



SDG Curriculum Mapping and Intensity Analysis

Institute-Based Heatmap Report

Executive Summary, Contents and General Methodology



TABLE OF CONTENTS

Section	Page
EXECUTIVE SUMMARY	3
General Methodology for SDG Curriculum Mapping	5
İzmir International Biomedicine and Genome Institute (IBG)	6
Institute of Health Sciences	9
Institute of Marine Sciences and Technology	13
Institute of Social Sciences	17
Institute of Fine Arts	22
Institute of Educational Sciences	26
Institute of Atatürk's Principles and History of the Turkish Revolution	30

EXECUTIVE SUMMARY

Dominant SDG Patterns Across Institutions

SDG Curriculum Mapping and ECTS-Weighted Intensity Analysis Across Academic Units

Weekly Topic Mapping	ECTS-Weighted Intensity	Heatmap Interpretation
----------------------	-------------------------	------------------------

Methodological note

This executive summary is based on an ECTS-weighted SDG curriculum mapping of graduate-level institute programs. Weekly course contents were reviewed against the United Nations Sustainable Development Goals, and examination periods were excluded in order to focus on active instructional delivery. The analysis uses a 12-teaching-week model and converts SDG-related course content into an intensity value through the formula: $SDG\ Intensity = (SDG\text{-related teaching weeks} / 12) \times ECTS\ value$. Where relevant, shared foundational courses and high-ECTS thesis or specialization components are interpreted as institutional multipliers because they represent sustained academic effort and research depth.

The resulting institute-level profile is not intended to replace disciplinary judgement. Rather, it provides a transparent and comparable view of how graduate curricula contribute to sustainability, research capacity, social transformation, innovation, and institutional resilience. The heatmap logic allows each institute to be interpreted through its dominant SDG identity while also revealing secondary and emerging areas of impact.

Institute-level SDG profile

Institute	Dominant / prominent SDGs	Executive insight
İzmir International Biomedicine and Genome Institute (IBG)	SDG 3, SDG 9	IBG is positioned as a high-technology health and biomedicine node. Its curriculum is anchored in precision medicine, genomics, oncology, immunology, gene therapy, bioinformatics, artificial intelligence, 3D bioprinting, biomaterials, OCT and laser-tissue interactions. The institute therefore links Good Health and Well-being with advanced biomedical innovation.
Institute of Health Sciences	SDG 3, SDG 9, SDG 10, SDG 5, SDG 12	The Institute of Health Sciences shows a strongly health-centered profile, with very high intensity in anatomy, biochemistry, biophysics, biomechanics, exercise sciences and thesis-based research. Its secondary strengths include Health 4.0 entrepreneurship, robotics and prosthetics, neuro-informatics, inclusive health practices, gender-sensitive sport and sustainable laboratory management.
Institute of Marine Sciences and Technology	SDG 14, SDG 13, SDG 11, SDG 12, SDG 9	This institute has the clearest thematic concentration around Life Below Water. Graduate courses address fisheries science, marine biodiversity, planktonology, marine mammals, benthic and pelagic ecology, marine pollution, aquaculture, MPAs, climate-driven oceanographic change, Lessepsian migration, ROVs, sonar, underwater acoustics and marine technology.
Institute of Social Sciences	SDG 16, SDG 5, SDG 11, SDG 13, SDG 10, SDG 9	The Institute of Social Sciences contributes to sustainability through governance, rights, equality, urban resilience and climate policy. Its dominant profile is built around human rights, administrative accountability, anti-corruption, CEDAW, gender equality, environmental policy, disaster management, migration, local democracy and AI-enabled public administration.
Institute of Fine Arts	SDG 11, SDG 12, SDG 5, SDG 9, SDG 10	The Institute of Fine Arts translates sustainability into cultural memory, visual representation and creative production. Its curriculum highlights cultural heritage, traditional Turkish arts, city archives, urban memory, gender and cinema, ecology and contemporary photography, Anthropocene art, augmented reality, artificial intelligence and visual activism.

SDG Curriculum Mapping and Intensity Analysis

Institute of Educational Sciences	SDG 4, SDG 3, SDG 10, SDG 9, SDG 16	The Institute of Educational Sciences is primarily an SDG 4 driver, with strong emphasis on advanced pedagogy, research methods, educational leadership and doctoral thesis work. It also contributes to mental health and well-being, family counseling, crisis and trauma intervention, special education, disadvantaged families, migration, digital research infrastructure, mediation and legal awareness.
Institute of Atatürk's Principles and History of the Turkish Revolution	SDG 16, SDG 5, SDG 10, SDG 11	This institute provides a historically grounded sustainability profile centered on strong institutions, democratic modernization, constitutional history, civic rights, scientific ethics and the Turkish Revolution. Its secondary contributions address women in the Republican era, migration and settlement policies, minority rights, social integration and Izmir urban history.

Cross-institute strategic synthesis

Across the institutes, the SDG map reveals a mature graduate-level sustainability profile in which disciplinary depth and research intensity are the primary drivers of impact. Health-oriented institutes are strongly clustered around SDG 3 and SDG 9, demonstrating the link between well-being, biotechnology, digital health, robotics and advanced biomedical infrastructure. The Institute of Marine Sciences and Technology provides a distinctive blue sustainability axis through SDG 14, while social, educational, historical and artistic institutes expand the portfolio toward governance, equality, cultural heritage, inclusion, climate action and quality education.

The overall pattern suggests that Dokuz Eylül University's graduate curriculum does not approach sustainability as a single thematic add-on. Instead, it distributes sustainability through research training, thesis work, professional specialization, laboratory practice, digital innovation, public governance, cultural production and social inclusion. This creates an institutional SDG identity that is both evidence-based and multidimensional.

1. General Methodology for SDG Curriculum Mapping

1.1 Purpose and analytical scope

The methodology is designed to map graduate curricula against the United Nations Sustainable Development Goals in a way that is transparent, auditable and comparable across institutes. The analysis focuses on the academic content of Master's and Doctorate programs, using official course catalogues, weekly course plans, ECTS/AKTS credit values, research components and thesis or specialization fields as the main evidence base.

1.2 Active teaching-week model

The mapping uses a 12-teaching-week model. Midterm examinations, final examinations, study weeks and other non-instructional assessment periods are excluded from the denominator. This approach isolates the weeks in which SDG-relevant knowledge, skills and competencies are actively delivered through lectures, seminars, laboratory practice, fieldwork or supervised research training.

1.3 SDG identification and coding

Each course is reviewed at the weekly topic level. SDG alignment is assigned when course content directly addresses an SDG theme, target or competency area. Examples include health and well-being, quality education, gender equality, clean energy, innovation, reduced inequalities, sustainable cities, responsible production, climate action, life below water, peace and strong institutions, and partnerships. Course content may be mapped to more than one SDG when the thematic evidence supports multiple alignments.

1.4 ECTS-weighted intensity calculation

The basic course-level intensity score is calculated as: $SDG\ Intensity = (Number\ of\ SDG\ -related\ teaching\ weeks / 12) \times ECTS\ value$. This formula weights both the duration of SDG-related instruction and the academic workload assigned to the course. High-ECTS thesis, research and specialization components are interpreted as strong indicators of sustained institutional commitment, particularly at Doctorate level.

1.5 Normalization and heatmap interpretation

For visualization, raw SDG intensity scores are normalized to allow comparison across institutes with different curricular structures. Heatmaps and intensity surfaces should be read as strategic indicators of curriculum emphasis, not as absolute rankings of institutional quality. A high intensity value indicates that a specific SDG receives substantial instructional or research weight within the curriculum, while medium and emerging intensities indicate complementary or developing areas of sustainability engagement.

1.6 Quality assurance and limitations

The mapping is dependent on the detail and consistency of available course descriptions. It captures documented curriculum content and therefore may not fully reflect informal teaching practices, hidden curriculum, student projects or research outputs that are not explicitly described in the source material. For this reason, the results should be periodically updated and validated with institute representatives, program coordinators and course instructors.

