



Al-Furat Al-Awsat Technical University's (ATU) strategic commitment to integrating environmental stewardship into higher education and fulfilling the requirements for the QS World University Rankings: Sustainability, ATU formally documents its comprehensive academic curriculum dedicated specifically to **Climate Science and Environmental Sustainability**.

Across ATU's technical colleges and institutes, academic programs incorporate specialized undergraduate and postgraduate courses aimed at equipping students with practical engineering, technological, and scientific competencies to address climate change, renewable energy adoption, environmental management, and sustainable development across Iraq and the Middle Euphrates region.

Verified Public Links & Institutional Portals

To support QS audit compliance and verification, academic curricula, course specifications, and environmental education frameworks are accessible through ATU's official web portals:

- ATU Sustainability Master Portal (Education Section): <https://sustainability.atu.edu.iq/>
Highlights academic initiatives, green technology education, and climate change modules.
- ATU Sustainable Development Unit & Curriculum Strategy: https://idi.atu.edu.iq/?page_id=44811&lang=en
Strategic framework mandating the integration of UN SDGs into technical course syllabi.
- Engineering & Technical Curriculum Guidelines: <https://ikr.atu.edu.iq/en/vision-mission-goals/>
Academic benchmarks for environmental engineering, clean technology, and climate adaptation.
- Kufa Technical Institute Academic Programs: https://inj.atu.edu.iq/?page_id=37296&lang=en
Course catalog hosting technical diploma modules on environmental pollution and renewable systems.

Dedicated Climate Science & Sustainability Courses

ATU offers both core and specialized courses dedicated specifically to climate science, renewable energy technologies, and environmental sustainability across various academic levels:



Course Title	Department / Faculty	Academic Level	Core Focus & Climate/Sustainability Content	Mapped UN SDGs
Environmental Engineering & Climate Impact	Department of Building & Construction Engineering	Undergraduate (B.Sc.)	Covers climate dynamics, environmental pollution mitigation, greenhouse gas accounting, and sustainable infrastructure design.	SDG 13: Climate Action SDG 11: Sustainable Cities
Renewable & Clean Energy Systems	Department of Electrical Power Engineering Technologies	Undergraduate (B.Tech.)	Focuses specifically on photovoltaic systems, wind energy technology, smart grids, and reducing carbon emissions in industrial applications.	SDG 7: Affordable & Clean Energy SDG 13: Climate Action
Environmental Management & Waste Recycling	Department of Chemical and Petroleum Refining Technologies	Undergraduate (B.Sc.) / Diploma	Teaches circular economy principles, hazardous and e-waste treatment, water treatment technologies, and sustainable resource management.	SDG 12: Responsible Consumption SDG 6: Clean Water



Course Title	Department / Faculty	Academic Level	Core Focus & Climate/Sustainability Content	Mapped UN SDGs
Sustainable Agricultural Technologies & Soil Conservation	Mussayib Technical College / Agricultural Techniques	Undergraduate (B.Sc.)	Addresses climate change impacts on agriculture, smart irrigation techniques, desertification control, and sustainable food systems in Iraq.	SDG 2: Zero Hunger SDG 15: Life on Land
Climate Change & Eco-Health Impact	Department of Community Health Technologies	Undergraduate / Diploma	Examines the ecological and human health consequences of rising temperatures, air pollution, and climate-induced water scarcity.	SDG 3: Good Health & Well-being SDG 13: Climate Action

The following list of some courses and subjects that have been offered to the students in the university about SDGs17.

No	Course Title	Sustainability Area
1	Renewable Energy Resources	Clean Energy
2	Energy Storage Systems	Clean Energy
3	Photovoltaic Systems	Solar Energy
4	Environmental Pollution	Environmental Protection
5	Protected Agriculture	Sustainable Agriculture
6	Plant Environment	Ecosystems and Biodiversity
7	Growth Environment	Environmental Sustainability



