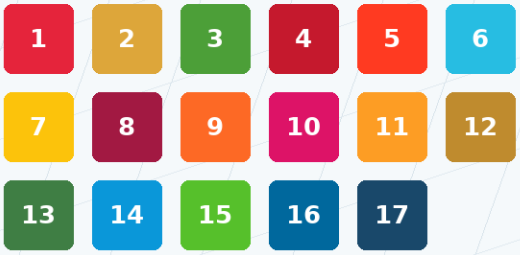
DOKUZ EYLUL UNIVERSITY

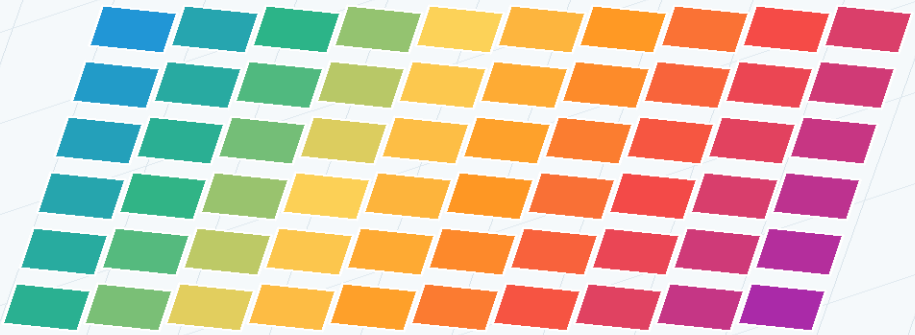
Sustainable Curriculum Intelligence



SDG Curriculum Mapping and Intensity Analysis

Vocational Schools and Schools-Based Heatmap Report

Executive Summary, Contents and General Methodology



Prepared by Zero Waste and Environmental Management Coordinatorship and Sustainability Office of Dokuz Eylül University

2026

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This executive summary synthesizes the SDG curriculum mapping results for Dokuz Eylul University's vocational schools and schools. The analysis demonstrates that these units constitute the university's applied sustainability interface: they translate global goals into clinical practice, legal and administrative services, green energy skills, food safety, cultural heritage management, sustainable gastronomy, and performing arts education.

The mapping uses a standardized active-teaching model in which examination weeks are excluded and weekly course topics are aligned with relevant Sustainable Development Goals. Each alignment is weighted by ECTS credit value, allowing the analysis to distinguish between occasional thematic references and sustained, workload-based curriculum intensity.

Dominant SDG Profile by Unit

Academic Unit	Dominant SDGs	Strategic SDG Identity
Vocational School of Health Services	SDG 3, SDG 9, SDG 8, SDG 12	A high-density clinical and technical health unit, with strong emphasis on patient care, biomedical equipment resilience, internships, first aid, sterilization and medical waste management.
Vocational School of Justice	SDG 16, SDG 8, SDG 5/10, SDG 12	A rule-of-law and institutional integrity unit, supported by human rights, labor law, family law, consumer protection and judicial administration courses.
İzmir Vocational School	SDG 3, SDG 9, SDG 11, SDG 2/12	A triple-pillar applied hub linking biomedical technologies, computer programming and mechatronics, local governments, mapping, agriculture and chemical safety.
Bergama Vocational School	SDG 7, SDG 8/3, SDG 12, SDG 9	A green energy and industrial transition unit centered on renewable energy technologies, OHS, internships, waste management, industrial ecology, sensors and digital infrastructure.
Efes Vocational School	SDG 3, SDG 11, SDG 2, SDG 9	A regional sustainability unit combining food technology, aviation safety and logistics, and cultural heritage management with strong practical placement components.
Torbalı Vocational School	SDG 3, SDG 11, SDG 9, SDG 12, SDG 13/15	A multi-sector vocational unit integrating food safety, aviation health, industrial efficiency, heritage preservation, green logistics and disaster/climate awareness.
Kiraz Vocational School	SDG 3, SDG 2, SDG 12, SDG 8	A One Health and agri-food unit focused on veterinary health, livestock productivity, laboratory diagnostics, milk production, professional ethics and responsible biological sample management.
School of Applied Sciences	SDG 8, SDG 12, SDG 2, SDG 9	An applied services and gastronomy-oriented unit where sustainable gastronomy, zero-waste recipes, Slow Food, food safety, HRM and supply-chain innovation dominate.
State Conservatory	SDG 4, SDG 11, SDG 3, SDG 12	A cultural sustainability unit linking technical artistic mastery, intangible heritage preservation, performer health and responsible material/costume use.

