

Courses that teach specifically on environmental sustainability



Number of Courses/Subjects Related to Sustainability Offered

Alexandria University offers a group of courses related to the environment and sustainability in various sectors, in line with the state's strategies to achieve sustainable development goals and to achieve the goals of linking science with industry and qualifying the graduate to find job opportunities commensurate with the field of specialization. The university works to qualify the graduate by providing various awareness and training programs during the study period. The university also provides a distinguished group of postgraduate programs that are compatible with their counterparts in international universities, as indicated by the indicator data for this standard.

A. An academic team (Ph.D.) from the Faculty of Science at Alexandria University teaches a course titled 'Man and Environment' (University Elective Course – 2 Credits). The course addresses



environmental problems, types of natural resources, pollution, environmental footprint, carbon footprint, waste management, recycling, climate change and global warming, biodiversity, and the Sustainable Development Goals (SDGs). It is offered to students from various faculties at Alexandria University, such as:

Faculty of Science

Faculty of Tourism

Faculty of Agriculture

Faculty of Sport Education

Faculty of Business

Faculty of Computers and Data Science

Faculty of Dentistry

Faculty of Economics and Political Science

Faculty of Arts

Faculty of Nursing

Also, this course is offered in some programs at Alexandria National University, including:

Computer and Data Sciences (CDS) Programs

Oral and Dental Surgery Program

Software and Multimedia Production Program (SIM)

Courses focused on marine environments and the sustainability of marine ecosystems make use of the Research Yacht, located at the Faculty of Science in the Anfoushi area and equipped with a GPS system. Students and researchers utilize the yacht for field trips to collect samples and conduct essential studies. This access to the Research Yacht greatly supports the study, understanding, and conservation of marine life.



Example of Programs and Courses/Subjects Related to Sustainability (Alexandria University, Egypt):

- Man and Environment
- Living resources and taxonomy
- Economic botany and biofuel
- Plant biotechnology and species conservation
- Water treatment and water analysis
- Plant propagation and tissue culture
- Algal Biotechnology
- Taxonomy of flowering plants
- Plant anatomy and ecology
- Quality criteria for biological applications
- Biology of Microorganisms
- Microbial diversity
- Research project
- Field study
- Environmental geology
- Marine plankton
- Marine chemistry
- Fish biology and fisheries
- Marine benthos
- Marine ecology

Marine pollution
Coastal zone management
Aquatic aquaculture
Effect of climate changes on marine ecosystem
Marine microbiology
Marine biodiversity
Regional oceanography
Conservation and sustainable development of natural resources
Environmental bioremediation
Physicochemical Processes in Environmental Engineering
Sustainable Built Environment
Sustainable Water Resources Development
Environmental Sampling and Analysis
Unit Operation for Environmental Engineers
Thermodynamics for Environmental Engineers
Environmental Microbiology
Environmental Aquatic Chemistry
Environmental Organic Chemistry
Climate Change
The Nile; Environments, Limnology & Human Use
Site Assessment and Remediation
Climate Systems
Advanced Environmental Engineering
Integrated Environmental Assessment
Environmental Impacts of Power Generation
Environmental Sensor Informatics
Cities and the Challenge of Sustainable Development
Green Entrepreneurship and Agribusiness
Sustainable Energy Resources and Management
Sustainable Management of Marginal Drylands
Sustainable Farming Systems: Hydro and Aquaponics
Sustainable Development
Environmental Hydrology
Projects Management
Fundamentals of environmental sciences
Sustainable development
Climate dynamics
Climate change mitigation, vulnerability and adaptation
Environmental economics and management
Statistical analysis in climate research
Economic valuation and climate change
Green economy
Geographical information systems applications in climate change
Remote sensing and environmental change
Environmental risk assessment and management
Community engagement and sustainable development
Climate change, biodiversity and ecosystems functions
Climate change and health
Urban environment
Geopolitics of climate change
Scientific research skills
Introduction to Climate Change
Meteorology and Climate Observation
Marine Resources and sustainability
Environment Risk Assessment and Management