8	Biosafety and Biosecurity	Health and Biosafety
9	Medicinal Plants	Sustainable Health
10	Economics of Water Resources	Water Management
11	Quality of Irrigation Water	Water Resources
12	Organic Farming	Sustainable Agriculture
13	Soil Pollution	Environmental Protection
14	Desertification	Climate Action
15	Soil and Plant Analysis	Soil Management
16	Soil Maintenance and Irrigation Projects	Water Conservation
17	Soil Fertility and Fertilization	Sustainable Soil Management
18	The Relationship of Soil with Water and Plants	Ecosystem Management
19	Plant Tissue Culture	Sustainable Biotechnology
20	Protected Agriculture	Sustainable Food Production
21	Forage and Pasture Crops	Sustainable Agriculture
22	Cultivation and Improvement of Plants	Crop Improvement
23	Plant Anatomy	Plant Sciences
24	General Plant	Plant Sciences
25	Increasing the Palm Trees	Biodiversity Conservation
26	Microbial Soil Revival	Soil Restoration
27	Land Reclamation Machines and Equipment	Land Rehabilitation
28	Principles of Plant Production	Food Security
29	Principles of Agricultural Economics	Sustainable Economy
30	Geography of Tourism	Sustainable Tourism
31	Electronic Reservation	Smart Tourism
32	Agricultural Machines	Sustainable Agriculture Technology
33	Internal Combustion Engines	Energy Efficiency
34	Nano Technology	Green Innovation
35	Water Resources	Water Sustainability
36	Soil Chemistry	Soil Conservation
37	Soil Salinity	Climate Adaptation
38	Hydrology	Water Resources Management
39	Irrigation Systems	Water Conservation
40	Sustainable Land Reclamation	Land Restoration

Teaching Methodology & Applied Sustainability Integration



ATU's approach to climate and environmental education emphasizes practical, applied learning tailored to technical education:

- **Laboratory & Fieldwork:** Students engage in hands-on environmental monitoring, solar panel efficiency testing, and water quality sampling in dedicated university laboratories.
- **Graduation Capstone Projects:** Final-year engineering and technical students are required to address real-world climate or environmental challenges through innovative prototyping and applied research.
- **Peer-to-Peer & Workshop Training:** Special seminars and technical workshops organized in cooperation with the [ATU Sustainable Development Unit](#) to cover emerging global climate trends.

There are 180 academic specialized departments divided into 16 faculties at the university.

Each department embedded Courses or subjects of Teaching Sustainability Development as courses within two hours per week; which means 30 hours per semester that students should study annually. These courses are weighted as 2 credited units for each semester. It means that the undergraduate student has to study this subject which appropriate to his chosen department and according to general specializations

Courses and subjects of Sustainable Development according to the Faculties and Institutions depending on UN SDGs:

- **Students in medical and life sciences specializations are instrumental in achieving multiple Sustainable Development Goals (SDGs). They contribute to:**

SDG 1: No Poverty, by working to make healthcare affordable and accessible.

SDG 2: Zero Hunger, by addressing malnutrition and food security.

SDG 3: Good Health and Well-Being, through healthcare promotion and disease prevention.

SDG 13: Climate Action, by advocating for environmentally sustainable healthcare practices.

SDG 14: Life Below Water and 15: Life on Land, through research and mitigation efforts.

SDG 16: Peace, Justice, and Strong Institutions, by promoting ethical healthcare practices and equity.

SDG 17: Partnerships for the Goals, by collaborating with various stakeholders to advance sustainability.

In essence, they are essential in creating a more equitable and sustainable future.

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- **Students in computer sciences and technology specializations contribute to several Sustainable Development Goals (SDGs):**

SDG 4: Quality Education, by developing innovative educational technologies.

SDG 9: Industry, Innovation, and Infrastructure, through technological advancements.

SDG 10: Reduced Inequalities, by bridging the digital divide.

SDG 11: Sustainable Cities and Communities, by creating smart city solutions.

SDG 12: Responsible Consumption and Production, by promoting eco-friendly practices.

SDG 17: Partnerships for the Goals, through collaborations to advance sustainability. Their work is pivotal for a more sustainable world.

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- **Law students contribute to multiple Sustainable Development Goals:**



SDG 1: No Poverty (SDE1: No Poverty) through advocacy for poverty reduction.

SDG 5: Gender Equality (SDE5: Gender Equality) by supporting women's rights and combating gender-based discrimination.

SDG 8: Decent Work and Economic Growth (SDE8: Decent Work) through advocating for fair employment practices.

SDG 15: Life on Land (SDE15: Life on Land) by advocating for sustainable land-use practices.

SDG 16: Peace, Justice, and Strong Institutions (SDE16: Justice) by promoting the rule of law and access to justice.

SDG 17: Partnerships for the Goals (SDE17: Partnerships) by collaborating with various stakeholders for sustainability. Their work is instrumental in achieving these SDGs.

