

17.4.2 Education for SDGs Specific Courses on Sustainability

2023–2024

AASTMT maintains a strong commitment to embedding sustainability within its academic pathways by providing a selection of dedicated courses and learning options that directly engage with SDG-related themes. These offerings give students structured opportunities to explore sustainability concepts, understand global challenges, and develop practical competencies connected to environmental and socio-economic issues. Alongside classroom learning, the university encourages participation in sustainability-oriented projects and experiential activities, ensuring that students gain a well-rounded perspective on sustainable development. This integrated approach reflects AASTMT's ongoing effort to prepare graduates who can actively contribute to advancing the SDGs in their professional and community roles.

B.Sc. in Digital & Sustainable Business Economics

This undergraduate major introduces students to contemporary approaches in sustainable economic development, integrating environmental considerations with digital innovation. The program equips learners with the analytical and managerial skills necessary to support responsible economic growth while addressing evolving sustainability challenges.

Digital and Sustainable Business Economics

College of Management & Technology | English

Overview | Structure | Career | Admission | Accreditation & Cooperation

Program Description

The "Digital & Sustainable Business Economics" major offers a comprehensive education that provides students with a range of skill sets, including data analytics, economic analysis, and digital marketing. Graduates of this program will be equipped with the knowledge and tools necessary to lead innovative businesses into the future. Furthermore, our program offers seven minors in addition to the "Digital & Sustainable Business Economics" major. This allows for even greater specialization and a more tailored educational experience for our students. Overall, our program provides a unique and valuable opportunity for those interested in pursuing a career in the intersection of business and technology, with an emphasis on sustainability.

Degree Bachelor

Area of study: Business and Management

Duration: 8 Terms

Credit hours: 144.00 hrs

[B.Sc. in Digital & Sustainable Business Economics](#) on AASTMT webpage

Sustainability & Energy in Buildings (ECB3302)

This course provides students with an in-depth exploration of sustainable building practices, focusing on energy-efficient design, renewable energy integration, and performance assessment of building systems. It enables learners to understand how engineering decisions influence environmental outcomes and supports the development of practical skills in green construction.

Sustainability & Energy in Buildings

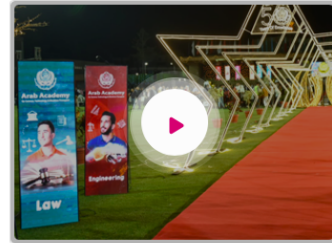
□ Construction & Building Engineering | 🌐 English

Course Info

Course Content

Description

Sustainable development and renewable energy. - Principles of green building design. - Green building rating systems. - Principles of building physics (heat transfer in buildings). - Principles of building physics (airflow in buildings). - Principles of building physics (moisture transport in buildings). - HVAC systems in buildings (heating systems). - HVAC systems in buildings (cooling systems). - Heating and cooling load calculations. - Passive heating and cooling systems. - Egyptian energy efficiency code. - Building energy performance simulation using Design Builder. - PV systems in buildings.



🎓 Degree **Bachelor**

📖 Code: ECB3302

🕒 Credit hrs: 3

✳️ Prerequisites: ECB3502

[Sustainability & Energy in Buildings](#) on AASTMT webpage

Energy Efficient Operation of Ships (NGPSS 1020)

In line with AASTMT's emphasis on embedding sustainability principles within its educational pathways, this course enhances learners' capacity to apply environmentally conscious practices in maritime operations. *Energy Efficient Operation of Ships* (NGPSS 1020) provides a structured understanding of the environmental implications of ship performance, highlighting fuel-efficient strategies, emissions reduction, and alignment with international climate-related standards. Through its focus on greenhouse gas impacts, SEEMP implementation, and key energy-performance indicators such as EEDI, EEXI, and CII, the course offers a comprehensive learning experience that prepares students to address contemporary sustainability challenges in the maritime sector.

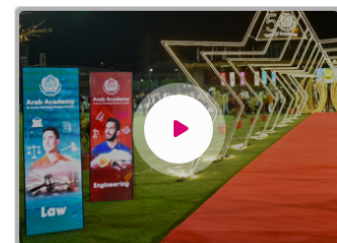
Energy Efficient Operation Of Ships

🏠 Natural Gas and Petrochemicals Simulator System

Course Info

Outlines

- > Introduction of Climate change and IMO-related work.
- > Fuel efficient operations.
- > Optimized ship handling.
- > Hull and propulsion system.
- > Implementation and monitoring of the latest version of SEEMP.



📖 Code: NGPSS 1020

🕒 Credit hrs: 8

[Energy Efficient Operation of Ships](#) on AASTMT webpage

M.Sc. in Renewable Energy and Environmental Engineering

This postgraduate program offers comprehensive academic training in renewable energy technologies, environmental assessment, and sustainable engineering solutions. By combining theoretical foundations with applied methodologies, the program prepares graduates to analyze and design systems that support cleaner energy production and improved environmental performance.



