



UNIVERSITY OF  
THESSALY

# Host - microbe interactions

➤ **HosMic**





## Program Overview

“Host - microbe interactions” is an MSc program exclusively specialized in symbiotic relations between micro and macro-organisms, but also between microorganisms. The role of animal and plant microbiomes is associated with interdisciplinary fundamental and applied scientific fields.

HosMic, mainly through the understanding of the described research processes, aims at the specialization of its graduates in topics concerning:

- a) the structure, the functioning and regulation of plant and animal microbiomes;
- b) the interactions mechanisms of microbiomes with their macroscopic hosts;
- c) the interactions between microorganisms (particularly the symbiotic ones);
- d) the understanding of the regulatory mechanisms governing these interactions, and the overall holobiont homeostasis;
- e) the role of abiotic factors in these interactions.

HosMic is implemented exclusively in English and for this it is open to international students while its participating tutors are well-established international researchers on organism microbiomes.

### Scientific Fields

Environmental Sciences – Agricultural Sciences – Biotechnology – Symbiotic Relations - Veterinary Sciences – Microbial Ecology and diversity

### Programme Scope

The main scope of HosMic is the graduate specialization in fundamental and applied research processes of topics dealing with host-microbe interactions.

Participating departments of the University of Thessaly include the:

- Department of Ichthyology and Aquatic Environment (DIAE), School of Agricultural Sciences



- Department of Agriculture Crop Production and Rural Environment (DACPRE), School of Agricultural Sciences
- Department of Biochemistry and Biotechnology (DBB), School of Health Sciences

The three departments have fully equipped classrooms (that can fit more students than those admitted in the MSc), and laboratories used by the tutors for the teaching and research of microbiology, molecular biology, biotechnology, instrumental analytics, fisheries/aquaculture, greenhouses, bioinformatics. The tutors are willing to be involved in the MSc at levels beyond their legal obligations for achieving the MSc goals.



## Why Us

**Diversity:** An international environment with applicants and students from all over the world and throughout several continents.

**Travel:** Study abroad period through the European Erasmus+ program (the University currently has more than 600 Erasmus Bilateral Agreements with more than 40 different countries) See my comment in press release.

**Teacher Expertise:** High quality teaching in a truly international environment and by renowned experts of the field.

**Ground-breaking Innovation:** Host-Microbe Interactions is now bearing the fruits of innovative efforts by microbiologists, immunologists, cell biologists, geneticists and ecologists. Hence, this field is both very unique and rapidly advancing – exciting times!

**Research Opportunities:** The University and our Department encourage research through the creation of modern research structures, increase infrastructure and utilize its assets and funds from the EU with the research programmes supported by Horizon 2020, HorizonEurope, RFSR, FP6, FP7, Erasmus+, INTERREG, and LIFE and other national and international funding agencies.

**Rankings:** The University of Thessaly has significantly advanced itself in the recent past. It now ranks in the top 800 Universities internationally, according to World University Rankings, one of the best-known university ranking lists in the world.





## Career Office Support

Education is much more than obtaining a degree. It's also about preparing for a successful professional career, and the Career Office of the University of Thessaly is here to help our students make that goal a reality. The office also aims to connect our students with schools, alumni associations, and businesses to achieve a successful career.

## International Student Support

The newly formed Office of Global Services aims to assist international students by easing the transition into student life and community building, so that they can start building a network of their own. From orienta-

tion programs to providing information regarding immigration and government regulations, this office is dedicated helping international students with a variety of issues, including non-academic matters such as adjusting to their new environment.

## Financial Assistance

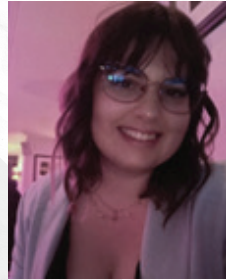
As we understand that any international study program costs, we make every effort to assist those in need. From free meals and dinners offered at the Department's restaurant, to potential scholarships to some students based on their merit or background, our Department and the University in general aim to alleviate any financial problems to make sure your focus is on your studies and future growth.







## Testimonials



**Joanna Gkoni**

"The reason I chose HOSMIC for my Master of Science degree is also one of the reasons that eventually fascinated me, the ability to interact with scientists from all over the world discovering the great role of the different microbiomes and their multiplexity. It is a really promising fact that the scientific community focuses on the different microbiomes and their great potential, indicating that microbiome imbalances can lead to a great variety of diseases globally."



