

# EDINI

▶ @ University of West Attica Athens, Greece

**Engineering Design & Materials**  
**Summer School**



University of West Attica  
Athens, Greece

Coordinator

**Prof. Achilleas Vairis**

*Department of  
Mechanical Engineering*



## Summer School

EDM Summer school in Athens is a learning experience focused on leading-edge subjects.

### Location:

It will take place at the University of West Attica, Mechanical Engineering Department, in the Ancient Olive Grove Campus, Athens, Greece

The EDM **50 hours** summer school represents a unique opportunity to participate in an exciting laboratory of teaching and active learning.





# Department of Mechanical Engineering

The **Department of Mechanical Engineering** is one of the traditional Engineering Departments of the **School of Engineering** of the **University of West Attica**. The purpose of the Department is to provide high level university education through undergraduate, postgraduate and doctoral studies, covering both traditional and constantly evolving topics in the broader area of Mechanical Engineering, integrating cutting-edge research and technology with modern methods and tools in the educational process.

# COURSE COORDINATORS

Faculty Members



## 1. Engineering Design

Dr. Zoe Kanetaki

Assistant Professor

*Department of  
Mechanical Engineering*



## 2. Design and Manufacture of Racing Car

Prof. Constantinos Stergiou

Dean of Engineering School

*Department of Mechanical  
Engineering*



## 3. Metallic Materials Technology

Dr. Carmen Mentrea

Associate Professor

*Department of  
Mechanical Engineering*



## 4. Greek Civilization

Dr. Eleni Kanetaki

Assistant Professor

*Department of Conservation of  
Antiquities and Works of Art*



# 4 COURSE TOPICS

50  
hours

EDM



## 1. Engineering Design

- It will cover computer-aided-design within the context of 3D solid modelling, using scanning for inverse engineering, 3D printing to produce models developed in CAD, incorporating Artificial Intelligence in CAD systems. Students will attend lectures and get hands-on experience in designing and printing their models.

## 2. Design and Manufacture of Racing Car

- Poseidon team is a research student group from the University of West Attica that designs and builds single-seater vehicles. The team started as a simple idea in 2012 participating in competitions such as the SHELL ECO-MARATHON.

# 4 COURSE TOPICS

EDM



## 3. Metallic Materials Technology

- It will cover the structure of metals, defects/dislocations, phase diagrams, optical microscopy, hardness measurement, steels, alloying, and microstructure. Students will attend lectures and study metal structures in the lab.



## 4. Greek Civilization

- An introduction to the Greek civilization, materials used in antiquity...
- The course will be delivered at a pre-course stage, online and will be concluded with in-situ visits of Greek monuments and sites



