

MSEn

Materials Science & Engineering

Greece's first English-taught programme in Materials Science & Engineering. Offered by Aristotle University of Thessaloniki — ranked in the global top 600 (ARWU) — with teaching drawn from the Departments of Chemistry, Physics and Mechanical Engineering. Graduates hold the Integrated Master qualification (EQF Level 7, 300 ECTS) and are eligible for full EU professional engineering registration in all 27 member states.

40	57	1,495	€8,000
PLACES 2026 ENTRY	RESEARCH-ACTIVE FACULTY	SCOPUS PAPERS 2021–2025	ANNUAL TUITION

KEY FACTS			
DURATION	5 years / 10 semesters	QUALIFICATION	Integrated Master — EQF Level 7
ECTS	300 credits	LANGUAGE	English throughout
LOCATION	AUTh Campus, Thessaloniki, Greece	EU RIGHTS	Full TEE registration — 27 member states

The MSEn programme at AUTH brings scientific foundations, engineering knowledge, laboratory training, research methodology and applied innovation into one unified five-year academic journey. Students develop gradually from understanding the fundamental nature of matter to designing materials for real-world technological challenges — in a single, deliberately structured programme, not two separate degrees.

BUILT ON THREE DISCIPLINES

Chemistry

Physical chemistry, electrochemistry, polymer science, organic chemistry, biochemistry and functional inorganic chemistry.

Physics

Electron microscopy, magnetic materials, optical spectroscopy, solid-state physics, thin-film technology and nanostructures.

Engineering

Physical metallurgy, additive manufacturing, composite structures, sustainable engineering and thermomechanical processing.

CURRICULUM — YEAR BY YEAR

Year 1 Foundations	Year 2 Core MSE	Year 3 Advanced	Year 4 Specialisation	Year 5 Master level
• Intro to MSE • Fundamentals of Chemistry • Physics I & II • Mathematics I & II • Materials Informatics • Organic Chemistry +2 more	• Physical Chemistry • Thermodynamics • Condensed Matter Physics • Inorganic Materials Chemistry • Polymer Science & Engineering • Organic Chemistry Lab	• Materials Characterization • Ceramics • Composite Materials • Chemical Process Engineering • Mechanical Behaviour • Design in the Atomic Scale +2 more	• Materials Selection in Engineering Design • Materials Processing • Track electives — choose one of 3 specialisation areas • Advanced Project Work (12 ECTS)	• Advanced specialisation modules • Research seminars • Industry internship (optional) • Diploma Thesis — 30 ECTS
60 ECTS	60 ECTS	60 ECTS	60 ECTS	60 ECTS

SPECIALISATION TRACKS — CHOSEN IN YEAR 4

Materials Manufacturing & Circular Economy

Additive manufacturing, powder metallurgy, solidification, waste valorisation, critical raw materials, LCA

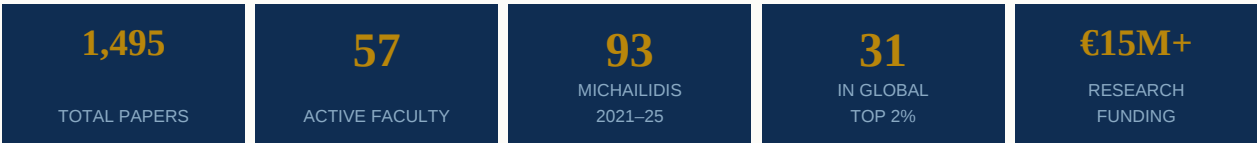
Micro & Nanotechnology Engineering

Surfaces & thin films, nanomaterials, semiconductors, optoelectronics, energy materials, electronic processing