SDG Impact Report: İzmir International Biomedicine and Genome Institute (IBG)

1. Institutional Overview and Analysis Scope

The İzmir International Biomedicine and Genome Institute (IBG) represents a cornerstone of advanced biotechnological research and graduate-level education. As a specialized multidisciplinary hub, IBG is dedicated to translating fundamental genomic data into clinical applications and innovative health technologies. This report provides a comprehensive, curriculum-based analysis of IBG's graduate programs—specifically the Master of Science (MSc) and Doctorate (PhD) tracks—to quantify their alignment with the United Nations Sustainable Development Goals (SDGs).

Designed for university leadership and international accreditation bodies, this analysis employs a rigorous evidence-based approach to demonstrate how the institute's pedagogical framework contributes to global health, industrial innovation, and sustainable development.

2. Methodological Framework: ECTS-Weighted SDG Mapping

To convert raw curricular data into strategic institutional intelligence, this report utilizes a multidimensional "SDG Intensity" scoring system. This methodology ensures that sustainability impact is measured not just by presence, but by academic depth and institutional reach.

- The 12-Week Pure Instructional Model:** The analysis filters out mid-term and final examination periods, focusing strictly on the 12 weeks of active teaching per semester. This isolates the specific time allocated to knowledge transfer and research training.
- The Impact Formula & Program Multiplier:** To capture the true institutional footprint, an "SDG Intensity Score" is calculated using the following formula: $SDG\ Score = [(Total\ SDG-Related\ Teaching\ Weeks / 12) \times Course\ ECTS\ Value] \times Program\ Multiplier$. The **Program Multiplier** accounts for foundational courses shared across multiple departments, amplifying the total institutional impact when a single high-value course serves a broad student base.
- Global Intensity Normalization:** Results are mapped to a standardized scale of 0 to 100. To ensure comparability across diverse faculties, a baseline of **100% intensity** is defined as a full 30-ECTS semester load (e.g., a total clinical or research rotation).

3. Core Alignment: SDG 3 (Good Health and Well-being)

The curriculum at IBG is primarily anchored in SDG 3, reflecting its institutional mission to combat complex diseases through precision medicine. The following table synthesizes the thematic clusters within this goal.

Thematic Focus	Course Codes	Curricular Impact Summary
----------------	--------------	---------------------------

Oncology and Immunology	BST 6019, MBG 6109, MBG 6118	Advanced training in cancer chromatin dynamics, pathogen-host immune interactions, and molecular pathways of tumor initiation and progression.
Genetics and Rare Diseases	BST 6012, BST 6015	High-tech application of genome engineering. Includes specialized modules on porcine model generation for biomedical research and genome engineering in retinal diseases , alongside single-gene vs. multi-gene pathology.
Therapeutic Strategies	MBG 6106, BST 6017	Critical instruction on gene therapy protocols and regenerative biology focusing on the heart, bone, and kidneys.

4. Technological Innovation: SDG 9 (Industry, Innovation, and Infrastructure)

IBG serves as a primary driver for SDG 9 by integrating computational sciences and engineering with biomedical research, fostering an infrastructure for next-generation health industries.

- **Computational Biology and AI:** Courses such as **BST 6005** (Machine Learning and Artificial Intelligence) and **BST 6002** (Bioinformatics and Gene Priority) provide students with the data-driven expertise required to navigate the "Industry 4.0" healthcare landscape.
- **Precision Engineering:** Through **BST 6011** (3D Bioprinting and Tissue Engineering) and **BST 6010** (Biomaterials and Microenvironments), the curriculum bridges the gap between material science and biological architecture.
- **Advanced Diagnostic Imaging:** Specialized training in **BST 6013** (Optical Coherence Tomography - OCT) and **BST 6014** (Laser-Tissue Interactions) develops the technical infrastructure necessary for non-invasive medical diagnostics.

5. Quantitative Distribution Analysis: PhD vs. MSc

The SDG footprint illustrates a clear progression from foundational technical competence to intensive, specialized research contribution.

- **MSc (Master's) Programs:** These programs provide the technical bedrock. Courses like **BST 5001** (Biomedicine Science) carry a standard **12 ECTS** value per semester, focusing on broad-spectrum technical alignment and preparing students for the rigors of specialized research.
- **PhD (Doctorate) Programs:** Doctoral candidacy represents a massive, sustained commitment to SDG goals. Specialized research modules, most notably **BST 6099** (Thesis), represent a cumulative commitment of **135 ECTS** across the candidacy. This creates a sustained "Research Plateau" of maximum intensity, signifying the development of world-class expertise in genomic sustainability.

6. Visual Projection Specifications: The Academic Journey



DOKUZ EYLÜL UNIVERSITY



To communicate this data effectively to stakeholders, 3D Surface Graphs are utilized to visualize the "Biomedical Sustainability Journey." These projections must adhere to the following parameters:

- **X-Axis (Academic Timeline):** Represents the semester-based progression (MSc Semesters 1-4; PhD Semesters 1-8+).
- **Y-Axis (Teaching Timeline):** Represents the 12 teaching weeks per semester, providing a granular view of instructional delivery.
- **Z-Axis (Normalized Intensity):** Represents the impact score on the 0-100 scale (where 30 ECTS = 100% intensity).
- **Key Identification (The Research Plateau):** The visual representation must highlight the **Research Plateau**—the high-altitude region of the graph formed by intensive modules such as **BST 6099** and **BST 6198**. This plateau illustrates the culmination of the student's journey into SDG-aligned expert mastery.

7. Strategic Synthesis and Conclusion

The İzmir International Biomedicine and Genome Institute (IBG) is a vital strategic asset in the university's global sustainability portfolio. By successfully bridging the divide between fundamental genetic research (**SDG 3**) and industrial technological applications (**SDG 9**), IBG positions the university at the vanguard of the international biomedical landscape.

The institute's specific intensity in **BST 6005** (AI/Machine Learning) and **BST 6013** (OCT) provides a distinct technological edge that traditional medical faculties often lack. This synergy between genomics and artificial intelligence serves as a primary contributor to the university's global sustainability rankings, ensuring that IBG graduates are uniquely equipped to lead the transition toward a more resilient and innovative global health infrastructure.

SDG Impact Report: Institute of Health Sciences

1. Executive Overview and Methodology

This report provides a strategic audit of the graduate curriculum at the Institute of Health Sciences (Sağlık Bilimleri Enstitüsü), mapping academic output to the United Nations 2030 Agenda. The objective is to quantify the Institute's contribution to global sustainability through specialized health research, technological innovation, and social inclusion.

Methodology:

- **ECTS-Weighted Impact Analysis:** Institutional commitment is measured using the European Credit Transfer and Accumulation System (ECTS). By weighting the ECTS of course modules against specific Sustainable Development Goals (SDGs), we determine "Impact Intensity."
- **The 12-Week Graduate Model:** All Master's and Doctorate programs are analyzed through a standard 12-teaching-week unit. This model is utilized as the baseline for evaluating competency acquisition; it provides the necessary longitudinal depth to move students from theoretical clinical foundations to the mastery of complex, SDG-aligned research methodologies.
- **Source Authority:** The analysis is strictly grounded in the departmental course catalogs for Anatomy, Biochemistry, Biophysics, Physical Education and Sports, and Biomechanics.

2. Primary Impact Analysis: SDG 3 (Good Health and Well-being)

SDG 3 is the "massively dominant" priority of the Institute, acting as the anchor for all clinical and research activities. The curriculum directly addresses **Target 3.4 (Reduce mortality from non-communicable diseases)** and **Target 3.5 (Strengthen the prevention and treatment of substance abuse)**.