**Venetios Michelioudakis**

"The best part in HosMic is that you get a general idea of microbiomes in short 4-5 month lectures and then you get straight to applied research. You are done in a year's time. And finally, for the most "distant/ far off" bioinformatics, we were assisted with practicals."



**Vasileia Riga**

"Hosmic is a once in a lifetime experience. We had the chance to meet and collaborate with incredible researchers, professors and most importantly, people. These people were by our side every step of the way!"



## Student Life & the Extended Community

Our International Program is based in Volos, Thessaly. Volos is one of the largest and most beautiful Greek cities, located at the centre of the country, with a port that is among the busiest in Greece. Built at the innermost point of the Pagasitikos Gulf, it lies at the foot of Mount Pelion, where the fresh and salty sea breeze is mixed with the scented mountain air of the homeland of the mythical Centaurs. The long seafront is lined with traditional cafés and restaurants and among them you will find the local eateries called tsipouradika, where you will try the traditional tsipouro (a local strong spirit) and a variety of tasty seafood and fish dishes.

### What do the surrounding areas of Thessaly offer?

#### Archaeological Wonders: Meteora

Meteora is certainly one of the most impressive regions in the country. Located north of Trikala, this spectacular place is included in the UNESCO World Heritage List since 1989 and an official holy place for Greece since 1995. The famous monasteries date back to the Byzantine era and they lie on the top of massive rock formations. Interesting fact: The breathtaking natural landscape was shaped approximately 60 million years ago.

#### Beautiful Beaches: Volos & Sporades Islands

The beaches in the wider area of Volos and the exquisite Sporades Islands (Alonissos, Skopelos, or Skiathos) are among the best-loved in Greece. Thousands of visitors flock to their beaches, all of which offer breathtaking scenery and many recreational facilities. The coast of Magnesia has one of the mildest climates in the Mediterranean. Cool summers and exceptionally mild winters create ideal conditions to enjoy the sea during all seasons of the year.



#### Mountainous Travels: Pelion

Pelion is an absolute natural paradise. It is a huge mountain dotted with picturesque traditional villages and fringed by mesmerizing beaches. The gems of Pelion are its quaint villages. They are made up of traditional little houses with grey stone roofs and paved alleys that ooze charm in abundance. This paradise is also full of drinking fountains, plane and apple trees, oaks, gardenias, hydrangeas and camellias.

#### Amazing Scenery & Forestry: Lake Plastiras

Lake Plastiras is surrounded by an idyllic landscape of incomparable natural beauty that captivates the mind at first sight. The stunning blue lake is surrounded by snow-capped mountains and verdant pine forests, captivating visitors at any time of the year. Dreamlike in all aspects, it is one of the largest artificial lakes in Greece created in a location where in antiquity we could find the confluence of the rivers Tavropos and Achelous.



## Degree Program Details

### Candidate selection criteria:

- Diploma degree with a minimum rating of “very good” - 30%
- English language level - 25%
- Publications in scientific journals and conferences - 5%
- Reference letters - 10%
- Interview - 30%

HosMic accepts 15 students each academic year. The students must be graduates of national and peer international Universities, as well as Technical Institutions of the following study fields: Biology, Biochemistry and Biotechnology, Molecular Biology and Genetics, Biological Applications and Technology, Computational Biology and associated fields, Agricultural Sciences, Environmental Sciences, Diet and Nutrition, Food Technology, Chemistry, Chemical Engineering, Environmental Engineering and associated fields, Veterinary Science.

Deadline for applications is 31 August 2023. Only electronic applications are accepted.

The tuition fees are 3.600,00 € per student for each study cycle.

### Course Outline for the MSc degree:

MODULES	Credit Units ECTS
<b>1st Semester (Months 1-6)</b>	
Introduction to microbiomes – Methodology	6
Plant-microbe interactions	6
Animal-microbe interactions	6
Microorganisms as hosts	6
Bioinformatics for microbiomes	6
<b>SEMESTER TOTAL</b>	<b>30</b>
	<b>Credit Units ECTS</b>
<b>2nd semester (Months 7-12)</b>	
MSc Thesis	45
<b>SEMESTER TOTAL</b>	<b>45</b>
<b>TOTAL SUM</b>	<b>75</b>

### Studying Notes:

- Obligatory MSc courses, 3 weeks each with 13 3-hour lectures, face-to-face teaching, and distance learning.
- The courses will be performed in 3 weekdays between 17:00-21:00.
- Course exams (M5).
- Research diploma Thesis (M5-M12).
- The MSc teaching language and MSc Thesis is English.
- An extension of 6 more months can be provided if deemed necessary (to a total duration of 18 months).



## How to Reach out

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