Across the combined vocational school and school dataset, five institutional patterns emerge. First, SDG 3 is the strongest applied health pillar, particularly in Health Services, Efes, Torbalı and Kiraz. Second, SDG 9 appears as an enabling infrastructure goal across biomedical equipment, aviation, computing, mechatronics, digital mapping and supply-chain systems. Third, SDG 11 is strongly represented through cultural heritage, urban/local governance, mapping and performing arts preservation. Fourth, SDG 12 is embedded through waste management, responsible packaging, circular kitchen practices, laboratory safety and material lifecycle extension. Finally, SDG 8 functions as the professionalization layer, especially where internships, occupational safety, entrepreneurship, HRM and labor-market readiness are central.

The overall profile is therefore highly complementary to the faculty and institute reports: while faculties and institutes demonstrate disciplinary depth and research intensity, vocational schools and schools provide the applied operational capacity through which sustainability competencies become workplace practice, public service capacity, cultural continuity and regional development.

Cross-Cutting Institutional Patterns

Pattern	Institutional meaning
Applied health and safety	SDG 3 appears through clinical practice, food hygiene, first aid, flight physiology, One Health, laboratory biosafety and performer health.
Technical and digital infrastructure	SDG 9 is visible in biomedical equipment, digital technologies, aviation systems, mechatronics, GIS, AI-adjacent systems and supply-chain tools.
Cultural and community continuity	SDG 11 is supported by heritage conservation, urban/local governance, city mapping, tourism assets, Ephesus-focused expertise and artistic heritage.
Responsible production and resource use	SDG 12 is embedded through waste management, packaging, zero-waste kitchens, green logistics, recycling, material maintenance and laboratory efficiency.
Workforce readiness and regional development	SDG 8 functions as a vocational bridge through internships, OHS, entrepreneurship, HRM, labor law and sector-specific employability.

General Methodology for SDG Curriculum Mapping

The SDG curriculum mapping framework was designed to identify, quantify and visualize how weekly course content contributes to the United Nations Sustainable Development Goals. The approach is intentionally compatible with the faculty- and institute-based reports so that all academic units can be incorporated into a single university-wide SDG heatmap structure.

1.1 Analytical Unit: Active Teaching Weeks

The primary unit of analysis is the active teaching week. Midterm examinations, final examinations and non-instructional assessment periods are excluded from the denominator. For this reason, the standard semester model is treated as a 12-teaching-week cycle. This allows the mapping to focus on actual pedagogical delivery rather than assessment intervals.

1.2 SDG Alignment Logic

Weekly topics, course descriptions, learning outcomes and practical training components are reviewed against the 17 SDGs. A course may contribute to more than one SDG when its weekly content supports multiple sustainability dimensions, such as food safety and public health, or cultural heritage and sustainable communities. The strongest alignment is recorded as the primary SDG, while secondary alignments are retained for interpretation of the unit-level profile.

1.3 ECTS/AKTS-Weighted Intensity Formula

To prevent superficial mapping, thematic relevance is weighted by academic workload. ECTS/AKTS values are treated as a proxy for student effort, institutional resource allocation and curricular depth. The basic formula used across the analysis is:

SDG Intensity Score = (Relevant SDG Weeks / 12) × Course ECTS/AKTS Value

Where applicable, an institutional or program multiplier is applied to shared foundational courses that serve multiple programs. This captures the wider institutional reach of courses such as anatomy, first aid, occupational health and safety, seminar modules or cross-program technical courses.

1.4 Normalization and Heatmap Interpretation

Raw intensity scores are normalized to a common scale for cross-unit comparison. The normalized heatmap does not merely show whether an SDG is present; it shows how strongly and where it appears across the curriculum. High-intensity peaks generally occur in clinical rotations, internships, capstone practice, high-ECTS technical modules or advanced professional training. Lower-intensity zones often represent introductory awareness, foundational theory or single-week thematic references.

Methodological Component	Purpose	Output
Weekly content mapping	Links active teaching topics to specific SDGs	SDG relevance by week
Exam-week exclusion	Removes assessment periods from intensity calculations	12-week active teaching denominator
ECTS/AKTS weighting	Reflects student workload and academic depth	Course-level SDG intensity score
Program multiplier	Captures shared courses serving multiple programs	Institutional reach-adjusted score
Heatmap normalization	Enables comparison across vocational, clinical, cultural and technical units	Unit-level and university-level SDG profiles

1.5 Interpretation for Vocational Schools and Schools

Because vocational schools and schools are practice-oriented, their SDG profiles often peak in applied modules, internships, laboratory practice, clinical training, professional safety courses and sector-specific technical courses. This makes them especially important for demonstrating how sustainability competencies are operationalized beyond theoretical awareness. Their contribution is therefore interpreted through applied workforce readiness, public service capacity, technical infrastructure support, cultural preservation and regional development impact.