- **Clinical Foundations:** Doctorate studies in neuroanatomy (ANA 6048) and systemic anatomy (ANA 5002) establish the physiological bedrock for advanced medical intervention. The focus on the central nervous system, brain stem, and spinal cord pathways (9 ECTS) is essential for addressing neurological health across populations.
- **Molecular Insights:** The Biochemistry curriculum (BİO 6070, 6071) explores metabolic pathways and cellular signaling (apoptosis and autophagy). This provides the molecular framework required to innovate treatments for metabolic syndromes and chronic diseases.
- **Physical Performance and Ergogenic Aids:** Beyond exercise physiology (BES 6003, 6004), the inclusion of "Ergogenic Aids" (BES 6017) is critical. This module synthesizes pharmacological, physiological, and nutritional interventions. By educating researchers on the risks of amphetamines, anabolic steroids, and peptide hormones, the Institute



directly supports the global mandate for substance abuse prevention and safe health practices (Target 3.5).

ECTS-Weighted Impact of SDG 3 Core Courses

Course Code	Program Level	ECTS	12-Week Analysis: High-Intensity Focus Area
ANA 6048	Doctorate	9	Neuroanatomy: CNS Pathways and Brain Stem Analysis
BiO 6070	Doctorate	6	Bioenergetics: Metabolic Cycles and Nucleotide Synthesis
BES 6017	Doctorate	6	Pharmacological Aids: Substance Prevention and Nutrition
BES 6004	Doctorate	9	Cardiopulmonary Adaptations: Respiratory Mechanics
ANA 5002	Master's	7	Systemic Anatomy: Circulatory and Urogenital Systems

3. Innovation and Technological Advancement: SDG 9 (Industry, Innovation, and Infrastructure)

The Institute fosters a high-tech health ecosystem, specifically contributing to **Target 9.5 (Enhance scientific research and upgrade technological capabilities)**.

- **Biomechanics and Robotics:** Course BMK 6041 (12 ECTS) integrates mechatronics and biomedical device concepts into health sciences. The curriculum details the use of biological sensors, hydraulic/pnömatic actuators, and the development of rehabilitative robotics and prosthetics, providing the physical infrastructure for modern medicine.
- **Neuro-Informatics and Digital Infrastructure:** Biophysics modules (BYF 5014, ERS 6022) focus on data acquisition, sampling, and brain data analysis. These competencies represent a vital form of "Digital Research Infrastructure," enabling the processing of complex biological signals into actionable medical data.
- **Entrepreneurial Ecosystem:** The SBE 6083 and SBE 6084 modules (6 ECTS each) bridge the gap between the laboratory and the market. These courses emphasize the creation of "Health 4.0" startups.

The Innovation Pathway (Laboratory to Startup):

- **IP Management:** Navigating patents, utility models, and industrial property rights.
- **Incubation:** Utilizing Technoparks and incubation centers for early-stage development.
- **Product Development:** Prototyping and the creation of Minimum Viable Products (MVP).
- **Investment Readiness:** Developing Pitch Decks and engaging with Angel Investors and Venture Capital.

4. Reduced Inequalities and Inclusion: SDG 10 & SDG 5



The curriculum demonstrates a clear directive to address the social determinants of health and the rights of marginalized populations.

- **SDG 5 (Gender Equality):** The Institute addresses gender-specific health and sports participation through "Woman and Sport" (BES 6029) and research into sex hormones (BES 6008), promoting gender-sensitive health strategies.
- **SDG 10 (Reduced Inequalities):** The Institute explicitly maps curriculum elements to the inclusion of **Migrants, LGBTI+, and Disabled** groups. This is achieved through modules like "Child and Sport" (BES 6012), which focuses on inclusive education for diverse youth, and the psychology of adaptive physical education. Furthermore, the focus on "Human Resources Management" (BES 6023) includes training on preventing "Mobbing" (workplace harassment/exclusion), ensuring a safe and inclusive environment for all researchers and practitioners, regardless of social or biological background.

5. Responsible Operations and Environment: SDG 12 (Responsible Consumption and Production)

The Institute aligns its laboratory operations with international standards for resource efficiency and environmental safety, specifically targeting **ISO 14001 Environmental Management** principles.

- **Sustainable Lab Management:** "Advanced Biochemistry Techniques" (ERS 6023) and Biomechanics modules integrate precision measurement and safety protocols to minimize hazardous waste.
- **Resource Efficiency:** By training students in the exact application of SI units and precise volume/weight measurement, the Institute reduces chemical runoff and equipment wear.

Sustainable Laboratory and Clinical Practices Checklist:

- **ISO 14001 Alignment:** Implementation of standardized waste management and environmental impact protocols.
- **Waste Prevention:** Precise weighing and volume measurement (ERS 6023) to prevent chemical overflow.
- **Equipment Longevity:** Regular maintenance of transducers, sensors, and actuators (BMK 6041).
- **Diagnostic Efficiency:** Optimized use of high-resource imaging (MRI, PET, SPECT) to reduce unnecessary energy consumption.
- **Chemical Safety:** Adherence to strict laboratory safety and SI unit standards.

6. Quantitative Impact Distribution

Based on curriculum ECTS weighting, the SDG priority ranking for the Institute is as follows:

1. High Priority: SDG 3 (Good Health and Well-being)

- **Total ECTS Impact:** >650 ECTS.
- **Basis:** Massive allocation to core clinical research (Anatomy, Biochemistry, Physical Ed) and 150-ECTS thesis modules (ANA 6199, BİO 6199, BYF 6199).

2. Medium Priority: SDG 9 (Industry, Innovation, and Infrastructure)

- **Total ECTS Impact:** ~45 ECTS.
- **Basis:** Specialized mechatronics (BMK 6041), neuro-informatics (ERS 6022), and entrepreneurship (SBE 6083/6084).

3. Emerging Priority: SDGs 5, 10, and 12

- **Total ECTS Impact:** ~35 ECTS.
- **Basis:** Inclusion modules (Women/Children in sports), social equity training (Mobbing prevention), and laboratory management (ERS 6023).

7. Strategic Conclusions

The Sağlık Bilimleri Enstitüsü serves as a critical driver for the 2030 Agenda through three strategic pillars:

1. **Holistic Health Integration:** The curriculum bridges macroscopic anatomy with molecular signaling and pharmacological management, providing a 360-degree approach to SDG 3.
2. **Infrastructure for Health 4.0:** By merging biomechanical robotics with digital data informatics, the Institute creates the technical infrastructure required for sustainable medical innovation.
3. **Ethical and Inclusive Leadership:** The transition from clinical science to social management—including the protection of marginalized groups (Migrants, LGBTI+, Disabled) and the implementation of ISO 14001 environmental principles—prepares graduates for responsible global leadership.

The 12-week graduate model is the essential unit of this success, providing a structured timeline that moves the student through a rigorous progression of foundational knowledge, technical specialization, and ultimate alignment with global sustainability competencies.

SDG Impact Report: Institute of Marine Sciences and Technology (Deniz Bilimleri ve Teknolojisi Enstitüsü)

1. Institutional Framework and SDG Alignment Methodology

The Institute of Marine Sciences and Technology (Deniz Bilimleri ve Teknolojisi Enstitüsü) serves as a premier academic authority dedicated to the systematic study, technological advancement, and sustainable governance of marine environments. This report evaluates the Institute's contribution to the United Nations Sustainable Development Goals (SDGs) by mapping its advanced graduate curricula to global sustainability targets.

The methodology employed herein utilizes the European Credit Transfer and Accumulation System (ECTS/AKTS) values as a quantitative proxy for "institutional effort" and "impact weighting." In this framework, ECTS values represent the concentration of faculty resources, laboratory infrastructure, and research hours dedicated to a specific scientific domain. The analysis encompasses the comprehensive curriculum of both the PhD (Doktora) and Master's (Yüksek Lisans) programs, integrating the biological pillar of Living Marine Resources (Canlı Deniz Kaynakları) with the physical and historical data provided by the department of Marine Geology and Geophysics (Deniz Jeolojisi ve Jeofiziği).

2. Primary Impact Domain: SDG 14 - Life Below Water

SDG 14 is the institutional cornerstone, represented through a curriculum that synthesizes marine biodiversity, ecosystem functions, and the rigorous mathematical modeling required for sustainable fisheries management. The Institute emphasizes a holistic view of the water column, from primary production in the pelagic zone to the complex biodiversity of benthic communities.

