	I
<b>INSEGNAMENTO A SCELTA LIBERA</b>		<b>6</b>		
<b>Track 2nd year</b>		<b>16</b>		<b>I</b>
Data science and machine learning for engineering applications	ING-INF/05	6	01DSTND	II
<b>Tesi</b>		<b>16</b>		

Track 2nd year		16		
Monte Carlo methods, safety and risk analysis	ING-IND/19 (5); ING-IND/18 (5)	10	02OKEND	I
Polygeneration and advanced energy systems	ING-IND/10 (10)	10	01QGXND	I
Advanced materials for nuclear applications	ING-IND/22 (6)	6	01TVMND	I
Smart electricity systems	ING-IND/32 (2); ING-IND/33 (4)	6	01RUKND	I

## INSEGNAMENTO A SCELTA LIBERA (primo CdS)

6

I,II

Impianti idroelettrici	ICAR/02	6	04KBHND	I
Utilizzo Sostenibile delle Biomasse	ING-IND/27	6	01QXGMW	I
Resources and Environmental Sustainability	ICAR/03	8	04OULNF	I
Fixation and recycle of CO <sub>2</sub> for greenhouse effect mitigation	ING-IND/27 (3); ICAR/03 (3)	6	01VJBMW	II
Advanced Materials for Energy	ING-IND/22	6	01RXHND	II
Geothermal Energy	GEO/05	6	01RXCND	II
Valutazione del danno ambientale e compatibilità	ICAR/03	6	01RKSND	II
Energy Audit and certification of buildings	ING-IND/11	6	01RXGND	II
tirocinio		8		

## SECONDO CDS (seconda laurea magistrale)

### Ingegneria dell'Ambiente e del Territorio

## PIANO DI STUDI INGEGNERIA AMBIENTALE

### ANNO UNICO/TERZO ANNO

INSEGNAMENTO	SSD POLITO	CFU	CODICE	PD
Climate change mitigation	ICAR/03 (4); ICAR/05 (2)	6	02UCDNF	I
The climate system	ICAR/02 (6); ICAR/01 (2)	8	01TZSNF	I
Groundwater engineering	ICAR/03 (6); ING-IND/30 (2)	8	01UCLNF	I
Fundamentals of environmental engineering	ICAR/03	6	01DSVMW	II
Remote sensing	ICAR/06 (6)	6		II
Innovation lab for climate change	GEO/11 (3); ICAR/06 (3)	6	01UCENF	II
Climate change adaptation	ICAR/02 (4); ING-IND/28 (2); ICAR/01 (2)	8	01TZTNF	II
Management		4	codificare	I
Challenge		8		