1.6 Outputs of the Mapping Process

The methodology produces four complementary outputs: unit-level executive summaries, dominant SDG profiles, normalized heatmap-ready intensity values and interpretive notes explaining why particular SDGs are pedagogically dominant. These outputs are designed for integration into the consolidated institutional SDG curriculum report.

1.7 Quality Assurance and Interpretation Notes

The mapping should be interpreted as curriculum-based evidence of educational contribution, not as a direct measurement of external impact. Scores indicate the relative density of SDG-aligned learning within the curriculum. Final interpretation should consider program scope, the number of students served, whether a course is compulsory or elective, and whether the SDG contribution is theoretical, practical, clinical, technological or cultural.

DOKUZ EYLÜL UNIVERSITY

SDG Impact Report: Sağlık Hizmetleri Meslek Yüksekokulu (Vocational School of Health Services)

1. Institutional Framework and Analytical Methodology

This report delineates the strategic alignment of the Vocational School of Health Services' curriculum with the United Nations Sustainable Development Goals (SDGs). As a Senior Sustainability Consultant and Academic Registrar, the objective is to quantify the academic architecture of our 2-year (4-semester) vocational associate degree programs and their contribution to global health and industrial resilience.

Analytical Methodology

To ensure registrar-level precision, the curriculum is mapped using a standardized temporal and credit-based model:

- **Temporal Model:** We apply a **12-teaching-week model** per semester. This rigorously excludes examination weeks to isolate active pedagogical impact and ensure the data reflects instructional intensity.
- **ECTS-Weighted SDG Scoring Formula:** The institutional impact of any given course is calculated using the following proprietary formula: $\text{SDG Puanı} = \left(\frac{\text{İlgili Haftaların Sayısı}}{12}\right) \times \text{Dersin AKTS Değeri}$
    - **Application Example:** In the Anesthesia program, the course **ANS 2233 (Clinical Anesthesia III)** carries **17 ECTS**. Given that all 12 teaching weeks are directly mapped to SDG 3 (Good Health and Well-being), the calculation is: $(12/12) \times 17 = 17.0 \text{ SDG Points}$.
- **The Normalization Principle:** To facilitate comparative accuracy across diverse technical and clinical tracks—ranging from Anesthesia to Biomedical Equipment Technology—intensity levels are standardized. We establish the **Global Maximum Intensity (Semester 4)** as our **1.0 Benchmark**. Furthermore, the institutional weight is adjusted by the **Program Multiplier (Program Sayısı)**; foundational courses such as **Anatomy (ANS 1125, ADS 1001, BMT 1001)** possess higher institutional gravity as they serve the entire student body, whereas specialized clinical courses represent concentrated vertical impact.

2. Quantitative SDG Distribution & Global Intensity

The curriculum architecture strategically prioritizes four primary SDGs. The following table provides the normalized credit weighting across the school's pedagogical offerings.

SDG Academic Credit Weighting (Normalized)

SDG Number	Core Target Areas	Aggregated Influence (Normalized Coefficient)

SDG 3	Good Health and Well-being	0.94 (Massively Dominant)
SDG 9	Industry, Innovation, and Infrastructure	0.42 (High Specialization)
SDG 8	Decent Work and Economic Growth	0.28 (Professional Prep)
SDG 12	Responsible Consumption and Production	0.22 (Operational Ethics)

Global Maximum Intensity: The "pedagogical peak" occurs during **Semester 4**. This topographical maximum is driven by high-ECTS clinical rotations and technical practices, specifically **ANS 2233** (17 ECTS) and **ANS 2234** (15 ECTS), where theoretical foundations consolidate into high-stakes healthcare delivery.

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

The Vocational School serves as a primary driver for SDG 3, providing the human capital necessary for resilient health systems. Our impact is categorized into three strategic tiers:

- **Preventative Care:** Foundational courses such as **DDS 1001 (Public Health)** and basic sciences (**ANS 1125, ADS 1001, BMT 1001**) establish the biological and systemic baseline. These courses carry the highest **Program Multiplier**, ensuring that every graduate possesses a uniform understanding of human physiology and disease prevention.
- **Acute Intervention:** The school excels in training for high-acuity environments. This is exemplified by **Clinical Anesthesia (ANS 1152, ANS 2233)** and specialized dental care modules like **Endodontics and Restorative Treatment (ADS 2002)**, which transition students from simulated learning to direct patient intervention.
- **Diagnostic Precision:** The integration of technology and health is achieved through **Medical Imaging Systems (SHS 2059)** and **Oral and Maxillofacial Radiology (ADS 2013)**, ensuring the technical accuracy required for modern diagnostics.
- **Community Safeguarding:** A critical institutional safety net is the "First Aid" curriculum (**ASS 1001, DDS 2001**), which is mandatory across all 10 programs, ensuring all graduates are competent first responders.