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- **Engineering students contribute to a broad spectrum of Sustainable Development Goals (SDGs), including:**

SDG 1: No Poverty

SDG 4 : Quality Education

SDG 5 : Gender Equality

SDG 6 : Clean Water and Sanitation

SDG 7 : Affordable and Clean Energy

SDG 8 : Decent Work and Economic Growth

SDG 9 : Industry, Innovation, and Infrastructure

SDG 10 : Reduced Inequalities

SDG 11 : Sustainable Cities and Communities

SDG 12 : Responsible Consumption and Production

SDG 13 : Climate Action

SDG 14 : Life Below Water

SDG 15 : Life on Land

SDG 16 : Peace, Justice, and Strong Institutions

SDG 17 (SDE17): Partnerships for the Goals

Engineering students actively engage in projects, innovations, and infrastructure development that directly contribute to these SDGs. Their work plays a vital role in advancing sustainable development and addressing global challenges

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- **Students majoring in Arts, Economics, Administration, and social sciences specializations are integral to the pursuit of numerous Sustainable Development Goals (SDGs), including:**

SDG 1: No Poverty (SDE1: No Poverty)

SDG 2: Zero Hunger (SDE2: Zero Hunger)

SDG 4: Quality Education (SDE4: Quality Education)

SDG 5: Gender Equality (SDE5: Gender Equality)

SDG 8: Decent Work and Economic Growth (SDE8: Decent Work)

SDG 9: Industry, Innovation, and Infrastructure (SDE9: Innovation)

SDG 10: Reduced Inequalities (SDE10: Reduced Inequalities)

SDG 11: Sustainable Cities and Communities (SDE11: Sustainable Communities)

SDG 12: Responsible Consumption and Production (SDE12: Responsible Production)

SDG 13: Climate Action (SDE13: Climate Action)

SDG 16: Peace, Justice, and Strong Institutions (SDE16: Justice)

SDG 17: Partnerships for the Goals (SDE17: Partnerships)



These students actively engage in studies and projects that directly support these SDGs, fostering social progress, economic growth, environmental sustainability, gender equity, and the development of just and resilient communities through education, research, and advocacy.

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- **Students specializing in General Sciences are central to achieving a wide array of Sustainable Development Goals (SDGs). Their studies encompass:**

SDG 1: No Poverty (SDE1: No Poverty)

SDG 2: Zero Hunger (SDE2: Zero Hunger)

SDG 3: Good Health and Well-Being (SDE3: Good Health)

SDG 4: Quality Education (SDE4: Quality Education)

SDG 5: Gender Equality (SDE5: Gender Equality)

SDG 6: Clean Water and Sanitation (SDE6: Clean Water)

SDG 7: Affordable and Clean Energy (SDE7: Clean Energy)

SDG 8: Decent Work and Economic Growth (SDE8: Decent Work)

SDG 9: Industry, Innovation, and Infrastructure (SDE9: Innovation)

SDG 10: Reduced Inequalities (SDE10: Reduced Inequalities)

SDG 11: Sustainable Cities and Communities (SDE11: Sustainable Communities)

SDG 12: Responsible Consumption and Production (SDE12: Responsible Production)

SDG 13: Climate Action (SDE13: Climate Action)

SDG 14: Life Below Water (SDE14: Life Below Water)

SDG 15: Life on Land (SDE15: Life on Land)

SDG 16: Peace, Justice, and Strong Institutions (SDE16: Justice)

SDG 17: Partnerships for the Goals (SDE17: Partnerships)

Their multidisciplinary approach equips them to contribute significantly to sustainable development by addressing various global challenges through research, innovation, and problem-solving.

The following list includes some sample courses and subjects that have been offered in the university about SDGs17.

- The number of planned and added courses that support those assigned as teachers, technicians, administrators, and contract workers in various administrative, medical, legal, and educational specialties in computer systems is (145) courses.
- The number of workshops that support members as teachers, technicians, administrators, and contract workers in various administrative, medical, legal, and educational specialties with computer systems (28) workshops.
- Number of discussion sessions that support those affiliated as teachers, technicians, administrators, and contract workers in various administrative, medical, legal, and educational specialties with computer systems (2) sessions.
- The number of seminars that support those affiliated as teachers, technicians, administrators, and contract workers in various administrative, medical, legal, and educational specialties with computer systems (6) seminars.
- The number of seminars that support those affiliated as teachers, technicians, administrators, and contract workers in various administrative, medical, legal, and educational specialties with computer systems (9) seminars.
- The number of courses implemented by the Government Program Unit on electronic blackmail is (1) courses,