Climate Change Management
 Numerical Modelling and tools
 GIS and Remote Sensing
 Research Methodology and Ethics
 Climate and Ocean Modelling
 Climate Smart Agriculture
 Nanotechnology and Climate Change
 Sustainable Blue Economy
 Coral Reefs and Climate Change
 Energy Efficiency Management in Maritime Industry
 Environmental Impact Assessment
 Integrated Coastal Zone Management
 Climate Change and Biodiversity
 Global Environmental Governance
 Strategic Planning and Project Management
 Quality and Safety Management Systems
 Climate Change effects on Coastal Dynamics
 Adaptation Strategies to Climate Change for Hydraulic Risk Prevention in Coastal Areas
 Climate Change Policy of the EU
 Adaptation and Mitigation to Climate Change in Spatial Planning
 Master of WasteWater Engineering Practice
 Master of Drinking Water Engineering Practice
 Master of Radiation Physics Practice
 Master of Petrochemicals and Hydrocarbon Processing Practice
 M.Eng. Water Recourse
 M.Eng. in Irrigation Structures
 M.Eng. in Environmental Engineering
 M.Eng. in Thermal Engineering
 M.Eng. in Combustion Engines
 M.Eng. in Electrical Energy Systems and Control
 M.Sc./Ph.D in Electrical Engineering (Electrical Power and Machines)
 Master of Climate Change and Sustainable Development
 International Master of Smart Environmental Management of Climate Change
 International Master of Natural Resources Sustainability for Land Development
 International Master of Sustainable Management of Fisheries and Aquaculture Science
 Environmental silviculture and tree – resources management
 Pest control & environment protection from cides pollution.
 Soil and water sciences
 Pesticides chemistry and technology
 Sustainable management of water resources
 Sustainable management of land resources
 Occupational Hygiene and Air Pollution
 Environmental Health
 Food Hygiene and Control
 Environmental Health
 Occupational Hygiene and Air Pollution
 Food Hygiene and Control
 Environmental Studies - Biological Science
 Climatic Change and Sustainable Development
 Environment and Energy
 Sustainable Cities
 Sustainable Communities
 Soil and Water

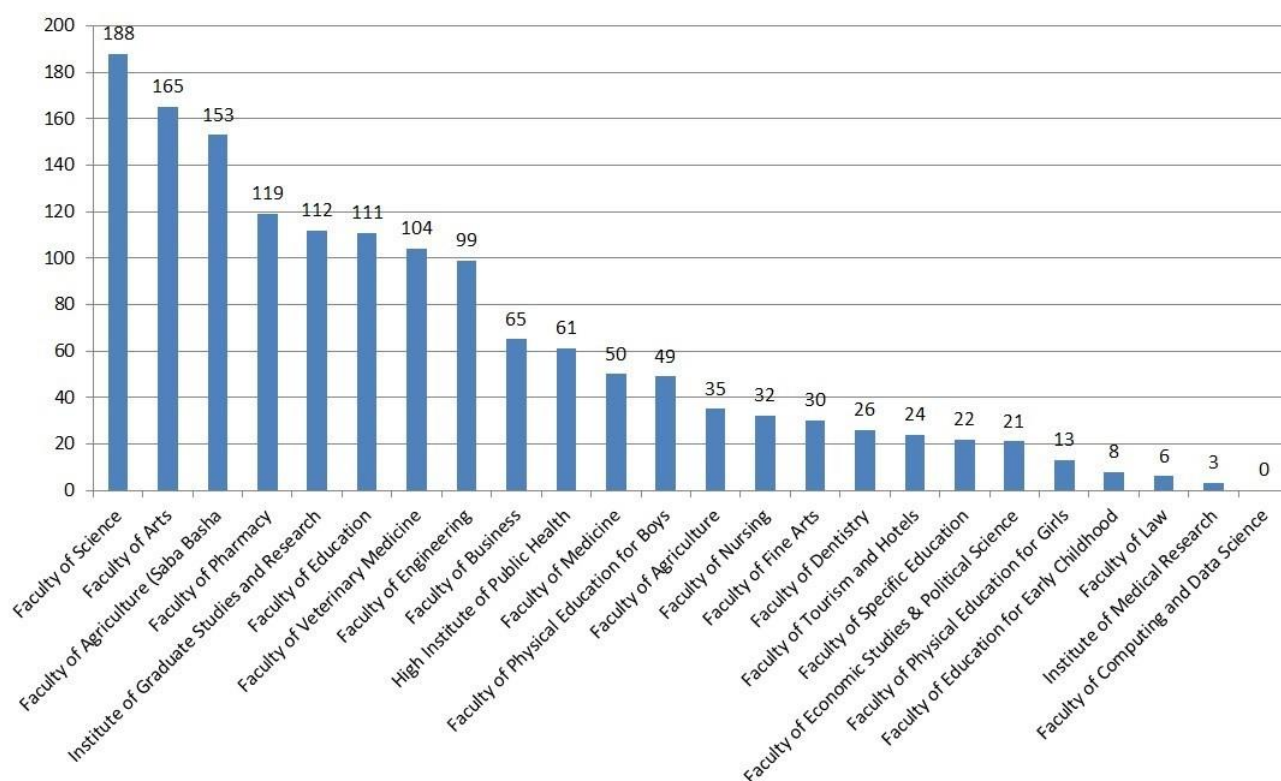
Example of Programs and Courses/Subjects Related to Sustainability (Alexandria University, Egypt)

Above is a list of examples of programs and courses which aims to embed sustainability that are offered by the University. The total number of courses related to the environment and sustainability in the various sectors of the university, running in the academic year 2023 – 2024, according to the data received from the colleges and specified in previous detailed table, is **1496**, which represents approximately **11.1 percent** of the total number of courses for the undergraduate and graduate levels, in 25 Faculties and Institutes at the University.