4. Specialization Impact: SDG 9 - Industry, Innovation, and Infrastructure

The **Biomedical Equipment Technology** program provides a unique sustainability value proposition by bridging the gap between engineering and patient care, directly supporting resilient health infrastructure.

Infrastructure Enablers: Institutional Technical Impact

Course Code	ECTS	Institutional Infrastructure Impact (Equipment Support)

BMT 2003	4	Life Support Systems (Ventilators, Hemodialysis, Incubators)
SHS 2059	4	Imaging Infrastructure (MRI, CT, Ultrasound, X-Ray)
BMT 1004	4	Diagnostic Sensors (Biopotential ECG, EEG, EMG)
SHS 1090	3	Sterilization and Packaging Infrastructure

Training in **Biomedical Sensor Technology** and the maintenance of life-critical imaging systems ensures that health facilities remain operational, reducing technological downtime and fostering local technical innovation.

5. Professional Sustainability: SDG 8 & SDG 12

The transition from student to professional is governed by the principles of economic growth and environmental stewardship.

- **SDG 8 (Decent Work):** The curriculum integrates **Clinical Internships (ANS 1156, ADS 1012)** and **Occupational Health and Safety (OHS)** modules. This ensures graduates enter the healthcare workforce not only as skilled technicians but as professionals cognizant of labor rights and workplace safety.
- **SDG 12 (Responsible Consumption):** Operational waste management is treated as a core clinical competency. While **ANS 1149 (Anesthesia)** establishes sterilization basics, the **Oral and Dental Health** curriculum (**DDS 1004, Week 12**) provides the most granular instruction on the **"Collection and disposal of medical waste" (Tıbbi atıkların toplanması ve imha edilmesi)**. This module is essential for mitigating the biological and radioactive footprint of healthcare facilities.

6. Curriculum Journey: Temporal Intensity Mapping

A student's academic journey resembles a "Topographical Ascent." The complexity and credit weight of SDG-related content do not follow a linear path, but rather a structured incline.

- **Semesters 1-2 (The Theoretical Valley):** Lower intensity, focusing on the theoretical sciences. While essential, the ECTS values here (typically 2-4 per course) create a foundational base for later application.
- **Semesters 3-4 (The Clinical Peak):** A vertical ascent in intensity occurs as theoretical knowledge is applied in clinical settings. The "Plato Effect" is visible in Semester 4, where individual courses reach 15-17 ECTS, representing the maximum academic commitment to SDG 3 and SDG 9.

Simulated Intensity Matrix: SDG 3 (Semester vs. Teaching Week)

Week / Semester	Semester 1	Semester 2	Semester 3	Semester 4
Weeks 1-4	2.0	2.5	8.0	**12.0**

Weeks 5-8	2.0	3.0	9.0	**15.0**
Weeks 9-12	3.5	4.0	10.0	**17.0**

Note: Values calculated based on the DEU Institutional Methodology for Temporal Credit Mapping.

7. Strategic Conclusions for Institutional Reporting

1. **Unique Sustainability Value Proposition:** The Vocational School represents a critical **interdisciplinary technical-clinical bridge**. By uniting Biomedical Engineering (SDG 9) with Acute Care (SDG 3), the institution serves as a rare hub for both medical equipment resilience and patient care excellence.
2. **Strategic Recommendations for SDG Alignment:** To further refine our sustainability impact, we recommend expanding the **Medical/Radioactive Waste Management** modules within **ANS 1149** to include an explicit focus on **SDG 13 (Climate Action)**. Specifically, modules should be updated to address the **"Carbon Footprint of Disposable Medical Plastics,"** aligning clinical efficiency with environmental necessity.
3. **Institutional Normalized Impact:** Within the broader University context, the Vocational School of Health Services provides the highest "Practical Application Density." By anchoring the majority of its ECTS in the **1.0 Benchmark (Semester 4)**, the school ensures that its impact on global targets is both measurable and direct.

DOKUZ EYLÜL UNIVERSITY

SDG Impact Report: Vocational School of Justice Curriculum Mapping

1. Institutional Context and Program Scope

The Adalet Meslek Yüksekokulu (Vocational School of Justice) operates as a critical 2-year (4-semester) associate degree program designed to cultivate qualified human capital for the judicial and administrative tiers of the legal system. This report serves as a strategic evaluation of the program's curriculum, mapping its pedagogical delivery against the United Nations Sustainable Development Goals (SDGs).