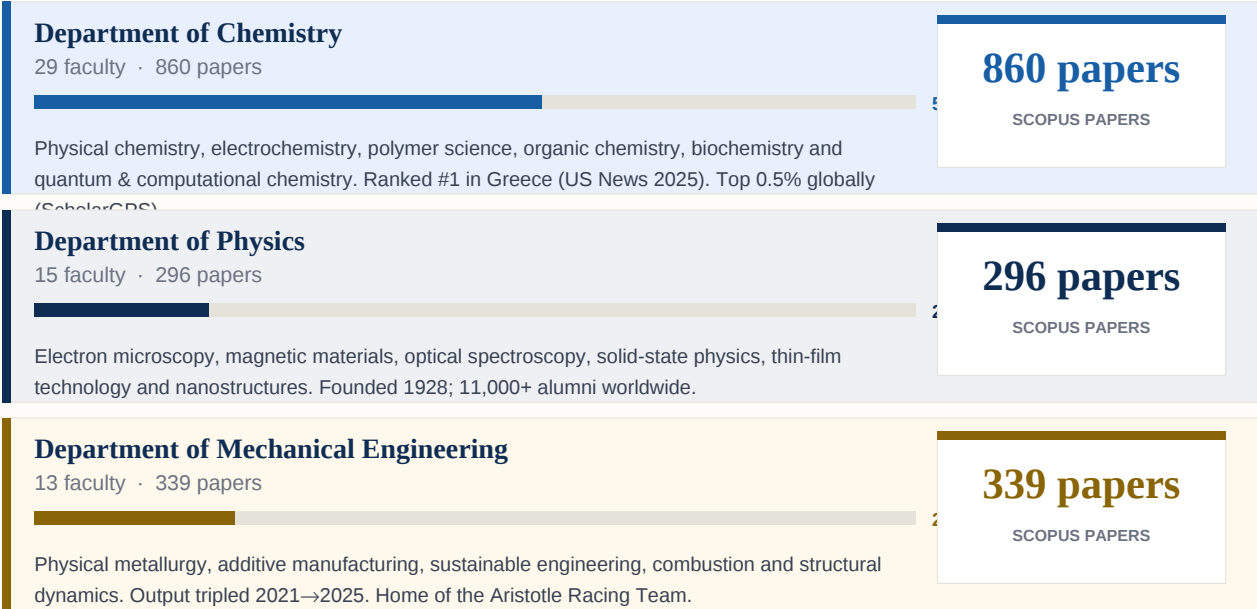
Biomaterials & Biotechnology

Bio-organic materials, biochemistry, bio-inorganic materials, bio-inspired engineering, biomechanics, structural biochemistry

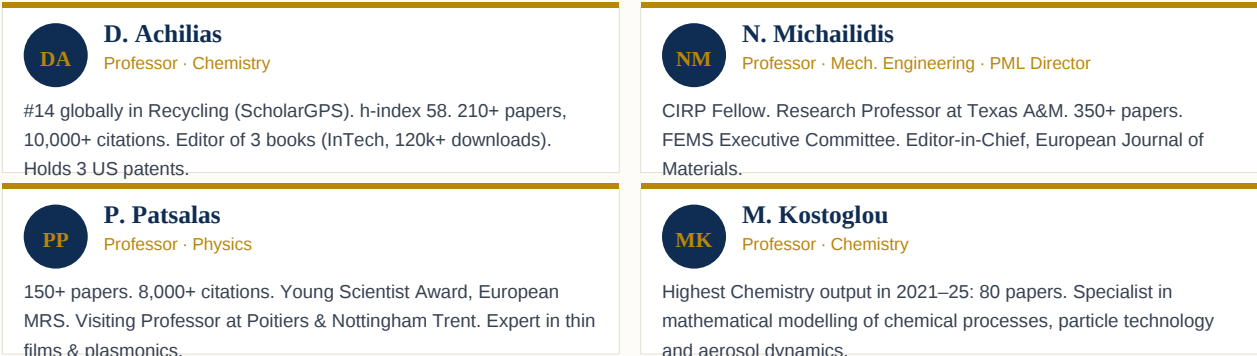
RESEARCH OUTPUT · SCOPUS VERIFIED · 2021–2025



DEPARTMENT PUBLICATION OUTPUT 2021–2025



SELECTED FACULTY PROFILES



CAREER OUTCOMES

MSE graduates work wherever materials determine performance, safety, cost or sustainability. Demand is growing across energy, aerospace, semiconductors, healthcare and manufacturing — driven by the EU green transition, the European Chips Act and the Critical Raw Materials Act. The U.S. Bureau of Labor Statistics projects materials engineers to grow at 6% by 2034, twice the average for all occupations.

- **Energy & batteries**
EV batteries, solid-state cells, fuel cells, hydrogen, photovoltaics
- **Aerospace & automotive**
Carbon-fibre composites, titanium alloys, thermal coatings
- **Semiconductors**
Thin-film deposition, lithography, packaging — EU Chips Act driven
- **Biomedical**
Orthopaedic implants, stents, drug-delivery nanoparticles, scaffolds
- **Sustainability**
Critical raw material recovery, circular economy, LCA
- **Manufacturing**
Additive manufacturing, surface engineering, coatings, NDT

EU Professional Engineering Rights

Integrated Master graduates (EQF Level 7) are eligible for registration with the Technical Chamber of Greece (TEE) — granting full professional engineering rights in all 27 EU member states under Directive 2005/36/EC. No re-qualification required to practise in Germany, France, the Netherlands, Belgium or any other EU country.

ADMISSIONS 2026

ENTRY

September 2026

PLACES

40 per year

LANGUAGE

English — IELTS 6.0 / TOEFL 79 / B2

TUITION

€8,000 per academic year

DURATION

5 years (Integrated Master)

QUALIFICATION

EQF Level 7 — 300 ECTS

EMAIL

materials@auth.gr

WEBSITE

mse.auth.gr

TOTAL ANNUAL COST COMPARISON

AUTH Thessaloniki	€14k–16k
KU Leuven	€21k–23k
TU Delft	€30k–33k
Imperial London	€68k–78k

LIVING IN THESSALONIKI

- €480–690/month student budget
- Population 1.1M — 2nd city of Greece
- Direct flights to 80+ EU destinations
- 300 days of sunshine per year

ARISTOTLE UNIVERSITY OF THESSALONIKI — AT A GLANCE

ARWU 501–600 **#1 Chemistry**

31 faculty

1925

90,000+

10 faculties

GLOBAL RANKING

US NEWS 2025

TOP 2% GLOBALLY

YEAR FOUNDED

ENROLLED STUDENTS

AUTH STRUCTURE

MSEn · Aristotle University of Thessaloniki · 2026 Entry