

# Why the Materials Science and Engineering Program ?

The Materials Science and Engineering Program focuses on one of the most dynamic and strategically important fields of modern science and technology: the design, development, characterization, and innovative application of materials that shape the future of industry and society. From advanced metallic alloys and polymers to ceramics, composites, nanomaterials, and smart materials, the program covers the full spectrum of contemporary materials that drive progress in energy, electronics, transportation, aerospace, healthcare, and sustainable development.

The curriculum builds on a strong foundation in Physics, Chemistry, and Mathematics, integrating these core sciences with engineering principles and technological applications. Students gain in-depth knowledge of materials structure-property relationships, processing techniques, and performance optimization. Emphasis is placed on modern characterization methods, computational modeling and simulation, digital design tools, and data-driven materials engineering approaches that support innovation and technological advancement.

Particular attention is given to emerging and high-impact areas such as renewable energy materials, energy storage systems (including batteries and fuel cells), semiconductor and electronic materials, biomaterials, advanced manufacturing, and sustainable materials design aligned with circular economy principles. The program responds directly to the demands of the green and digital transitions, preparing graduates to contribute to cutting-edge solutions for global challenges.

Developed in alignment with the needs of the international labor market and high-technology industries, the program equips students with both theoretical excellence and hands-on laboratory and research experience. Graduates are prepared to pursue careers in research and development, advanced manufacturing, quality control, innovation management, and entrepreneurship, as well as to continue with postgraduate and doctoral studies at leading institutions worldwide.

The core mission of the program is to cultivate creativity, critical thinking, and scientific leadership. Faculty members are committed to guiding students from their current academic level toward clearly defined professional and research goals, while encouraging them to exceed their own expectations. Within a modern, research-oriented academic environment, students are empowered to transform knowledge into innovation and to achieve accomplishments beyond what they initially imagined possible.



<https://www.youtube.com/watch?v=ueG4wNIq8Ek>

# Aristotle University of Thessaloniki

The Aristotle University of Thessaloniki (AUTH) was founded in 1925 and was named after the famous ancient philosopher Aristotle. It is one of the largest University of Greece, covering an area of about 34 hectares and located in the city centre.

It consists of 41 Faculties and Schools offering all kinds of studies, has about 74.000 registered students (65.000 undergraduate and 9.000 postgraduate, 4.000 of which at Doctoral level), more than 2.500 permanent teaching staff and approximately 800 permanent administrative staff.

AUTH houses 16 Museums, Archives and Collections, has 3 choirs, 1 orchestra, 1 opera. It facilitates a Gym providing a wide range of sports' programmes and activities, a restaurant where more than 15,000 meals are served to all members of the university community on a daily basis and a Career Services Office where you can get detailed information and advice about studies, career and employment opportunities. The university also has a Camp in Kalandra (Halkidiki), a piny area next to the sea.

AUTH takes part in the Erasmus exchange programme and is a member in 11 student unions.

Finally, AUTH was certified as fully compliant by the Hellenic Quality Assurance and Accreditation Agency Board on 10/9/2019 after the external evaluators visit on July 2019.



# About Greece

Greece, officially the Hellenic Republic, historically also known as Hellas, is a country located in Southeast Europe. Greece is considered the cradle of Western civilization, being the birthplace of democracy, western philosophy, western literature, theatre, drama, poetry, historiography, political science, major scientific and mathematical principles and the Olympic Games. Greek is the oldest written language still in existence, continuously used for more than 5000 years. From the eighth century B.C., the Greeks were organized into various independent city-states, which spanned the entire Mediterranean region and the Black Sea. Philip of Macedon united most of the Greek mainland in the fourth century B.C., with his son Alexander the Great rapidly conquering much of the ancient world, from the eastern Mediterranean to India. Greece was annexed by Rome in the second century B.C., becoming an integral part of the Roman Empire and its successor, the Byzantine Empire, which adopted the Greek language and culture. The Greek Orthodox Church, which emerged in the first century A.D., helped shape modern Greek identity and transmitted Greek traditions to the wider Orthodox World. Even more, there are more than 4000 traditional dances around the country. Greece emerged as a modern nation state in 1830 following a war of independence. The country's rich historical legacy is reflected in part by its 18 UNESCO World Heritage Sites.