The analysis is grounded in the institution's core pillars: **Justice, Law, and Human Rights**. By transitioning from theoretical legal foundations to applied procedural management, the program ensures that its graduates are prepared to uphold the rule of law in a modern institutional framework.

2. Mapping Methodology & Impact Metrics

To maintain institutional benchmarking standards and ensure data readiness for university-wide integration, the following metrics were applied:

- **ECTS-Weighted Impact Factor:** The quantitative weight of each SDG is determined by the formula: **SDG Score = (Number of Thematic Weeks / Total Teaching Weeks) x Course ECTS Value.**
- **Teaching Week Parameter:** To eliminate "assessment valleys" (non-instructional periods), the analysis utilizes a standardized **12-week teaching cycle**. Midterms and final examination weeks are excluded to isolate active content delivery.
- **Global Normalization:** Intensity scales are normalized against a universal cap of **100** to allow for comparative benchmarking across all university units, ensuring that the Adalet MYO data can be integrated into the broader University Heatmap.

3. Primary Pillar: SDG 16 – Peace, Justice, and Strong Institutions

SDG 16 represents the dominant strategic alignment of the Adalet MYO curriculum, focusing on the rule of law, institutional integrity, and the administrative health of judicial systems.

Core Course Alignment: SDG 16

Course Code	Course Title	Key Thematic Alignment (Source Context)	ECTS Value
AMY 1016	Basic Law	Rule of Law, Legal Rights, Systems of Justice	4
AMY 1019	Constitutional Law	Separation of Powers, Judicial Independence, Norm Control	4
AMY 1034	Judicial Organization	**Savcılık Teşkilatı** (Prosecution), **Arabuluculuk** (Mediation), Court Systems	5

AMY 1037	Human Rights Law	International Protection, ECHR, Civil Rights	5
AMY 1004	Criminal Law	State Authority, Criminal Responsibility, Principles of Law	4
AMY 2030	Criminal Procedure Law	Evidence Law, Rights of the Accused, Judicial Fairness	4
AMY 1028	Judicial Registry Services	Administrative Integrity, **Kalem Hizmetleri** (Registry), Transparency	4
AMY 2031	Execution Law	**İnfaz Hukuku** (Enforcement), Rights of Convicts, Re-socialization	4

Technical Analysis of Institutional Strength The curriculum maintains a high intensity of engagement by bridging the gap between theoretical criminal responsibility (AMY 1004) and the practical mechanics of judicial administration. By emphasizing **Judicial Registry Services (AMY 1028)** and **Execution Law (AMY 2031)**, the program ensures that "Peace and Justice" are not merely concepts but operational realities. The inclusion of **Arabuluculuk (Mediation)** within the judicial organization highlights a contemporary shift toward alternative dispute resolution, which is essential for reducing procedural backlogs and strengthening institutional efficiency.

4. Economic Growth and Decent Work: SDG 8

The curriculum contributes to economic sustainability by regulating the legal framework of the labor market and ensuring the financial integrity of public receivables.

- **AMY 2042 (Labor Law):** Focuses on the protection of worker rights and the legal regulation of employer-employee relations, vital for sustainable economic growth.
- **AMY 2032 (Commercial Law) & AMY 1041 (Business Management):** Addresses corporate ethics and the legal parameters of business operations.
- **AMY 2047 (Tax Law) & AMY 2046 (Public Debt Collection):** These courses are critical for maintaining the financial integrity of the state. They specifically cover **"Kamu alacağı için tanınan güvence önlemleri"** (Guarantees for public receivables) and "Public liability," ensuring a stable fiscal environment required for market confidence.

5. Equality and Social Justice: SDG 5 (Gender Equality) & SDG 10 (Reduced Inequalities)

Grouped under the framework of **Socio-Legal Equity**, the curriculum addresses systemic inequalities and the protection of vulnerable groups through specialized legal domains:

- **AMY 2033 (Family Law):** Direct focus on the protection of marriage and child welfare. Core topics include:
    - **Nafaka** (Alimony) and the economic protection of spouses.

- **Vesayet** (Guardianship) and the legal representation of the vulnerable.
- **Miras** (Inheritance) as a mechanism for social and familial equity.

- **AMY 1037 (Human Rights Law):** Provides a broad shield against discrimination, emphasizing:
  - **International Protection of Human Rights (ECHR).**
  - Individual Application to the Constitutional Court.
  - Universal protection of civil liberties regardless of socio-economic status.