- Number of seminars implemented by the Government Program Unit on electronic blackmail: (1) seminar,
- Number of discussion sessions implemented by the Government Program Unit on Smoking Number (1) session
- Number of seminars implemented by the Government Program Unit on combating social stigma: (2) seminars,
- The number of seminars implemented by the Government Program Unit on combating electronic extremism is (2) seminars,
- The number of seminars implemented by the Government Program Unit on Drugs is (8) seminars.
- Number of seminars implemented by the Government Program Unit on Smoking: (1) seminar,
- Number of workshops implemented by the Government Program Unit on Smoking: (2) workshops,
- ATU held an educational awareness lecture entitled (Drugs and Psychotropic Substances) for members and students as part of the government program
- ATU carried out a campaign to distribute posters entitled “No to Drugs” during the International Week Against Drug Abuse. They were distributed to students
- In order to achieve the Sustainable Development Goals (Goal 3: Good Health and Well-being), ATU implemented a volunteer campaign by distributing educational brochures on the effects of drugs in cooperation with the Babylon Anti-Narcotics Directorate.
- Participation in the Future Week Sustainability Festival at the University of the Future (faculty and students)
- The Institute implemented the Sustainability Week activities for five days, which included (16) activities to achieve the sustainable development goals,
- Mr. (Assistant Professor Dr. Musleh Amer Saleh) participated in the Sustainability Week through a workshop entitled (Green Education and the Sustainable University)
- In order to achieve the Sustainable Development Goals (Goal 8: Decent Work and Economic Growth, and Goal 13: Climate Action), ATU held a seminar entitled (Sustainable Development in the Economic, Social and Environmental Perspective).
- In order to achieve the Sustainable Development Goals (Goal 1: Eradicating poverty and Goal 3: Good health and well-being), ATU held a symposium entitled (Stages of Growth and Sustainable Development and Methods of Developing Them).
- In order to achieve the Sustainable Development Goals (Goal 3: Good Health and Well-being), ATU launched a field campaign by distributing bags made of paper fibers to ovens, bakeries, and shops.
- ATU held a seminar entitled (The Impact of Transformational Leadership on the Performance of Employees in Government Institutions).
- ATU held a seminar entitled (Impediments to Administrative Investigation of the Employee).
- ATU held a discussion session entitled (Analysis and Study of Intellectual Capital in Companies and its Development).
- ATU held a discussion session entitled (Financial Risks and How to Address Them).
- ATU held a symposium entitled (The Use of Microcontrollers in Medical Applications).
- ATU held a seminar entitled (Healthcare Procedures for Patients Infected with COVID-19).
- ATU held a symposium entitled (Some methods leading to cancer).
- ATU held a discussion session entitled (Restricting the use of antibiotics and not dispensing them except with a medical prescription is the most successful way to eliminate antibiotic resistance).
- ATU held a symposium entitled (Side effects of drugs and their types).
- ATU held an educational awareness lecture entitled (Drugs and Psychotropic Substances).
- ATU held a seminar entitled (How to protect your child from autism).
- Holding a series of conferences, workshops, and awareness seminars on the dangers of drug abuse and how to avoid them during the Iraqi Anti-Drug Week for six days.
- ATU held a symposium entitled (Antibiotics).
- The Institute held a seminar entitled (The Role of the Iraqi Government in International Conflicts).
- The Institute conducted a seminar entitled (Learning the Art of Self-Leadership in Health Institutions).



- The Institute held a seminar entitled (Crimes against the duties of the job - bribery and embezzlement).
- The Institute held a seminar entitled (Custom and Administrative Permission).
- The Institute held a symposium entitled (Reading the New Variables in the Middle East).
- The Institute held a seminar entitled (The Impact of Visual Management on Improving Performance).
- The Institute implemented a seminar entitled (Occupational Safety).(Annex A-42)
- The Institute held a discussion session entitled (Time Management in Educational Institutions in the Light of E-Learning)
- ATU held a seminar entitled (Industrial Costs and Wages).
- ATU carried out a campaign to distribute posters entitled (The Effects and Negatives of Drugs) and they were distributed to students,
- ATU carried out a campaign to distribute posters entitled (Combating Drugs) and they were distributed to students, Attachment A-46.
- ATU carried out a campaign to distribute posters entitled “No to Drugs” during the International Week Against Drug Abuse. They were distributed to students
- ATU carried out a campaign to distribute posters entitled (The Dangers of Drug Abuse and Avoiding It) during the International Week Against Drug Abuse. They were distributed to students

Institutional Support & Educational Policy

The university leadership supports the continuous development of climate-focused education through:

- Periodic review and updating of technical curricula to incorporate modern climate science data and UN SDG frameworks.
- Provisions for faculty training in sustainable engineering and green educational methodologies.
- Open access to digital resources and publications via the [ATU Sustainability Portal](#).

