

The Leading Engine for Innovation and Entrepreneurship in Sustainable Energy



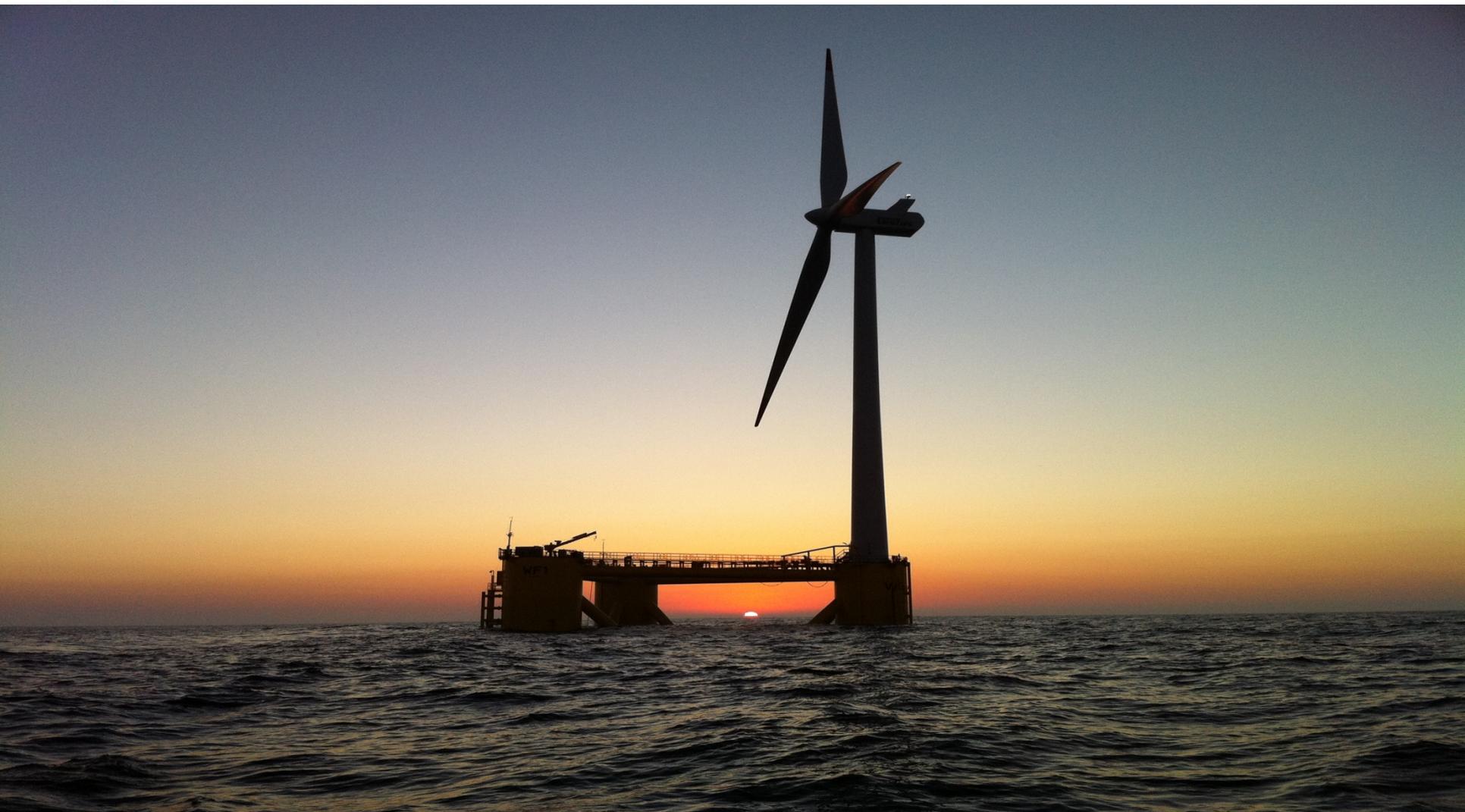
TÉCNICO
LISBOA

The IST RenE Master Program

José Falcão de Campos



A School for the 21st Century





TÉCNICO
LISBOA



11.000 Students

1.000 Faculty & Researchers

MIT

(Massachusetts Institute of Technology)

CMU

(Carnegie Mellon University)

UT/Austin

(University of Texas at Austin)

EPFL

(Ecole Polytechnique Federale de Lausanne)

TIME

Politecnico di Milano; Università Padova; Università Trento; Moscow; Écoles Centrales Paris, Lille, Lyon, Nantes.