6. Responsible Consumption and Legal Protection: SDG 12

The curriculum identifies a niche but vital alignment with SDG 12 by fostering legal accountability in production and consumption cycles through **AMY 2045 (Consumer Law)**.

Technical instruction focuses on the legal recourse available for "Defective Goods/Services." A primary mechanism highlighted is the **Tüketici Hakem Heyeti** (Consumer Arbitral Committees), which provides the legal infrastructure for accountability. By educating future legal professionals on these mechanisms, the program ensures that sellers and providers are held to sustainable and ethical standards, thereby empowering responsible consumption.

7. Quantitative Summary and Visual Projections

Applying the **ECTS-Weighted Impact Factor** (Score = [Thematic Weeks / 12] \times ECTS) to the core curriculum results in the following impact distribution:

Sustainable Development Goal	Total Calculated ECTS Impact	Strategic Priority
SDG 16: Peace, Justice, and Strong Institutions	31.17	Primary Driver
SDG 8: Decent Work and Economic Growth	22.00	Secondary Support
SDG 5 & 10: Socio-Legal Equity	8.25	Essential Support
SDG 12: Responsible Consumption	4.58	Niche Support

Visual Projection Analysis The projected **3D Surface Graph** for Adalet MYO displays an "Academic Ascent" profile. The Z-Axis (Intensity) reveals a significant **"plateau" in Semester 4**. This elevation is driven by the concentration of high-ECTS specialized procedural courses (e.g., AMY 2030, AMY 2028, and AMY 2031). For university-wide normalization, the **Global Maximum Intensity** is capped at **100**, ensuring this unit's data is ready for the comparative Heatmap.

8. Conclusion: Strategic Alignment

The Adalet Meslek Yüksekokulu curriculum is a robust driver for **SDG 16**, providing the technical and ethical foundation required for a resilient judicial system. It further offers secondary support for socio-economic stability through **SDGs 8, 10, and 12**.

To further enhance the program's impact on **SDG 9 (Industry, Innovation, and Infrastructure)**, it is recommended that "Legal Technology and Digitalization" be framed as the digital infrastructure of the judiciary. Current courses like **AMY 1030 (Keyboard Techniques)** and **TBT 1011 (Basic IT)** should be strategically positioned as tools for the "reduction of procedural backlog," thereby modernizing the state's judicial infrastructure for the 21st century.

SDG Impact Report: İzmir Vocational School (İzmir MYO) Curriculum Analysis

1. Executive Summary of Curricular Alignment

The İzmir Vocational School (İzmir MYO) has strategically transitioned its vocational training framework to align with the United Nations 2030 Agenda for Sustainable Development. This report provides a high-level assessment of how the institution's technical curriculum serves as a critical vehicle for sustainable development. By integrating Sustainable Development Goals (SDGs) into core vocational competencies, İzmir MYO ensures that its graduates are prepared to address the socio-technical challenges of the 21st century.

The curriculum analysis reveals a high degree of intentionality in departmental clusters, particularly within Health, Industry, and Technology. This alignment moves the institution beyond peripheral awareness, embedding sustainability into the functional "DNA" of each program. The following assessment utilizes ECTS weighting and longitudinal mapping to quantify this impact, providing university leadership with a strategic roadmap for institutional growth.

İzmir MYO Primary SDG Identity Based on departmental core competencies and high-intensity academic clusters, İzmir MYO functions as a **Triple-Pillar Impact Hub**:

- **The Health Pillar:** Centralized around SDG 3 (Good Health and Well-being) via Biomedical Device Technology.
- **The Innovation Pillar:** Focused on SDG 9 (Industry, Innovation, and Infrastructure) via Computer Programming and Mechatronics.
- **The Community Pillar:** Driven by SDG 11 (Sustainable Cities and Communities) via Local Governments and Mapping programs.

2. Methodological Framework: The Triple-Filter Approach

To ensure academic rigor and comparability across the university's 34 units, the İzmir MYO curriculum was analyzed using a quantitative "Triple-Filter" methodology. This system normalizes raw course data into strategic impact scores.

1. **Micro Level (Weekly Content Analysis):** A granular review of weekly lesson titles for SDG-related keywords. This filter identifies the presence of sustainability themes in the active teaching schedule.
2. **Meso Level (Course Density):** This level determines the concentration of SDGs within a single course by calculating the ratio of sustainability-focused weeks to the total teaching duration.
3. **Macro Level (ECTS Weighting):** The final impact is determined by applying the credit-multiplier, recognizing that higher ECTS values represent a greater share of the student's academic effort and institutional resources.