# PROGRAM



**50 hours**



**4 topics**



**13 days**

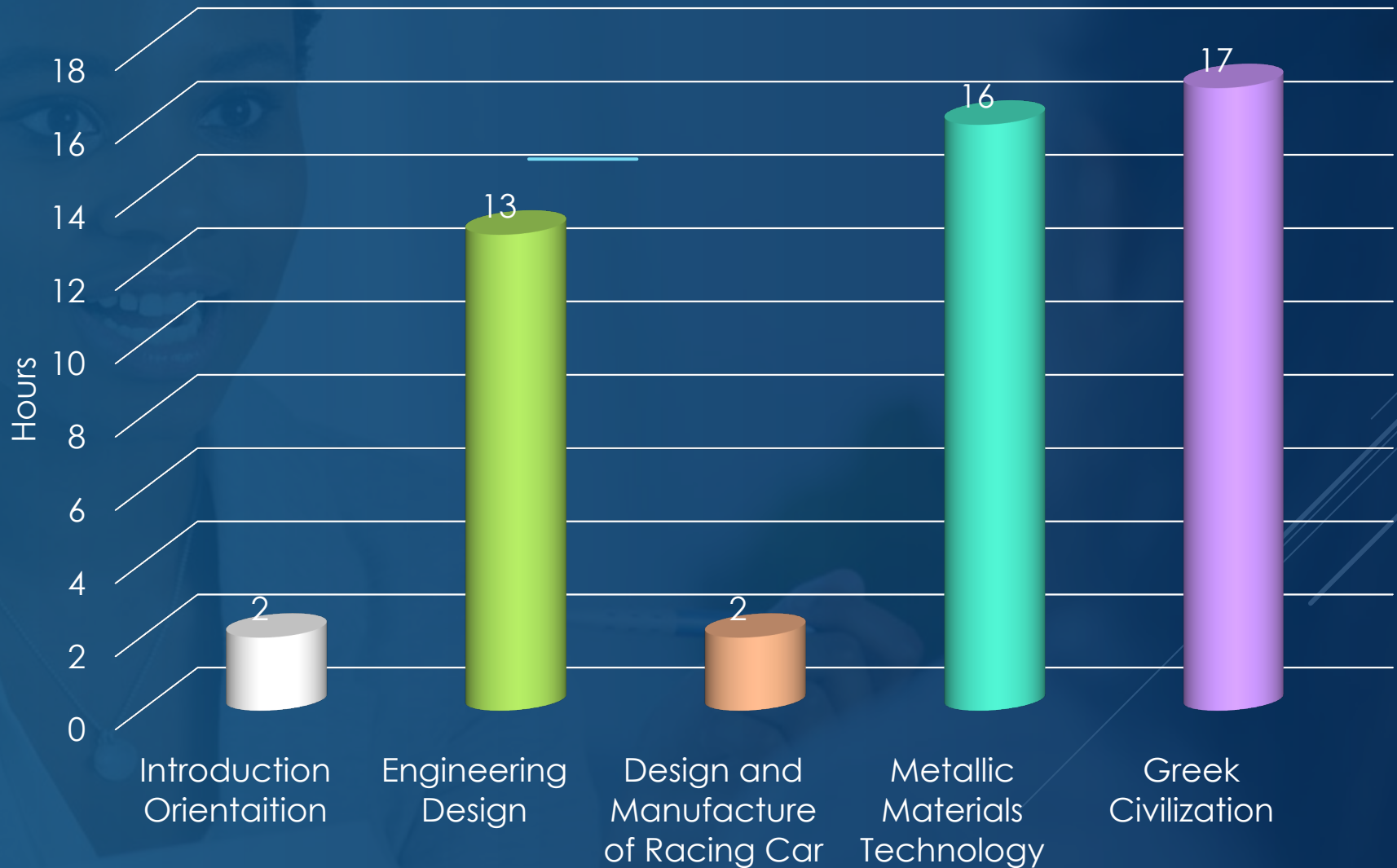
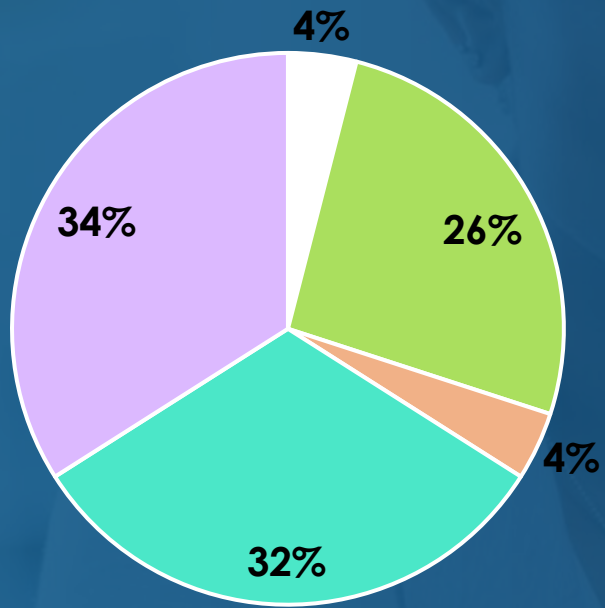


**Delivery modes:**  
**3 days online**  
**10 days on-site**



**EDM**  
▶ **Summer School**

# WORKLOAD CHART





# OVERVIEW

# EDM



## Course Dates

On-line: **9, 11 and 12 July 2024**

On-site (Athens, Greece):

**15 – 25 July 2024**



## Instructors

The courses will be run by qualified instructors, also assisted by final year undergraduate students of the University of West Attica



## Participants

The courses do not have any prerequisite and can be attended by science and engineering undergraduate students.



## Accommodation

Hostel in Athens city center (30' walk from Acropolis, close to metro station).

In double and triple private rooms, En suite bathrooms. Free Wi-fi. Air-conditioning



## Language

The language of instruction is English.



## Certificate

A certificate of completion will be issued at the end of the course

**ECVET: 5** (European Credit System for Vocational Education and Training)

# OVERVIEW

# EDM



## Living Expenses

Participants should plan for a minimum allowance of 400 Euros (four hundred Euros) to cover living expenses.



## Insurance

All participants will be required to have health and accident insurance for the duration of the course.