The population of Greece is approximately 11 million. Athens is the nation's capital and the largest city, followed by Thessaloniki. Situated on the southern tip of the Balkan Peninsula, Greece is located at the crossroads of Europe, Asia, and Africa. The Aegean Sea lies to the east of the mainland, the Ionian Sea to the west, the Cretan Sea and the Mediterranean Sea to the south. Greece has the longest coastline on the Mediterranean Basin and the 11th longest coastline in the world (13,676 km), featuring many islands, of which 227 are inhabited. Eighty percent of Greece is mountainous, with Mount Olympus being the highest with its peak at 2,918 meters. It is also one of the sunniest countries in the world as the whole country has more than 250 days of sun on average. Moreover, Greece has one of the richest varieties of wildlife in Europe, being the home of 116 species of mammals, 18 species of amphibians, 59 species of reptiles, 240 species of bird and 107 species of fish.

Greece is a unitary parliamentary republic and developed country with an advanced high-income economy, a high quality of life, and a very high standard of living. Its economy is the largest in the Balkans, where it is an important regional investor. A founding member of the United Nations, Greece was the tenth member to join the European Communities (precursor to the European Union) and has been part of the Eurozone since 2001. It is also a member of numerous other international institutions, including the Council of Europe, the North Atlantic Treaty Organization (NATO), the Organization for Economic Co-operation and Development (OECD), the World Trade Organization (WTO), the Organization for Security and Co-operation in Europe (OSCE), and the Organisation internationale de la Francophonie (OIF).

Greece's unique cultural heritage, large tourism industry, prominent shipping sector and geostrategic importance classify its power. The traditional heritage of a country is the sum of the cultural and material achievements bequeathed by previous generations. Folk culture for the Greek people, rich in music, dances, poetry and theatre, is part of their everyday life. All over the country have been created many specialized museums and cultural organizations aiming to preserve and study the Greek traditional heritage.

# Living in Thessaloniki

Thessaloniki is the second-largest city of Greece, established 2300 years ago. A significant historical and multicultural city, with a population of 1,1 million, located in the north of the country and capital of the Region of Central Macedonia. It is the administrative, cultural and business centre of northern Greece.

The coast at the Aegean Sea is one of the largest urban seafronts of Europe and has an excellent view of the famous Mount Olympus. Thessaloniki is well known for its 30 museums, 15 UNESCO monuments, the delicious food and the nearby beaches of Halkidiki and Pieria. It has historical landmarks, such as the Byzantine walls, the arch of Galerius and the Rotunda, the White Tower and Aristotelous Square. One can enjoy its annual festivities such as the Thessaloniki International Trade Fair and the Thessaloniki International Film and Documentary Festival. The variety of bars and coffeeplaces all over the city are only some of the aspects of this vibrant modern city.

Apart from the cultural and historical elements, the city of Thessaloniki is also known for its scientific contribution. The Aristotle University of Thessaloniki, one of the main universities of the city, is the largest university in Greece and the Balkans. Being a young student in Thessaloniki is the best choice in scientific and financial terms. Contemporary yet affordable, Thessaloniki is a modern European city. However, it has a relatively low cost of living and can satisfy the needs of the students' budget.

Moreover, Thessaloniki is among the 100 safest cities of European Union according to Eurostat and the average of 7,1 hours of sunshine per day is one of the highest in Europe (Europe's average is 5,45 h/d).



# Housing Information & Living Costs

In Thessaloniki you can find many Real Estate businesses that can help you find the apartment you want.

This is a list including the prices of some basic goods that determines the cost of living:

Item	Price in Euro
Bus ticket	1,00 € 0,50 € if you obtain the Academic ID Card
Bottle of water (0,5lt)	0,15-0,50 €
Milk (1 lt)	1,00-1,50 €
Refreshments	1,00-2,00 €
Coffee (espresso at a cafeteria)	1,50-3,50 €
Beer (at a bar)	4,00-6,00 €
Cinema ticket	7,50 €
Loaf of Fresh White Bread	0,90 €
Taxi Start (Normal Tariff)	3,50 €
Meal (mid-range restaurant)	10,00 €
Apples (1kg)	0,80-1,40 €



# Visa Information

Applicants from countries outside the Schengen zone need a student visa. Applicants should communicate with the Greek Embassy/Consulate in their country for information on the procedure and also on the time needed for the conclusion of the process.

No visa is required to enter Greece for studies if you possess a valid passport from Iceland, Liechtenstein, Norway or Switzerland.