Mathematical Formula for SDG Scoring: SDG Score = (Number of Related Weeks / 12 Teaching Weeks) x Course ECTS Value

Note: In accordance with the standardized 12-week active teaching model, all examination weeks (Midterms and Finals) were excluded to isolate pure instructional impact and prevent "intensity dips" caused by assessment periods.

3. Departmental SDG Cluster Analysis

The following clusters were prioritized for analysis based on their "High-Intensity Potential" identified through the Triple-Filter model. These representative courses illustrate the depth of SDG integration across primary departments.

Cluster 3.1: SDG 3 (Good Health and Well-being)

Focus: Biomedical Device Technology (BMT). This department serves as the backbone for medical infrastructure resilience.

Course Code	Core Subject	Target SDG	Impact Description
BMT 4101	Anatomy and Physiology	SDG 3	Foundational biological knowledge required for medical device integration.
BMT 4116	Biomedical Instrumentation	SDG 3	Technical theory of sensors/transducers for patient monitoring.
BMT 4216	Calibration	SDG 3	Ensuring accuracy of life-critical equipment (EKG, Defibrillators).

Cluster 3.2: SDG 9 (Industry, Innovation, and Infrastructure)

Focus: Computer Programming (BLP). This cluster addresses digital transformation and the infrastructure of the "New Economy."

Course Code	Core Subject	Target SDG	Impact Description
BLP 4125	Digital Technologies	SDG 9	Integration of IoT, Big Data, and Industrial Algorithms.
BLP 4114	Embedded Systems	SDG 9	Microcontroller programming for smart industrial automation.
BLP 4226	Electronic Commerce	SDG 9	Infrastructure development for new economic and e-government ecosystems.

Cluster 3.3: SDG 11 (Sustainable Cities and Communities)

Focus: Local Governments and Mapping. This cluster addresses the administrative and spatial requirements for resilient urban environments.

Course Code	Core Subject	Target SDG	Impact Description
YRY 4XXX	Urban Planning Logic	SDG 11	Sustainable land use and disaster-resilient city management.
HRT 4XXX	Digital Mapping	SDG 11	Geographic Information Systems (GIS) for community infrastructure.

Cluster 3.4: SDGs 2 & 12 (Zero Hunger & Responsible Production)

Focus: Agriculture and Chemistry. These modules align with sustainable production cycles and the "Food Safety" logic established in the university's central sustainability framework.

Course Code	Core Subject	Target SDG	Impact Description
TRM 4XXX	Sustainable Agriculture	SDG 2	Enhancing food security through sustainable cultivation techniques.
KMY 4XXX	Chemical Safety	SDG 12	Minimizing hazardous waste in industrial and agricultural production.

4. The 3D Curriculum Journey: Longitudinal Impact Mapping

The 4-semester Associate Degree (Önlisans) structure is visualized as a "Curriculum Journey" using 3D Surface Graphs. This allows for the identification of "Intensity Summits" throughout the academic timeline.

Axis	Definition	Source Logic
X-Axis	Semester (1st to 4th)	4th-digit coding logic (Odd = Fall, Even = Spring).
Y-Axis	Teaching Week (1 to 12)	12-week instructional flow (excluding exams).
Z-Axis	Normalized Intensity	ECTS-weighted scores (Global Scale).

Demonstrative Intensity Calculation: The course **BMT 4216 (Calibration)** demonstrates a "Summit" profile. With 12 weeks of active SDG 3 content and an ECTS value of 3: SDG Score = (12 / 12) x 3.0 = 3.0 Intensity units. Contrastingly, **BMT 4101**, while core to the program, carries an ECTS of 2, resulting in a lower intensity peak of **2.0**. This mathematical variance justifies the 3D surface "peaks" seen in the final semesters of the program.

5. Comparative Institutional Impact (Normalization)

To ensure comparability across 34 distinct university units, a **Global Maximum Intensity** strategy is employed.

- **Fixed Scale (0-100):** All intensity scores are normalized to a universal scale. This prevents high-credit departments (like the Veterinary Faculty with 30 ECTS rotations) from overshadowing the significant technical contributions of İzmir MYO.
- **Institutional Reach (Program Count Multiplier):** The impact of a course is multiplied by the "Dersi Alan Program Sayısı" (Number of Programs taking the course).
    - *Case Study:* **MHG 4001 (Seminar)** has a Program Count of **3**. While its individual intensity may be moderate, its institutional impact is **tripled**, as it serves as a primary vehicle for disseminating sustainability competencies across multiple student cohorts simultaneously.