Core Curricular Contributions to SDG 14

Course Category	Thematic Focus (derived from content)	Representative ECTS Weight
Fisheries Science	Advanced stock assessment using Virtual Population Analysis (VPA) , Cohort Analysis , and the determination of Biological Reference Points (CDK 5155, 6029) .	8 ECTS
Marine Megafauna	Systematics, biogeography, and conservation status of Marine Mammals; application of IUCN Red List criteria and regional protection protocols (CDK 5144, 5044).	6 ECTS
Ecosystem Ecology	Structural and functional analysis of benthic and pelagic systems within Turkish seas; focus on nutrient cycling and secondary production (CDK 5106, 5006).	7 ECTS

Planktonology (MSc)	Study of phytoplankton diversity, historical contexts, and sucul (aquatic) ecosystem management (CDK 5043).	8 ECTS
Planktonology (PhD)	Focused research on primary production processes, the biological pump, and energy flow through the food web (CDK 5149).	7 ECTS

3. SDG 13: Climate Action and Oceanographic Shifts

The Institute provides the critical scientific data required to understand and mitigate the effects of climate change on the marine environment. This is achieved through both real-time monitoring of biological indicators and the analysis of historical climate records.

Climate Impact Research Areas:

- **Stratigraphic Historical Baselines: DJJ 5043** (Marine Geology) utilizes sediment analysis and stratigraphy to establish a historical baseline of climate variations, providing the necessary data to measure and project modern anthropogenic climate shifts.
- **Indicator-Based Monitoring:** Research into the relationship between planktonic community shifts and climate-driven oceanographic changes (**CDK 5149**).
- **Climate-Driven Migration:** The curriculum addresses the distribution of exotic species—specifically the phenomenon of **Lessepsian migration**—as a primary biological indicator of rising sea temperatures and global warming (**CDK 5031**).

4. SDG 11 & 12: Coastal Zone Management and Responsible Consumption

Addressing anthropogenic pressures and marine pollution is essential for the sustainable development of coastal communities. The Institute's curriculum provides the technical expertise to monitor pollutants and implement sustainable consumption models in aquaculture.

- **Pollution Mitigation and Toxicology:** Advanced study of chemical and industrial pollutants, with a specific focus on **Polycyclic Aromatic Hydrocarbons (PAH)**, heavy metals, and radioactive isotopes and their impacts on biotic communities (**CDK 5011**). This is complemented by microbial analysis of pathogens such as *Vibrio cholerae* and *Escherichia coli* (**CDK 5033**).
- **Sustainable Aquaculture Systems:** Evaluation of fish farm waste management, the assessment of carrying capacity, and the transition toward "Organic Farming" and "Multitrophic Aquaculture" to minimize the environmental footprint of marine protein production (**CDK 5029, 5129, 5038**).
- **Governance of Genetic and Natural Resources:** Training in the planning and governance of Marine Protected Areas (MPAs). The curriculum emphasizes compliance with international frameworks, including the **Barcelona Convention, Ramsar**



Convention, and the **Nagoya Protocol** regarding the governance of marine genetic resources (**CDK 5147**).

5. SDG 9: Industry, Innovation, and Marine Technology

The Institute actively drives innovation through the development of underwater technologies and naval architecture tailored for deep-sea exploration and commercial fisheries.

Technical Competencies and Innovations:

- **Oceanographic Observation & Estimation:** Mastery of underwater acoustics, sonar applications, and the use of Remotely Operated Vehicles (ROVs). This includes high-level training in **acoustic methods for biomass estimation** and **Scuba-based direct observation** for accurate resource assessment (**CDK 5112**).
- **Molecular Marine Genetics:** Application of metagenomic scanning and PCR-based methods to identify microbial diversity in marine sediments and biofilms (**CDK 5042**).
- **Advanced Aquaculture Engineering:** Design of intensive production systems, specifically high-efficiency **"raceway" tank systems** and offshore cage infrastructures (**CDK 6004**).
- **Specialized Naval Architecture:** Strategic design and feasibility of **Ocean-type (Okyanus Tipi)** commercial fishing and research vessels for deep-sea operations (**CDK 6005**).

6. Quantitative Impact Analysis: ECTS Distribution

The Institute's primary engine for deep, specialized SDG impact is its research output, as evidenced by the massive ECTS weighting of its doctoral program.

- **Doctoral Thesis (DEN 6199):** At **150 ECTS**, the PhD thesis is the definitive vehicle for original sustainability research, representing over half of the total degree effort. This weight proves the Institute's commitment to generating primary, peer-reviewed data on marine sustainability.

Programmatic Focus Comparison:

PhD (Doktora) Level Impact	Master's (Yüksek Lisans) Level Impact
Advanced Modeling: Utilization of R, CANOCO, and PRIMER for complex ecological and statistical data analysis.	Technical Specialization: Focus on the foundational taxonomy of flora and fauna and coastal monitoring techniques.
Deep-Sea Ecology: Research into the physiology and metabolic adaptations of bathypelagic and mesopelajik organisms.	Applied Management: Practical training in sustainable aquaculture practices and waste management.



DOKUZ EYLÜL UNIVERSITY



Methodological Innovation: Focus on independent research design and development of new sampling strategies.	on the	Regulatory Compliance: Emphasis on (aquatic) environment quality standards and local fishery laws.
--	--------	---

7. Strategic Conclusion: Academic Contribution to Global Sustainability

The Institute of Marine Sciences and Technology serves as a critical academic stakeholder for the UN 2030 Agenda. By synthesizing technical mastery of **underwater acoustics** with biological research into **Lessepsian migration** and **benthic communities**, the Institute provides the scientific evidence required for science-based policy support.

The Institute's role in developing **Marine Protected Area** systems and establishing **Biological Reference Points** for fisheries ensures that the "Blue Economy" is built upon ecological resilience. Through the **mitigation of nutrient loading (eutrophication)** and the monitoring of **PAH** and microbial pathogens, the Institute provides the technical and regulatory framework necessary to protect our oceans for future generations.

SDG Impact Report: Institute of Social Sciences Curriculum Analysis

1. Executive Framework and Methodology

This report provides a formal strategic audit of the Sosyal Bilimler Enstitüsü (Institute of Social Sciences) curriculum, mapping its architectural alignment with the United Nations Sustainable Development Goals (SDGs). As a Senior Academic Sustainability Auditor, the objective is to evaluate how the Institute's pedagogical progression and institutional alignment contribute to the global 2030 Agenda through graduate-level instruction and research.

Methodology

The analytical framework utilizes a structural credit allocation assessment based on the following parameters:

- ECTS-Weighted Impact:** This analysis employs ECTS (European Credit Transfer and Accumulation System) values as a quantitative weighting mechanism. Higher ECTS values in the research and thesis phases represent a concentrated institutional commitment to specific SDG pillars.
- Instructional Temporal Model:** The report adheres to a standard 12-week teaching model. The evaluation details specific thematic interventions within this cycle to demonstrate the depth of student engagement with sustainability challenges.

Curriculum Impact Weighting Parameters

Program Level	Credit-Based Weighting Logic	Maximum Research Weights
Master's (Yüksek Lisans)	Foundational research and specialized elective application.	60 ECTS (KMY 5099 Thesis)
Doctorate (Doktora)	Advanced theoretical synthesis and high-impact specialization.	162 ECTS (KMY 6199 Thesis/Specialization)

2. SDG 16: Peace, Justice, and Strong Institutions

The curriculum serves as a primary driver for SDG 16, focusing on the legal architecture of human rights and the accountability of administrative structures.

Legal Oversight and Human Rights

The pedagogical progression in **KMY 5006 (AİHS ve Türkiye)** and **KMY 5101 (İnsan Hakları)** ensures that students master the European Convention on Human Rights (AİHS) framework. Following the 12-week model, **KMY 5006** dedicates weeks 5 through 13 to a rigorous analysis of European Court of Human Rights (AİHM) decisions against Turkey, specifically addressing the right to life, freedom of expression, and the prohibition of torture within the context of the 1982 Constitution.