In this context, the table below shows the total number of courses related to the environment and sustainability according to the specializations of the university’s various faculties and institutes:

Sectors	Number of courses related to environment and sustainability		Total number of courses Offered during the academic year 2023/2024	Percentage of the number of courses related to environment and sustainability
	Undergraduate studies	postgraduate studies	Undergraduate and postgraduate studies	
Medical sector (dental-pharmacy-nursing-veterinary medicine- - Medical Research Institute)	136	463	13520	11.1%
Basic sciences sector (Engineering - Agriculture - Saba Pasha Agriculture - Science - Fine Arts - Specific Education - Graduate Institute)	237	313		
Humanities sector (Commerce - Arts - Tourism and Hotels - Education - Law - Physical Education for Boys - Physical Education for Girls - Early Childhood Education)	223	124		
Total numbers	596	900		

Number of courses in each college that are related to sustainability



The National Alexandria University was established last academic year (2022/2023) & (2023/2024), with 9 undergraduate Programs (attached is a list of the new programs). The National Alexandria University programs refer to educational programs offered by Alexandria University, which is a public university located in Alexandria, Egypt. However, public universities like Alexandria University do offer programs that are funded by the government, and students pay lower tuitionfees compared to private institutions.

Study begins at Alexandria National University at its headquarters in New Smouha, starting from the academic year 2022/2023 and continuing in the academic year 2023/2024 in nine programs that grant bachelor's degrees, as follows: 1 -

College of Medicine - Medicine and Surgery Program.

2 - College of Dentistry - Oral and Dental Medicine and Surgery Program.3 -

College of Pharmacy - Pharm de Clinical Program.

- College of Engineering (Architecture and Construction Program - Computers and Communications Program - Mechatronics and Robotics Engineering Program).

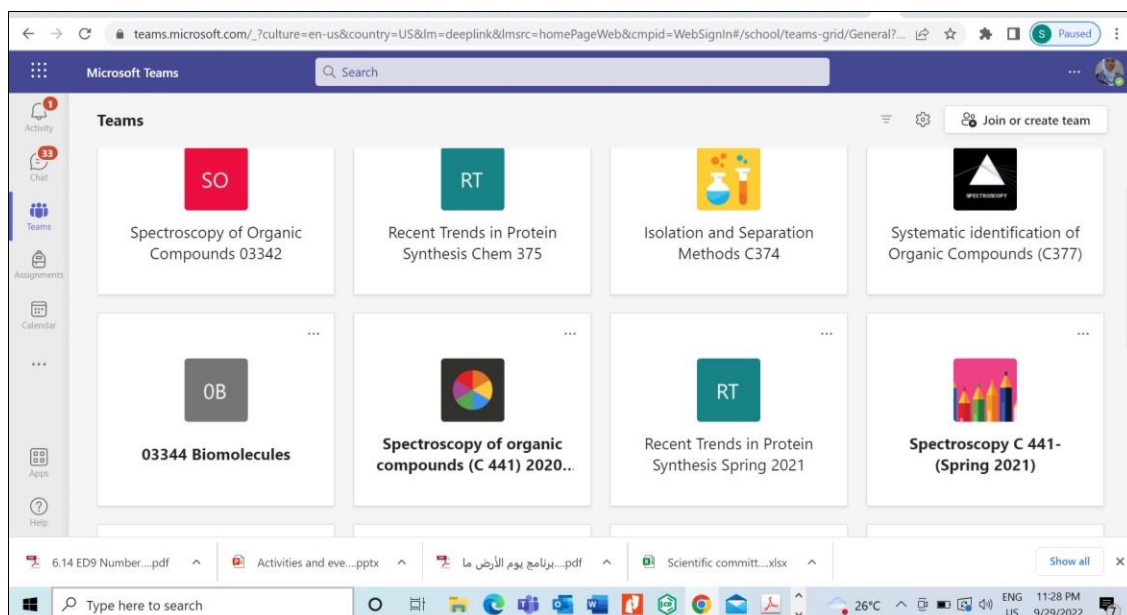
- College of Computer and Data Sciences (Cybersecurity Program - Smart Systems Program).6 -

College of Science - Software and Multimedia Industry Program.

The total number of courses **at the new Alexandria National University** in the academic year 2022/2023 & 2023/2024 are531 courses.

College	Program	Total number of courses
College of Medicine	Medicine and Surgery Program	49
College of Dentistry	Oral and Dental Medicine and Surgery Program	75
College of Pharmacy	Pharm de Clinical Program	66
College of Engineering	Architecture and Construction Program	55
	Computers and Communications Program	101
	Mechatronics and Robotics Engineering Program	84
College of Computer and Data Sciences	Cybersecurity Program - Smart Systems Program	48
College of Science	Software and Multimedia Industry Program	53

Online Courses



Using Microsoft Teams (Alexandria University, EGYPT)