

Host Institutions

1. Technological Educational Institute of Crete / Departments of Electronics and Electronic Engineering / Nanomaterials and Advanced Electronics Group
2. University of Crete / Departments of Chemistry and Materials Science & Technology

Associate Partners

1. Imperial College London / Department of Physics / Advanced Materials & Devices group
2. University of Oxford / Department of Physics / Photovoltaic and Optoelectronic Device group
3. University of St-Andrews / School of Physics / Polymer Optoelectronics
4. Cyprus University of Technology / Mechanical Engineering and Materials Science
5. Johannes Kepler University / Linz Institute of Organic Solar Cells
6. Friedrich Alexander University – Erlangen / Institute of Engineering Advanced Materials
7. University of Groningen / Faculty of Mathematics and Natural Sciences/Photophysics & Optoelectronics Research Group
8. Politecnico di Milano / Department of Physics / Italian Institute of Technology / Center of Nano Science and Technology
9. Foundation of Research and Technology / Institute of Electronic Structure and Lasers / Ultrafast Laser Micro and Nano Processing
10. Technion Israel Institute of Technology / Organic Materials & Devices
11. NanoForce (Industrial Partner)
12. AIXTRON (Industrial Partner)
13. Ceradrop (Industrial Partner)
14. BENEQ (Industrial Partner)

Entry Requirement

Tuition Fees

The tuition fees have been set to 1,000 € per year. These registration fees will be allocated to the following MSc degree costs:

- o Laboratory consumables during the
- o Laboratory courses and MSc thesis
- o Implementation
- o Teaching equipment update
- o Indirect costs that may occur during the
- o course
- o Distinguished lecturer invitation

Admission Rules

A maximum of 25 students can be registered in this postgraduate course. The admission criteria have been set by the MSc committee and are the following and the maximum possible score has been set at 150 credit points (C.P.):

- o BSc degree in Physics, Chemistry, Materials Science, Electronic or Electrical Engineering Mechanical Engineering, Mineral Resources Engineering, Environmental or Environmental and Natural Resources Engineering, Chemical Engineering or graduates of other specializations of a related nature or field
- o BSc degree graduate grade (5 x Diploma score C.P.)
- o Knowledge of the English Language (30 C.P.)
- o Experience on the subject (30 C.P.)
- o Interview (40 C.P.)

Contact Person

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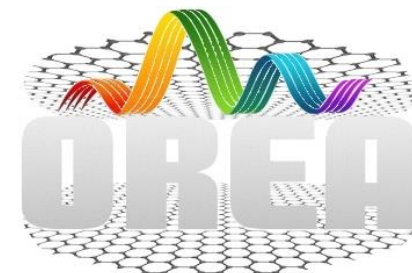
Email: MScOREA@staff.teicrete.gr
<https://teicrete.gr/mscorea>

MSc Course Director

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Master of Science Degree in

ORGANIC ELECTRONICS & APPLICATIONS



<https://teicrete.gr/mscorea>



Aims and Objectives

The Inter-Institutional Postgraduate Study Programme (I.P.S.P.) “Organic Electronics and Applications” (OREA) is a joint degree accredited by the University of Applied Sciences of Crete (Department of Electrical Engineering and Department of Electronic Engineering) and the University of Crete (Department of Chemistry and Department of Material Sciences). The main objective of this postgraduate degree is to provide an advanced theoretical & laboratory training in the field of organic electronics to the enrolled students. It is targeted to Physics, Chemistry, Materials Science, Electronic or Electrical Engineering Mechanical Engineering, Mineral Resources Engineering, Environmental or Environmental and Natural Resources Engineering, Chemical Engineering BSc holders or graduates of other specializations of a related nature or field and Technical staff that are interested in upgrading their qualifications. The course curriculum was evaluated by the European Agency EACEA and was developed in close collaboration of academic & industrial partners ensuring that satisfies the market needs and thus enhances the employability of its graduate students. Specifically, the OREA postgraduate degree aims are to:

1. Teach the core physical concepts and provide the laboratory training necessary for PhD studies in the field of organic electronics
2. Teach the core physical concepts and provide the proper laboratory training for a technical career in the respective Organic Electronics Industry
3. Provide multidisciplinary education including physics, chemistry, materials science and various laboratory techniques (e.g. deposition, characterization...)
4. Teach students to work under competitive and highly demanding work environment
5. Improve some of the students’ soft skills; presentation, problem solving, time management skills

Course Structure

The key elements of the program are the theoretical & laboratory modules and the MSc research project. The Program has duration of three (3) academic semesters of full time studying. During the first two semesters, the students will attend 6 compulsory courses and two compulsory courses of their choice, while the third semester is assigned for the implementation of their MSc thesis in one of the collaborating laboratories, in Greece or abroad. The workload of the total program corresponds to 90 ECTS credits that are equally distributed during its lifetime. The program’s lecturers will mainly come from the host University and invited lecturers can implement parts of the modules during the program.

Course Module

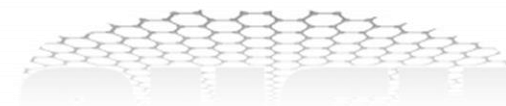
1 st Semester		
Title	Awarded ECTS	Type
An Introduction to Organic Semiconductor Materials	7.5	Compulsory
Devices Processing Techniques and Characterization Methods	7.5	Compulsory
Journal Club & Research Skills	7.5	Compulsory
Compulsory Course of Choice	7.5	Choice
	30	

2 nd Semester		
Title	Awarded ECTS	Type
Carbon Allotropes & 2D Materials Technology	7.5	Compulsory
Organic Electronic Devices I: Organic & Perovskite Solar Cells	7.5	Compulsory
Organic Electronic Devices II: OLEDs, Displays, TFTs & Memories	7.5	Compulsory
Compulsory Course of Choice	7.5	Choice
	30	

Compulsory Courses of Choice		
Title	Awarded ECTS	Type
An Introduction to Physical Chemistry	7.5	1 st Semester
An Introduction to Optoelectronics & Lasers	7.5	
Technology Exploitation	7.5	2 nd Semester
Numerical Methods in Organic Electronics	7.5	
	30	

Employability - Career

The OREA curriculum has been developed in close collaboration with Industrial partners in Organic Electronics. This secures that the particular program will offer the qualifications that market requires. This guarantees the high youth employability and secure a high profile professional carrier.



Research Fields

The OREA MSc Program can be used as part of a PhD in the following areas:

- Physics of Organic Semiconductors
- New Materials Studies
- Organic Photovoltaics & OLEDs
- Perovskite Solar Cells