## Transfers

Private bus transfers between accommodation and Athens airport are included, as well as, private bus transfers between accommodation and the University of West Attica during course days



## Visas

Visa expenses to Greece are not included.

Necessary documentation to obtain visa will be provided by the course administration.



## Food

Buffet breakfast will be provided daily at the accommodation. Lunch and dinner will be provided daily at the University of West Attica student restaurant, during the on-site course days



## Travel

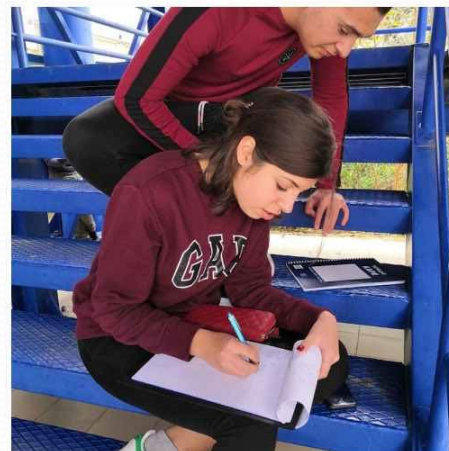
Air tickets to/from Athens are not included.



# STUDENT LIFE @ UNIWA



EDM





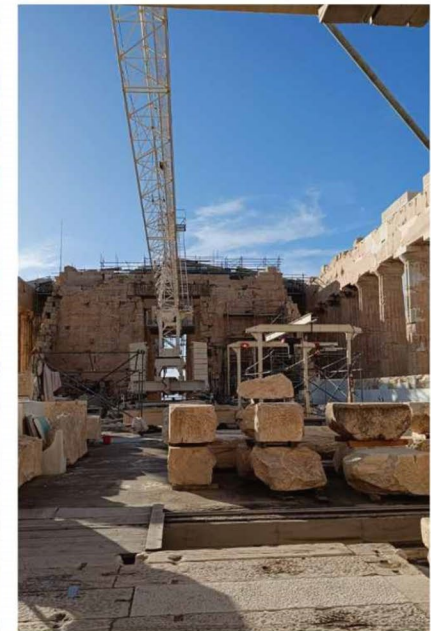


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Οργανισμός  
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Πολιτισμού

# DAY VISIT TO ACROPOLIS

- You will visit the Acropolis of Athens archaeological site (UNESCO World Heritage Centre), which includes the Parthenon, the Erechtheion, the Propylaea, the Temple of Nike and the Theatre of Dionysus, the Acropolis Museum and the National Archaeological Museum







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# DAY TRIP TO PELOPONNESE

The archaeological site of **Epidaurus**,  
and the **Sanctuary of Asklepios** - god of  
medicine and the **Ancient Theatre of  
Epidaurus**

The sanctuary of Asklepios is, the most  
famous healing centre of the Greek and  
Roman world.