Administrative Accountability and Anti-Corruption

Integrity in governance is institutionalized through **KMY 5145 (İdarenin Denetimi)**, which evaluates the oversight mechanisms of the TBMM and the Ombudsman (Kamu Denetçiliği). In **KMY 5080**, the curriculum provides technical legal training in identifying and preventing systemic corruption, specifically modules on *Zimmet* (Embezzlement), *Rüşvet* (Bribery), and *Görevi Kötüye Kullanma* (Abuse of Power). **KMY 5143** further deepens this through the study of judicial trial processes for public officials (Laws 4483 and 3628).

Key Governance Competencies

- **Constitutional Advocacy:** Mastery of AİHM jurisprudence and national constitutional rights.
- **Oversight Architecture:** Proficiency in *hiyerarşi* (internal hierarchy) and *vesayet* (administrative tutelage) oversight.
- **Anti-Corruption Literacy:** Technical identification of extortive and fraudulent administrative behaviors.

3. SDG 5: Gender Equality and Women's Studies

The Institute creates a "Gender Equality Learning Pathway" by synthesizing legal rights with the deconstruction of cultural archetypes.

Legal Frameworks and CEDAW

In **KMY 6082 (Kadınların İnsan Hakları)**, the 12-week cycle reaches peak impact during weeks 9–11, where students analyze the individual application mechanisms of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). The curriculum explicitly anchors these global standards to the 1982 Constitution, evaluating the efficacy of positive discrimination and the prevention of gender-based exclusion in the Turkish public sector (Week 4).

Literary and Sociological Synthesis

The analysis of gender roles is bolstered by **KAR 5039 (Edebiyat Kanonunda Kadın Şairler)** and **KAR 5010 (Edebiyatta Cinsiyetçilik)**. These courses deconstruct systemic sexism by examining archetypes such as the "Tragedy of Sexism" in *Oresteia* (Week 2) and the representation of motherhood/agency in *Medea* (Week 4). This is further grounded in **KMY 6117 (Pierre Bourdieu Sosyolojisi)**, which analyzes *Domination Masculine* and the reproduction of gendered habitus (Week 14).

Gender Equality Learning Pathway

1. **Legal Foundations:** CEDAW individual application and Constitutional equality rights.
2. **Sociological Analysis:** Deconstruction of symbolic violence and cultural capital in gender roles.
3. **Cultural Archetypes:** Critical analysis of "Femme Fatale" and gendered mythologies in the literary canon.

4. SDG 11 & 13: Sustainable Cities, Communities, and Climate Action

The curriculum addresses the urban-climate nexus by integrating environmental standards with disaster management strategies.

Climate Policy and EU Alignment

KMY 6084 (İklim Değişikliği) evaluates the global climate crisis, focusing on the Kyoto Protocol (Week 8) and IPCC negotiations (Week 9). This is augmented by **KMY 6062 (Çevre Politikası)**, which aligns the curriculum with international standards. An auditor's focus on this course reveals critical modules on EU Progress Reports regarding Turkey's environmental stance (Week 8) and the implementation of Strategic Environmental Assessment (SÇD) (Week 11).

Urban Resilience and Transformation

Urban transformation law is addressed in **KMY 5141**, focusing on sustainable cities (*Sürdürülebilir Kentler*) and urban poverty. **KMY 5131 (Doğal Afet Yönetimi)** provides the operational framework for integrated risk management, ensuring urban centers are resilient against natural and human-made disasters.

Urban-Climate Nexus

Course Module	Key Topics	ECTS Weight
KMY 6062	EU Progress Reports, Strategic Environmental Assessment (SÇD)	8
KMY 6084	Kyoto Protocol, Carbon Footprints, Technology Transfer	7
KMY 5131	Bütünleşik Afet Yönetimi (Integrated Disaster Management)	5
KMY 5139	Waste Management, Illegal Waste Trade, Recycling	5
KMY 5141	Quality of Life, Urban Transformation Law	5

5. SDG 9: Industry, Innovation, and Infrastructure

Innovation is treated as a mechanism for administrative efficiency and environmental monitoring.

Digital Governance and AI

KMY 5151 (Kamu Yönetiminde Yapay Zekâ) provides a cutting-edge approach to innovation. The curriculum transcends basic administrative efficiency to focus on:

- **Smart City Management (Weeks 3-5):** Utilizing AI for urban infrastructure optimization.
- **Environmental Monitoring (Weeks 6-8):** The role of AI in carbon footprint tracking and environmental decision-making.



- **Disaster Management (Weeks 9-10):** AI-supported risk management and disaster mitigation.

Innovation Curriculum

1. **Technological Integration:** Transitioning to "Smart Cities" via AI-driven public service models.
2. **Administrative Ethics:** Navigating the ethical boundaries of AI in public policy.
3. **Green Innovation:** Leveraging R&D and technology transfer within global climate negotiation frameworks (KMY 6084).

6. SDG 10: Reduced Inequalities

The curriculum engages with the sociological roots of social stratification, migration, and the "Othering" of marginalized groups.

Sociology of Stratification

Through **KMY 6117 (Pierre Bourdieu Sosyolojisi)**, students examine how social inequalities are reproduced via "cultural capital" (*kültürel sermaye*) and "habitus" (Weeks 4-5). The 12-week model concludes with an analysis of social exclusion and the reproduction of inequality (Week 12).

Migration and Local Democracy

KMY 5064 (Göç ve Kültürel Etkileşim) and **KMY 5105 (Küreselleşme ve Azınlıklar)** analyze the socio-economic impacts of population movements. A highlight of the curriculum is the "İzmir Example" (KMY 5064, Week 13), which studies the impact of internal and international migration on local democratic structures and urban identity, contrasting local patterns with global minority rights frameworks.

7. Strategic Impact Summary (ECTS Distribution)

The Institute's academic impact is anchored by its intensive research phase, where ECTS allocation reflects a deep-dive commitment to complex socio-legal challenges.

Dominance Hierarchy (ECTS-Weighted)

1. **SDG 16 & 10 (Structural Anchor):** High Dominance. This is driven by **KMY 6199** (162 ECTS) and **KMY 6200** (18 ECTS). These values represent the **Doctorate Specialization Field (Uzmanlık Alanı)**, where research is concentrated on administrative law and sociological structures.
2. **SDG 11 & 13 (Institutional Focus):** Medium-High Dominance. Supported by modules in environmental law (KMY 6062, 8 ECTS) and urban transformation (KMY 5141, 5 ECTS).
3. **SDG 5 & 9 (Strategic Focus):** Targeted impact through high-credit doctoral electives like **KMY 6082** (8 ECTS) and technology-focused seminars.



DOKUZ EYLÜL UNIVERSITY



8. Conclusion

The Sosyal Bilimler Enstitüsü curriculum serves as a sophisticated catalyst for sustainable development within the Turkish public and social sectors. By grounding global frameworks—such as the Kyoto Protocol, CEDAW, and AİHS—within local anchors like the 1982 Constitution and the "İzmir Example" of migration, the Institute provides the academic rigor necessary to address 21st-century challenges. This architectural alignment of ECTS credits and 12-week module depth ensures that graduate research is not merely theoretical but is strategically positioned to drive real-world impact in governance, equality, and environmental resilience.

SDG Impact Report: Institute of Fine Arts

1. Executive Summary & Institutional Context

This report presents a strategic analytics-based evaluation of the graduate curriculum at the Güzel Sanatlar Enstitüsü (Institute of Fine Arts). By conducting a comprehensive audit of Master of Arts and PhD programs, this analysis quantifies the institute's contribution to the United Nations Sustainable Development Goals (SDGs) through the specialized lenses of visual arts, film design, photography, and traditional craftsmanship.