CLUSTER

KTH (Sweden), UPC (Spain), AALTO (Finland)

and MORE

Universidade de São Paulo, TUDelf, SupAero, UFRJ, UniCAMP,

“Joint”: understood as joint, dual, double or in collaboration.

Doctoral Programmes

Advanced Study Programmes

Joint Research Programmes

Technology Transfer

Intellectual Property Promotion



Specialization in Renewable Energy (RenE)

Course Title	ECTS	Semester
Common Courses (16.5 ECTS)		
Economics and Energy Markets	6	1
Energy Management	4.5	1
Decision Support Models	6	2
Specialization Courses (Min. 24 ECTS)		
Biofuels	6	1
Hydro Power	6	1
Electrochemistry and Energy	6	2
Renewable Sources and Distributed Power Generation	6	2
Renewable Energies	4.5	1
Wave Energy	6	2
Marine Current & Tidal Energy	6	2
Offshore Wind Energy	6	2
Photovoltaic Solar Energy	6	1
Solar Thermal Energy	6	1
Electrical Machines	6	1
Pump and Hydro Power Systems	6	2
Turbomachinery	6	2
Power System Network Analysis	6	1

Specialization in Renewable Energy (RenE)

Course Title	ECTS	Semester
Complementary Courses (Min. 6 ECTS)		
Power Electronics for Renewable Energy	6	2
Engineering Management Projects	6	2
Logistics Management & Operations	6	2
Energy Systems Optimization	6	2
Air Pollution and Treatment of Gaseous Effluents	4.5	2
Renewable Energy Resources	6	2
Industrial Processes Automation	6	1
Project Appraisal	6	1
Sustainable Development, Energy and Environment	6	1
Production and Demand of Electric Energy	6	1
Waste to Energy	6	1
Dissertation and Project (42 ECTS)		
Engineering and Energy Management Master Thesis	30	2
Project in Engineering and Energy Management	12	1

Students start engaging with faculty during the Fall Semester in order to choose their Thesis Topics. Thesis topics are launched on a regular basis for the MSc in EEM.

Specialization in Renewable Energy (RenE)

Course Title	ECTS	Semester
Free Courses		
Analysis and Synthesis of Algorithms	7.5	2
Project Risk Evaluation and Management	4.5	2
Economics	6	2
Fundamentals of Operations Research	4.5	2
Marketing Management	6	2
Commercial and Strategic Management	6	2
Environmental Impacts	4.5	2
Natural and Technological Risks	4.5	2
Industrial Safety and Health	6	2
Embedded Computational Systems	6	2
Ambient Intelligence	7.5	1
Environmental and Sust. Challenges in Engineering	1.5	1
Technology Based Entrepreneurship	6	1
Engineering Economics	6	1
Innovation and Sustainable Development	4.5	1
Industrial Safety and Health	6	1

Specialization in Renewable Energy (RenE)

Course Title	ECTS	Semester
Harmonization Courses (Min. 18 ECTS)		
Electronic Fundamentals	6	1
Instrumentation and Measurement	7.5	1
Fluid Mechanics I	6	1
Thermodynamics and Transport Phenomena	6	2
Electric and Electromechanical Systems	6	1/2
Combustion	6	2
Electronic Fundamentals	6	2
Hydraulics I	6	2
Instrumentation and Measurement	7.5	2
Electrical and Servicing Systems	7.5	2
Transport Phenomena I	6	1
Energy and Mass Transfer	6	2

Specialization in Renewable Energy (RenE)

Course Title	ECTS	Semester
Business and Entrepreneurship courses		
Engineering Management Projects	6	2
Project in Engineering and Management of Energy	12	1
Project Appraisal	6	1
Economics	6	2
Project Risk Evaluation and Management	4.5	2
Economics and Energy Markets	6	1
Marketing Management	6	2
Commercial and Strategic Management	6	2
Technology Based Entrepreneurship	6	1
Engineering Economics	6	1