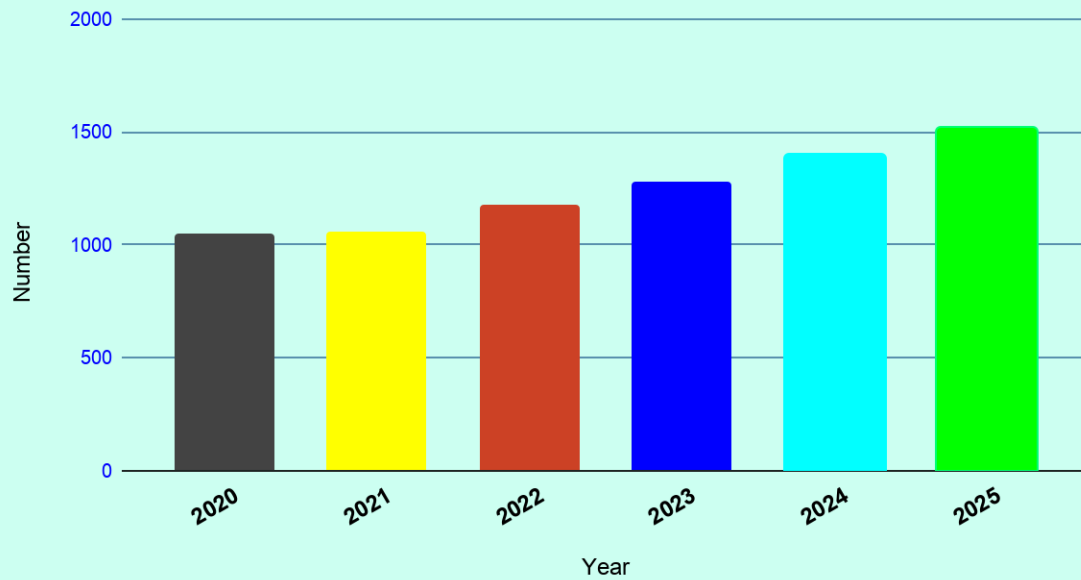




Workshops about clean energy (Al-Furat Al-Awsat Technical University,Iraq)



Total Courses Offered in 2020 -2025



Total Courses Offered in 2020 -2024

2020	1050
2021	1058
2022	1177
2023	1283
2024	1396
2025	1516



- The following is a list of some courses that have been offered to the students in the university about different subjects in sustainability.

← ↻ <https://atu.edu.iq/?cat=48> 🔍 ☆ 📄 📑 🏠 🌐 Sign in ...

English | الدورات الخارجية | الدورات الالكترونية | الاستديو | المعهد الرقمي | التعليم الالكتروني | مواقع التدريس | **جامعة الفرات الوسط التقنية**

الرئيسية | حول الجامعة | الختان والمصادر | الفهارس | الفهارس | الفهارس | الفهارس | الفهارس | الفهارس

الدورات والورش والندوات العلمية

 المنتدى يناقش دور الجامعة في تنمية العراق التي تلعبها دورا حاسما في التنمية الاقتصادية والبيئية في جامعة الفرات الوسط التقنية لتقديم الخدمات في المجتمع الرقمي. 2023, 30	 المنتدى يناقش دور الجامعة في تنمية العراق التي تلعبها دورا حاسما في التنمية الاقتصادية والبيئية في جامعة الفرات الوسط التقنية لتقديم الخدمات في المجتمع الرقمي. 2023, 30	 جامعة الفرات الوسط التقنية تقدم دورة "تأهيل القيادات" لتدريب القيادات في جامعة الفرات الوسط التقنية لتقديم الخدمات في المجتمع الرقمي. 2023, 30
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Al-Furat Al-Awsat Technical University has direct involvement in, or input into, national government or regional nongovernment organizations SDG policy development - including identifying problems and challenges, developing policies and strategies, modeling likely futures with and without interventions, monitoring and reporting on interventions, and enabling adaptive management.

- Moreover, Its policies and strategies are well approved and posed by the Iraqi Ministry of Higher Education and Scientific Research, which aimed to develop the necessary capabilities in the field of sustainable development, including
 - Stimulation and supporting sustainable development research in International & Local universities.
 - Highlighting the latest developments in economic, social, Health, and environmental research in conjunction with sustainable development concepts.
 - Discussing the obstacles associated with the integration of sustainability with the educational process that face faculty members.
 - Discussing the role of SDGs
 - partnerships in terms of supporting scientific research and community services.