As the Director of Academic Sustainability & Strategic Analytics, it is my assessment that the Güzel Sanatlar Enstitüsü serves as a critical cultural engine for global sustainability, transforming abstract policy goals into tangible visual narratives and preserved heritage. The curriculum demonstrates high-intensity alignment with the following primary goals:

- **SDG 11: Sustainable Cities and Communities**
- **SDG 12: Responsible Consumption and Production**
- **SDG 5: Gender Equality**
- **SDG 9: Industry, Innovation, and Infrastructure**
- **SDG 10: Reduced Inequalities**

2. Methodology: The ECTS-Weighted Impact Model

To ensure methodological rigor and cross-faculty comparability, this report utilizes the **ECTS-Weighted Impact Model**. This quantitative approach measures "SDG Intensity" by weighing pedagogical duration against academic credit value.

The Scoring Formula

The SDG Intensity Score for each course is derived using the following equation: **SDG Score = (Relevant Teaching Weeks / 12) × ECTS Value**

Data Parameters

- **12-Teaching-Week Model:** The denominator is fixed at 12 weeks. All examination weeks (mid-terms and finals) have been excluded to isolate purely instructional content delivery.
- **Normalization:** To facilitate strategic institutional mapping, the Z-axis (Intensity) is normalized against a **Global Maximum of 120 points**. This cap reflects the highest potential academic effort across all Dokuz Eylül University units (including high-ECTS clinical rotations in Veterinary or Medical faculties), ensuring the Fine Arts data is statistically consistent within the "DEU SDG Heatmap."

3. Quantitative Curricular Overview

The following table synthesizes the impact data from the graduate curriculum, providing the raw ECTS values and the calculated SDG Intensity Scores based on syllabus analysis.

Department/Program Level	Course Code	Course Title	ECTS	Primary SDG	Intensity Score
Traditional Turkish Arts (PhD)	GES 6100	Traditional Turkish Illumination	8	SDG 11	8.00
Traditional Turkish Arts (PhD)	GES 6102	Design Methods in Tezhip	8	SDG 11	8.00
Film Design (PhD)	FTA 6033	Critical Theory (Feminist)	6	SDG 5	0.50
Film Design (PhD)	FTA 6042	Memory Studies/Izmir Cinema	6	SDG 11	1.00
Photography (PhD)	FTG 6109	Art in the Anthropocene	6	SDG 12	5.00
Photography (PhD)	FTG 6111	Augmented Reality (AR)	6	SDG 9	6.00
Photography (PhD)	FTG 6113	Digital Visual Regimes & AI	6	SDG 9	6.00
Photography (MA)	FTG 5073	Ecology & Contemporary Photo	6	SDG 12	1.00
Photography (MA)	FTG 5070	City Photography	8	SDG 11	4.67
Photography (PhD)	FTG 6103	Photographic Research (Archive)	6	SDG 11	1.00
Film Design (MA)	FTA 5129	Gender and Cinema	7	SDG 5	7.00

4. Thematic Analysis: SDG 11 – Sustainable Cities, Communities, and Cultural Heritage

The curriculum focuses heavily on the preservation and reinterpretation of cultural heritage, particularly through the **Traditional Turkish Arts** program (GES 6100/6102). In urban contexts, **FTA 6042** (Cinema Culture in Izmir) and **FTG 5070** (City Photography) explore the documentation of urban memory.

Curricular Heat Index (3D Surface Graph): In a visual projection of SDG 11, the intensity demonstrates a localized peak during the early-mid semester phase. Specifically, in course **FTG 6103**, the "Heat Index" (Z-axis) surges during **Weeks 4 and 5**, representing the high-impact pedagogical site visits to the **Ahmet Piriştina Kent Arşiv ve Müzesi** (City Archive and Museum). These peaks represent the university's highest moments of applied cultural sustainability, where theoretical research meets historical archiving.



5. Thematic Analysis: SDG 12 – Responsible Consumption and Sustainable Production (Art & Ecology)

The Institute addresses the "Seventh Continent" (the Great Pacific Garbage Patch) by fostering ecological awareness. This shift is primarily driven by **FTG 6109** (Art in the Anthropocene) and **FTG 5073** (Ecology and Contemporary Photography).

- **Week 2 (FTG 5073):** Dedicated to Land Art and Earth Art, emphasizing the environmental footprint of artistic intervention.
- **Week 9 (FTG 5073):** Analyzes the "Recycling phenomenon," exploring waste as a medium for sustainable production. This pedagogical framework focuses on the role of the artist in visualizing environmental crises, translating the abstract threats of the Anthropocene into critical visual data.

6. Thematic Analysis: SDG 5 – Gender Equality and Representation in Visual Media

Critical theoretical frameworks deconstruct the "Male Gaze" across visual media. Under course **FTA 5129** (Gender and Cinema) and **FTA 5130**, the curriculum utilizes the foundational theories of **Laura Mulvey** (Visual Pleasure/Görsel Haz) and **John Berger** (Ways of Seeing/Görme Biçimleri).

The 12-week commitment to SDG 5 includes high-intensity modules on:

- **Body Politics:** Analyzing the representation of the female body in narrative cinema.
- **Queer Representation:** Exploring marginalized identities within digital visual media.
- **Feminist Visual Activism (FTG 5077):** Using photography as a tool for challenging systemic gender inequalities.

7. Thematic Analysis: SDG 9 – Industry, Innovation, and Infrastructure (Digital Arts & AI)

The Institute bridges fine arts and the 21st-century digital economy through high-ECTS innovation courses. **FTG 6111** (Augmented Reality) and **FTG 6113** (Digital Visual Regimes & AI) represent the technological vanguard of the curriculum.

Of particular strategic importance is **Week 9 of FTG 6113**, which analyzes "**Synthetic Imagery**" (**Sentetik görsellik**) and the resulting "**Truth Crisis**" (**Doğruluk krizi**) in the age of AI. This focus on "Machine Vision" and "Algorithmic Photography" ensures that students are equipped to navigate the ethical and infrastructural challenges of the digital age (Cybernetic Age).

8. Thematic Analysis: SDG 10 – Reduced Inequalities (Social Justice & Activism)

The Institute functions as a node for social justice advocacy through visual resistance. Course **FTA 5123** (Oppositional Ideologies in Cinema/Muhالیf İdeoloji) and **FTG 5077** (Photography and Activism) create a framework for representing class, race, and ethnicity.

Key analytical themes include:



DOKUZ EYLÜL UNIVERSITY



- **Visual Resistance Strategies:** Practical methodologies for representing marginalized populations.
- **Human Rights Advocacy:** Using the image as a document of resistance against systemic disparities.
- **Deconstructing Hegemony:** Analyzing how cinema depicts socio-economic class struggles.

9. Conclusion: Strategic Roadmap for Fine Arts Sustainability

Developing Inter-Faculty SDG Research Clusters

The Institute will transition from siloed arts education to collaborative research clusters. Specifically, we will map digital innovation (SDG 9) from Photography to Environmental Science units to create visual data tools for climate tracking.

Institutional KPI Mapping for Cultural Sustainability

Future curriculum reviews will mandate that the Traditional Turkish Arts department integrates digital preservation KPIs. By aligning GES 6100/6102 with digital archiving standards, the Institute strengthens its impact on SDG 11 as a sustainable cultural repository.

Integration with the DEU SDG Heatmap

The Güzel Sanatlar Enstitüsü serves as a core cultural node in the university's sustainability profile. By maintaining a consistent, normalized intensity scale, the Institute provides the blueprint for how creative units contribute to the broader "DEU SDG Heatmap," proving that artistic production is as measurable and impactful as scientific research in the global sustainability agenda.

SDG Impact Report: Institute of Educational Sciences

1. Institutional Framework and Mapping Methodology

This strategic report delineates the alignment between the curriculum of the Institute of Educational Sciences (*Eğitim Bilimleri Enstitüsü*) and the United Nations Sustainable Development Goals (SDGs). The scope encompasses advanced degree programs at both the Master's (*Yüksek Lisans*) and Doctorate (*Doktora*) levels.

To ensure rigorous analysis, the report employs an "Impact Intensity" methodology. This model is predicated on a 12-teaching-week cycle, explicitly excluding examination periods (Midterm/Week 8 and Final/Week 15) to isolate active pedagogical delivery. Furthermore, the findings are weighted against the European Credit Transfer and Accumulation System (ECTS/AKTS) values provided in the institutional Source Context. By correlating specific weekly course topics with SDG targets, the Institute provides a quantifiable map of its contribution to global sustainability through the lens of educational and psychological sciences.