More info at: [//fenix.tecnico.ulisboa.pt/cursos/mege](http://fenix.tecnico.ulisboa.pt/cursos/mege)

or

Google: IST and MEGE

Example: KTH (Y1) / IST (Y2) with PoY(6 ECTS) in 2014

SPECIALIZATION in RENEWABLE ENERGY		Y2
Course Title	ECTS	Semester
Common Courses – Masters in EEM		
Economics and Energy Markets	6	1
Specialization Optional Courses *		
Biofuels	6	1
Electrochemistry and Energy	6	2
Hydro Power	6	1
Offshore Wind Energy	6	2
Wave Energy	6	2
Marine Current & Tidal Energy	6	2
Project		
Project in Energy Engineering and Management	12	1
Dissertation		
Engineering and Energy Management Master Thesis	30	2

(*) Students chose two of these alternatives

From KTH to IST



Y1 @



Y2 @



TÉCNICO LISBOA

Admitted to study programme:
Master's Programme, Energy Innovation, 120 credits
Track, Renewable Energy

Courses	Credits
Renewable Energy Technology	6.0
Introduction to Energy Technology	3.0
Sustainable Power Generation	9.0
Renewable Energy Technology, Advanced Course	6.0
Computational Methods in Energy Technology	6.0
Applied Heat and Power Technology	6.0
Practical Energy Related Project	9.0
Energy and Environment	6.0
Sustainable Energy Utilisation	9.0

Total sum:	60.0

	Sem	ECTS	
Master Thesis in Energy Engineering and Management	2	30	compulsory
Project in Energy Engineering and Management	1	12	compulsory
Biocombustíveis/Biofuels	1	6	option/spec RenE
Hydroenergia/Hydropower	1	6	option/Spec RenE
Production and Demand of Electric Energy	1	6	complementary

From Paris Tech to IST



Y1 @



Y2 @



ECTS	Intitulé du cours - Course Title		Nc
PROGRAMME Période 1			
<i>PROGRAM First Period :</i>			
ENERGIES DU XXIEME SIECLE - P1			
<i>ENERGIES IN THE 21TH CENTURY-P1</i>			
4	MEC557	Méthode des éléments finis mécanique des solides <i>MEC557 The Finite Element Method for Solid Mechanics</i>	
4	PHY555	Energie et environnement <i>PHY555 Energy and environment</i>	
4	PHY558B	Energie solaire photovoltaïque <i>PHY558B Photovoltaic solar energy</i>	
4	PHY579	Conservation et stockage de l'énergie <i>PHY579 Direct Energy Conversion and Storage</i>	
PROGRAMME Période 2			
<i>PROGRAM Second Period :</i>			
ENERGIES DU XXIEME SIECLE - P2			
<i>ENERGIES IN THE 21TH CENTURY-P2</i>			
4	ECO564	Economy of the Energy Sector <i>ECO564 Economy of the Energy Sector</i>	
4	PHY563	Sciences des matériaux pour l'énergie <i>PHY563 Material Sciences for Energy</i>	
4	PHY569A	Fusion thermonucléaire <i>PHY569A Thermonuclear Fusion</i>	
4	PHY589	Photovoltaïque expérimentale <i>PHY589 Laboratory course on Photovoltaics</i>	
20	STAGE DE RECHERCHE : <i>SCIENTIFIC RESEARCH INTERNSHIP</i>		
	PHY 597 :	<i>PHY 597 :</i>	
	Energies	<i>Energies</i>	
3	Langue vivante FLE <i>Foreign language French foreign language</i>		
5	HSS3 Humanités & Sciences sociales <i>HSS3 Humanities & Social Sciences</i>		

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Sports and Infrastructures



*Aquatic polo
Basketball
Volleyball
Rugby Football
Handball
Swimming
Tennis
Athletics
kyodo
Table Tennis
Hockey
Football/Futsal*

Welcome to Lisbon



Transports (Subway and train network)



Monthly Expenses (€480-€730)

Housing in Lisbon	€ 200 - € 450
Meals, groceries and other essentials	€ 150
Public transportation (monthly pass in the city)	€ 35
Other living expenses	€ 100

Extra Costs

Meal at IST cafeteria	€ 2,50
Espresso	€ 0,60
Cinema	€ 5,20
Big Mac	€ 4,25
Beer	€ 1,00 - € 1,5
Bus ticket	€ 1,80
Metro ticket	€ 1.5
Urban train ticket	€ 1,75
"Dish of the day" in restaurant	€ 5 - € 6
Average dinner	€ 12 - € 17
Entry to nightclub	€ 12





www.kic-innoenergy.com

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