College of Engineering & Technology Alexandria

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Energy and Environmental Engineering

M.Sc. in Renewable Energy and Environmental Engineering

☐ Engineering Postgraduate Studies
 |
 ☐ Language of Study: English

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Accreditation & Cooperation

Program Description

* Some Courses of M.Sc. in Renewable Energy and Environmental Engineering have been updated thanks to EACEA funding as part of the WESET project (www.weset-project.eu)

Courses



Degree

Master



Area of study:

Science and Engineering

[M.Sc. in Renewable Energy and Environmental Engineering on AASTMT webpage](#)

Environmental Studies in Architecture and Urban Design (AR713)

This postgraduate course, offered within the M.Sc. in Architectural Engineering and Environmental Design, examines environmentally conscious architecture and the relationship between natural and built environments. Students explore ecological design principles, environmental assessment methods, and sustainability-focused planning approaches. By emphasizing resource efficiency, environmental performance, and responsible urban development, the course provides a dedicated academic pathway that strengthens learners' abilities to integrate sustainability considerations into architectural and urban design decisions. In doing so, it contributes to expanding the range of sustainability-oriented courses within the university's formal curriculum.

Environmental Studies in Architecture and Urban Design

□ Architectural Engineering & Environmental Design | 🌐 English

Course Info

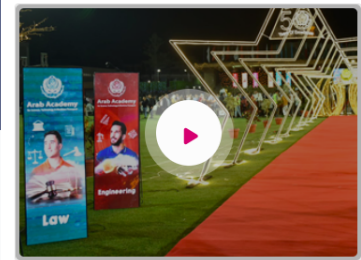
Course Content

Description

This course discusses the issue of environmentally conscious design. It consists of four main parts:(1) the philosophy of environmental design(2) the Physical Environmental including Geology, Geomorphology, Energy Resources and Climate, and their influence on building and site design(3) the natural environment including Soils, Materials, Energy and Ecology and,(4) the Principles of Strategic Environmental Assessment.

Program

M.Sc. in Architectural Engineering and Environmental Design



Degree	Master
Code:	AR 713
Credit hrs:	3
Prerequisites:	N/A

[ar713](#) on AASTMT webpage

Topics in Sustainability (AR423)

This undergraduate course offers a structured introduction to sustainability concepts, contemporary environmental challenges, and practical approaches to responsible development. It exposes students to established sustainability frameworks, environmental evaluation tools, and principles of responsible design. Through its multidisciplinary approach, the course encourages analytical thinking and problem-solving related to environmental and socio-economic issues. As a focused academic offering, it broadens students' access to sustainability-related learning within the curriculum and supports the development of competencies aligned with global sustainability priorities.

Topics in Sustainability

□ Architectural Engineering-cairo | 🌐 English

Course Info

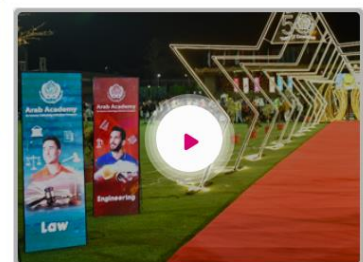
Course Content

Description

The course reviews concepts and theories of sustainability and how the term has developed and embraced change and shift in policies and global commitment. Students are encouraged to think of developing principles and consider the design process with sustainable principles at the forefront. Innovative ideas and international examples are explored.

Program

Architectural Engineering & Environmental Design



Degree	Bachelor
Code:	AR423
Credit hrs:	2
Prerequisites:	None

[AR423](#) on AASTMT webpage

MSc in Euro-Mediterranean Environmental and Climate Systems Management (SECCM)

The postgraduate program in Euro-Mediterranean Environmental and Climate Systems Management provides an advanced, multidisciplinary curriculum focused on understanding and responding to climate challenges. The program combines scientific knowledge with applied tools to analyze climate drivers, assess environmental impacts, and support adaptation and mitigation strategies. Graduates acquire practical and analytical capabilities that prepare them for careers in environmental governance, research institutions, and climate-related industries. Delivered in collaboration with international partner universities, the program equips learners to address environmental challenges across Egypt, the wider Arab region, and Europe, making it one of the most distinctive climate-focused master's pathways in the region.



The screenshot shows the website of the Maritime Postgraduate Studies Institute Alexandria. The header includes the institute's logo and navigation links: Programmes, Admission & Registration, Research, Alumni, Faculty & Staff, Contact Us, Students Affairs, and About Us. The main banner features a photograph of a modern campus with palm trees and a building, with the text "Master Of Science Degree In Euro-Mediterranean Smart Environmental And Climate Change Management SECCM". Below the banner, a breadcrumb trail reads: Institutes > Maritime Postgraduate Studies Institute > Master of Science Degree in Euro-Mediterranean Smart Environmental and Climate Change Management SECCM. The main text block describes the SECCM program, noting its accreditation by the Supreme Council of Universities-Egypt and its establishment with participation from four European countries (Italy, Greece, Lithuania, and Slovenia) and four Egyptian universities (Alexandria University, Suez Canal University, South Valley University, and Arab Academy for Science, Technology and Maritime Transport). It highlights the program's unique multidisciplinary curriculum and its focus on preparing graduates to address climate change challenges.

[Master of Smart Environmental and Climate Change Management \(SECCM\) on AASTMT webpage](#)