2. Dominant Pillar: SDG 4 – Quality Education and Pedagogy

The Institute's curriculum serves as a primary vehicle for achieving SDG 4 by fostering advanced research methodologies and pedagogical excellence. The program focuses on equipping educators and counselors with the high-level competencies required to manage complex educational systems. With 12 out of 14 weeks dedicated to active inquiry in core courses, the Impact Intensity for pedagogical development is maximized.

- **Advanced Research Paradigms:** Courses such as **AED 5536 (4 ECTS)** and **AED 5088 (5 ECTS)** (Qualitative Research) provide a deep understanding of qualitative paradigms and theory development. These modules are essential for evaluating and improving the quality of educational outcomes.
- **Scientific Inquiry and Specialization:** The doctoral framework, led by **ADE 6196 (3 ECTS)** (Doctoral Research) and **ADE 6199 (156 ECTS)** (Doctoral Thesis), dedicates substantial academic weight to identifying systemic educational problems and developing evidence-based solutions.
- **Educational Leadership:** The curriculum prepares advanced practitioners to refine system-wide learning outcomes, ensuring that equitable education is supported by data-driven pedagogical strategies.

3. Mental Health and Family Support: SDG 3 – Good Health and Well-being

A robust segment of the curriculum is aligned with SDG 3, focusing on mental health, family counseling, and therapeutic interventions. These courses emphasize the therapeutic relationship, psychological resilience, and the patient-family-provider partnership.

Course Code	Course Name / Focus	Specific Health & Well-being Outcome
-------------	---------------------	--------------------------------------

ADE 6001 (6 ECTS)	Counseling Skills	Establishment of ethical counseling relationships and psychosocial assessment.
ADE 6005 (6 ECTS)	Mindfulness-Based Counseling	Use of MBSR and MBCT techniques to enhance mental health in families.
ADE 6007 (6 ECTS)	Positive Psychology	Application of strength-based interventions for familial well-being.
ADE 6019 (6 ECTS)	Family Oriented Health	Implementation of patient-family-provider partnerships in healthcare.
ADE 6006 (6 ECTS)	Crisis, Trauma, and Grief Counseling	Psychological management of disasters, loss, and traumatic events.
AED 5531 (8 ECTS)	Crisis Intervention	Application of the ABC model to situational and developmental crises.
ADE 6010 (6 ECTS)	EMDR Therapy	Trauma recovery and desensitization through Adaptive Information Processing.

4. Special Education and Inclusion: SDG 10 – Reduced Inequalities

The Institute demonstrates a commitment to reducing inequalities by addressing the needs of disadvantaged groups and fostering social inclusion.

- **Emotional Health and Special Needs: ADE 6021 (6 ECTS)** specifically addresses "Individuals with special needs in the family," training practitioners to manage emotional health challenges within families navigating specialized care.
- **Mitigating Systemic Disadvantage:** Through **ADE 6024 (6 ECTS)**, the curriculum analyzes problems in "disadvantaged families" and "fragmented families," promoting interventions to reduce social exclusion.
- **Migration and Cultural Dynamics: ADE 6009 (6 ECTS)** examines the impact of migration, socio-economic status, and cultural structures on the family life cycle, preparing counselors for marginalized population support.

5. Innovation in Pedagogy: SDG 9 – Industry, Innovation, and Infrastructure

Alignment with SDG 9 is identified through the intersection of educational technology and curriculum development. The Institute focuses on the modernization of pedagogical tools and research infrastructure.

- **Digital Integration:** The Institute provides specialized training in "Digital technologies in mathematics education," highlighting the historical and current evolution of technological teaching tools.

- **Advanced Research Infrastructure:** The use of specialized software for qualitative data analysis, such as MAXQDA and NVivo, is taught in **AED 5556 (4 ECTS)**, reflecting a commitment to innovative digital research infrastructure.
- **Strategic Research Goals:** While not currently listed as weekly topics, the integration of Artificial Intelligence (AI) and Virtual Reality (VR) serves as a strategic institutional research goal to modernize educational delivery.

6. Socio-Legal Frameworks and Environmental Consciousness: SDGs 12, 13, 15, & 16

The curriculum adopts a multi-disciplinary approach to sustainable communities by integrating legal protections and environmental risk factors.

Legal/Environmental Course Topic	SDG Target
ADE 6013 (6 ECTS): Property Regimes & Civil Code	SDG 16: Promote inclusive societies through legal frameworks.
ADE 6017 (6 ECTS): Family Courts and Mediation	SDG 16: Access to justice and effective legal institutions.
ADE 6014 (6 ECTS): Paternity and Lineage (<i>Soybağı</i>)	SDG 16: Legal protection of children's rights and family status.
AED 5513 (6 ECTS): Fundamentals of Mediation	SDG 16: Conflict resolution and interpersonal mediation.
AED 5531/5579 (8/5 ECTS): Environmental Risk Factors	SDG 13/15: Stressors in crisis management and community health.
VSD 2005 (Referenced Context): Ecology and Fauna	SDG 15: Multidisciplinary elective supporting environmental education.

7. Quantitative Impact: ECTS-Weighted Intensity Metrics

The following table summarizes the academic weight attributed to primary SDG alignments, factoring in core ADE courses and specialized thesis research.

SDG Number	Primary Focus	Representative Course Codes	Cumulative ECTS Weight
SDG 4	Quality Education & Research	AED 5536, AED 5088, AED 6199	165+ ECTS
SDG 3	Mental Health & Well-being	ADE 6001, ADE 6005, ADE 6006	44 ECTS (per cycle)



DOKUZ EYLÜL UNIVERSITY



SDG 10	Reduced Inequalities	ADE 6021, ADE 6024, ADE 6009	18 ECTS (per cycle)
---------------	----------------------	------------------------------	---------------------

Note: Calculations reflect the exclusion of non-teaching weeks (8 and 15). The Doctoral Thesis (ADE 6199) remains the primary ECTS driver for SDG 4.

8. Conclusion: Strategic Contribution to Sustainable Development

The Institute of Educational Sciences serves as a critical driver for social and mental sustainability. Its curriculum establishes a strategic pipeline where Master's level courses—such as **AED 5531 (8 ECTS)**—build foundational crisis management skills, which then evolve into specialized clinical interventions and high-level research at the Doctorate level, exemplified by **ADE 6010 (6 ECTS)**.

By bridging the gap between foundational pedagogical skills and advanced therapeutic specialization, the Institute ensures a comprehensive output of experts capable of addressing complex societal challenges. This synthesis of individual psychological well-being, legal awareness, and inclusive education defines the **Institutional SDG DNA**, positioning the Institute as a leader in fostering sustainable social infrastructures.

SDG Impact Report: Institute of Atatürk's Principles and History of the Turkish Revolution

1. Institutional Overview and Mission Alignment

The Atatürk İlkeleri ve İnkılap Tarihi Enstitüsü (Institute of Atatürk's Principles and History of the Turkish Revolution) serves as a cornerstone of Turkish higher education, mandated to provide a rigorous academic analysis of the Turkish Revolution and the foundational pillars of the modern state. As a Senior Sustainability Analyst, it is evident that the Institute's focus on **Kemalism, Democracy, and Institutional Modernization** provides the necessary historical and theoretical infrastructure for achieving long-term sustainability. By dissecting the evolution of constitutionalism, the expansion of civil rights, and the integration of diverse populations, the Institute transforms historical inquiry into a blueprint for modern societal resilience.