**Nafplion** is the first capital of Modern  
Greece



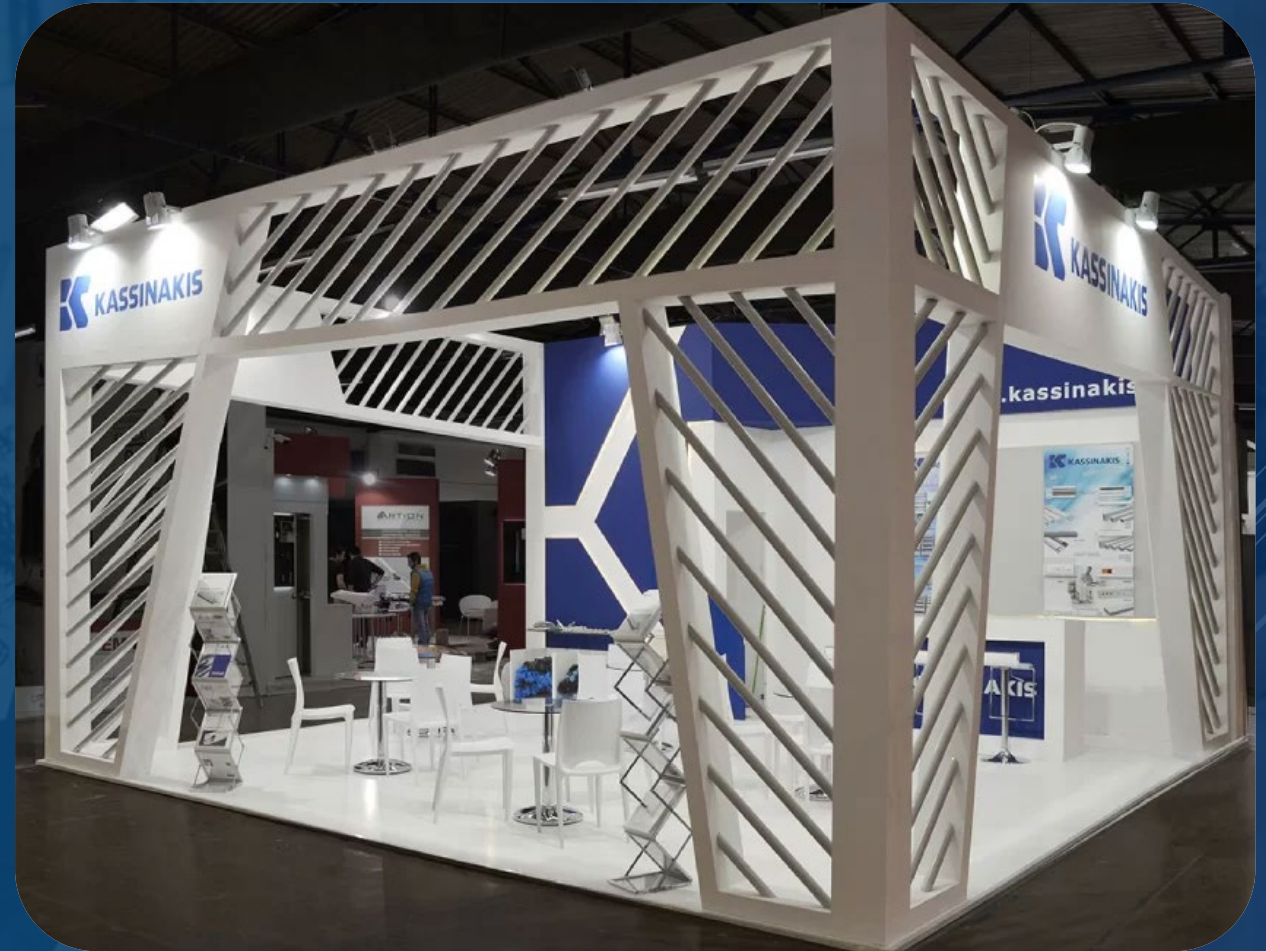


# DAY VISIT TO INDUSTRIAL PLANT

EDM



Visit of a 9000 m<sup>2</sup> industrial facility, where the students will explore the methods of production, -Extrusion, Injection, production of plastic parts



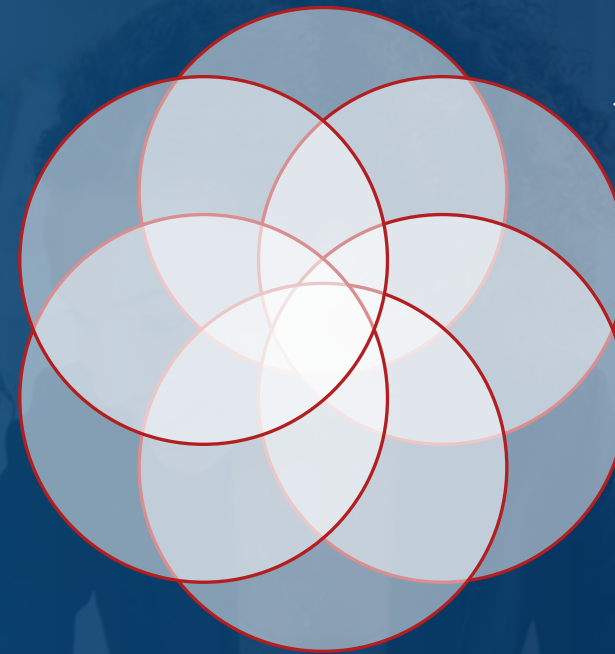
# EDUCATIONAL OUTCOMES

Having completed the **EDM** summer course, students will have:

developed an in-depth understanding of certain fundamental design technologies that support product development

attended a demanding academic program by working along leading experts

acquired skills to enhance their employability prospects in this demanding field



immerse themselves in local student life

been introduced to ancient Greek culture, which is the foundation of western civilisation

enjoyed a summer school experience in an ancient olive grove campus in Athens, one of the world's most ancient cities

# EDM







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**THANK YOU!**

谢谢来听报告



UNIVERSITY OF WEST ATTICA  
Department of Mechanical  
Engineering