This report evaluates how the Institute's academic output and curriculum strategically advance the United Nations Sustainable Development Goals (SDGs), with primary emphasis on:

- **SDG 16: Peace, Justice, and Strong Institutions**
- **SDG 5: Gender Equality**
- **SDG 10: Reduced Inequalities**
- **SDG 11: Sustainable Cities and Communities**

2. Methodological Framework for Impact Assessment

To evaluate the Institute's contribution to global goals, this report utilizes a rigorous quantitative and temporal framework:

- **ECTS Weighting:** Academic impact is measured through the European Credit Transfer and Accumulation System (ECTS). By weighting course contributions by their ECTS values, we quantify the institutional resource allocation and student commitment toward specific sustainable development themes.
- **Temporal Model:** The analysis adheres to a standardized 12-week teaching framework. Following the source context, all examination periods (midterms and finals) are excluded from the impact calculation to focus strictly on pedagogical delivery.
- **Programmatic Scope:** This assessment is grounded exclusively in the Master's (Yüksek Lisans) and PhD (Doktora) curricula as detailed in the provided source context.

3. Deep Dive: SDG 16 – Peace, Justice, and Strong Institutions

The Institute builds institutional resilience by mandating a curriculum that explores the transition from autocratic structures to a democratic, rule-of-law-based nation-state. Courses in constitutional history and political theory analyze the mechanisms required to maintain transparent and accountable governance.

Core Curriculum Mapping to SDG 16

Course Code	ECTS Value	Week-Specific Topics & Institutional Support
ATA 5027	4	Evolution of the 1921 and 1924 Constitutions; structure and functioning of basic state organs; constitutional amendment procedures.
ATA 6035	4	Historical origins of democracy; Ottoman-Republican democratic heritage; transition to multi-party systems; analysis of military interventions and election systems.
ATA 6050	5	Ethics and Philosophy of Science: Ethical behavior in scientific studies, the role of ethics committees, and anti-corruption in research.
ATA 6058	3	Kemalist Thought Analysis: Economic and political analysis of Kemalism, secularism (laiklik), and the nation-state model.
ATA 6068	3	Political thought from Antiquity (Socrates, Plato) to Modernity (Locke, Rousseau); the development of the Nation-State and Liberalism.
ATA 7004	4	Comparative analysis of political movements: Totalitarianism, Fascism, and the Kemalist Thought System as a modernizing alternative.
ATA 6099	180	PhD Thesis: Intensive research focused on scientific methodology, identifying literature gaps, and specifically foreseeing problems and preparing B-plans to ensure research continuity.

The Institute's commitment to SDG 16 is most profoundly reflected in **ATA 6099 (180 ECTS)**. By requiring doctoral candidates to master the ability to "foresee problems and prepare B-plans," the Institute cultivates a cadre of researchers capable of maintaining institutional stability and academic integrity even under conditions of systemic risk.

4. Deep Dive: SDG 5 – Gender Equality

The Institute prioritizes the study of the legal and social elevation of women as a prerequisite for modern state-building. This inquiry is concentrated in courses that track the transition from pre-modern social status to full civic participation.

Weekly Progression: ATA 5047 ("Women in the Republican Era")

To adhere to the 12-week teaching framework, the curriculum for ATA 5047 is synthesized as follows:

- **Week 1:** Basic concepts, theories of women's history, and women in political life.
- **Week 2:** Social, economic, and cultural status of women in the pre-modernization era.
- **Week 3:** Impact of Tanzimat modernization on women's living conditions and key reformist figures.

- **Week 4:** Women's status during the II. Abdülhamit era.
- **Week 5:** Development of women's rights during the II. Meşrutiyet (Second Constitutional) era.
- **Week 6:** The role and contribution of women during the Turkish War of Independence.
- **Week 7:** Legal advancements and women's rights during the Single-Party Era (1923–1945).
- **Week 8:** Gender rights and social change during the Democrat Party era.
- **Week 9:** Social struggles and women's movements in the 1960s.
- **Week 10:** Modern Türkiye and the evolution of Feminism as a political and social thought (linking to ATA 5060).
- **Week 11:** Gender in the context of scientific research and education institutions (linking to ATA 7019).
- **Week 12:** General evaluation of the status of women's rights approaching the 2000s.

The Institute's high-ECTS weighting of these modules signifies that gender parity is not merely a historical footnote but a core component of the academic inquiry into modern Turkish identity.

5. Deep Dive: SDG 10 – Reduced Inequalities

The Institute addresses the mandate of "Reduced Inequalities" by analyzing the socio-economic integration of migrants and the protection of minority rights following the Lozan Treaty. The curriculum examines the institutional response to displacement, specifically the role of the **Ministry of Exchange, Reconstruction, and Settlement** and the humanitarian involvement of the **Turkish Red Crescent (Hilal-i Ahmer Cemiyeti)**.

The Institute defines its approach to inequality through the study of "**Etabli problems**" and "**social structure formation.**" By analyzing the distribution of "**Abandoned Properties**" (**Terk edilmiş mallar**) as a mechanism for socio-economic equity, the curriculum explores how the state transitioned migrants into productive citizens, thereby mitigating the risk of long-term social marginalization.

Through courses such as ATA 6043 and ATA 6066, the Institute provides a historical model for the "Ministry of Exchange" and the "Mübadele, İmar ve İskan Kanunu" (Exchange, Reconstruction, and Settlement Law), demonstrating how institutional frameworks can be deployed to protect the rights of vulnerable, displaced populations.

6. Deep Dive: SDG 11 – Sustainable Cities and Communities

Historical urban evolution is treated as a prerequisite for sustainable planning. Through course **ATA 6033 ("Urban History: Izmir")**, the Institute explores the transition to Republican

municipal governance as a shift toward more organized and sustainable institutional urban management.

12-Week Schedule: ATA 6033

- **Week 1:** Theoretical foundations and definitions of "Urbanism."
- **Week 2:** Evolution of urban historiography in the Turkish context.
- **Week 3:** Introduction to historical sources of Izmir's urban history.
- **Week 4:** Social and economic transformation in 19th-century Izmir (Part I).
- **Week 5:** Social and economic transformation in 19th-century Izmir (Part II).
- **Week 6:** The transition process of Izmir in the early 20th century (Part I).
- **Week 7:** The transition process of Izmir in the early 20th century (Part II).
- **Week 8:** Impact of migration movements on the urbanization process and social equity.
- **Week 9:** Izmir during the War of Independence: Crisis and resilience.
- **Week 10:** Administrative structures pre- and post-Republic: The rise of organized municipal governance.
- **Week 11:** Social structure evolution pre- and post-Republic.
- **Week 12:** Economic structure evolution pre- and post-Republic.

By highlighting the shift from decentralized structures to the Republican administrative model, the curriculum demonstrates how organized governance facilitates the "organized and sustainable" management of urban centers.

7. Quantitative Impact Summary (ECTS Weighting)

The following table summarizes the cumulative ECTS impact, reflecting the Institute's strategic prioritization of sustainable development themes.

Cumulative ECTS Impact by SDG

Row	Sustainable Development Goal	Total ECTS Contribution (Selected Core Courses)
1	SDG 16: Peace, Justice, and Strong Institutions	210 ECTS (ATA 6099, 6035, 5027, 6068, 7004, 5019, 5042, 6050, 6058)
2	SDG 5: Gender Equality	8 ECTS (ATA 5047, 7019)
3	SDG 10: Reduced Inequalities	11 ECTS (ATA 5051, 6043, 6066)
4	SDG 11: Sustainable Cities and Communities	4 ECTS (ATA 6033)



DOKUZ EYLÜL UNIVERSITY



Note: ECTS values are derived from the official PhD and Master's listings. The dominance of SDG 16 is representative of the Institute's core mission to foster institutional strength through high-level research (ATA 6099) and ethics (ATA 6050).

8. Conclusion: Strategic Contribution to Global Goals

The Atatürk İlkeleri ve İnkılap Tarihi Enstitüsü serves as a critical intellectual hub for the attainment of Sustainable Development Goals. Its curriculum does more than recount history; it builds institutional resilience by training future scholars in risk-prevention, ethical research, and social parity. By mandating rigorous 12-week academic cycles and high-ECTS research requirements, the Institute ensures that the principles of justice, equality, and sustainable urban governance are deeply embedded in the nation's academic and administrative leadership. The Institute's work provides a necessary blueprint for achieving a peaceful, just, and sustainable global future.