6. Heatmap Visualization: The Institutional SDG DNA

The following heatmap synthesizes the concentration of SDGs across İzmir MYO's analyzed departments, reflecting the core "DNA" of the institution.

Department	SDG 2	SDG 3	SDG 8	SDG 9	SDG 11	SDG 12
Computer Programming	☐	☐	🟧	🟥	🟧	🟧
Biomedical Tech	☐	🟥	☐	🟥	☐	🟧
Local Governments	☐	☐	🟧	☐	🟥	☐
Agriculture	🟥	🟧	☐	☐	☐	🟥

Legend: 🟥 High Density (Core Impact), 🟧 Medium Density (Supporting Impact), ☐ Low Density (Indirect Impact)

7. Conclusion and Strategic Recommendations

The İzmir MYO curriculum is a significant contributor to the university's sustainability profile. However, to maximize the institutional impact, the following strategic actions are required:

1. **Elimination of Curricular Voids:** A longitudinal analysis shows that Semester 1 and 2 (Odd-coded courses ending in 1 or 3) often have significantly lower SDG intensity. Foundational sustainability modules must be integrated into these early semesters to establish competency before specialization.
2. **Strategic Credit Re-alignment:** ECTS weighting should be increased for modules that maintain a 100% SDG alignment ratio (such as BMT 4216) to ensure academic credit reflects the high societal value of these technical competencies.
3. **Expansion of High-Multiplier Courses:** The institution should utilize courses with high "Program Count" multipliers (like the MHG seminar series) as the primary vehicles for interdisciplinary sustainability themes, maximizing institutional reach with minimal curricular overhead.

8. Appendix: Global Normalization Scale

This report adheres to the standardized English terminology and grid-based visualization model required for the "Sustainability Atlas" database. All data is derived from the İzmir MYO course catalog and processed through the longitudinal analysis framework. The results are formatted for seamless integration into the final 578-graph institutional assessment.

SDG Impact Report: Bergama Vocational School Curriculum Mapping

1. Institutional Framework and Scope

This institutional audit establishes the baseline for sustainability-integrated vocational pedagogy within **Bergama Meslek Yüksekokulu (Bergama Vocational School)**. As a specialized 2-year (4-semester) vocational institution, Bergama MYO plays a pivotal role in the "Green Energy Transition" by aligning its technical curricula with the United Nations Sustainable Development Goals (SDGs).

The scope of this report encompasses a multidisciplinary analysis of the following primary academic programs:

- **Alternative Energy Sources Technology** (Alternatif Enerji Kaynakları Teknolojisi)
- **Computer Technology** (Bilgisayar Teknolojisi)
- **Machinery Operations** (İş Makineleri Operatörlüğü)

2. Impact Mapping Methodology

To maintain methodological rigor, this report utilizes a quantitative weighting system to measure "SDG Intensity." The logic moves beyond qualitative mapping to provide a mathematical representation of academic commitment.

- **Impact Factor (ECTS/AKTS):** The European Credit Transfer and Accumulation System (ECTS) value serves as the primary proxy for student effort and institutional resource allocation.
- **Normalization Logic:** The **SDG Intensity Score** is calculated using course content mapping against specific SDG targets, excluding examination periods to focus exclusively on the **12-week teaching cycles**.
- **The Quantitative Formula:** \text{SDG Intensity Score} = \left(\frac{\text{Relevant SDG Weeks}}{\text{Total Teaching Weeks (12)}} \right) \times \text{ECTS} \times \text{Program Factor}
- **Program Factor:** This coefficient represents the cross-disciplinary reach of a course. If a course is shared across multiple programs (e.g., Occupational Health and Safety), its institutional impact is multiplied by the number of participating programs (P_{factor}).

3. Dominant SDG Analysis: SDG 7 (Affordable and Clean Energy)

The curriculum mapping identifies **SDG 7** as the primary pillar of Bergama MYO. The technical depth of the programs ensures that the entire energy value chain—**Production, Storage, and Economics**—is covered, providing a transformative educational experience rather than a merely descriptive one.

Core Energy Course Mapping (SDG 7)

Course Code	Course Name	ECTS	Key SDG 7 Technical Topics
ENR 1002	Wind Energy	3	Turbine aerodynamics, power coefficients, and site measurement.
ENR 1008	Solar Energy Systems	3	Evolution of 1st-3rd gen PV cells; Photovoltaic system design.
ENR 1012	Hydrogen Energy Systems	4	Hydrogen production methods, fuel cells, and storage vehicles.
ENR 1013	Energy Power Plants	3	Thermal, hydraulic, nuclear, and geothermal plant operations.
ENR 1014	Energy Economics	2	Market dynamics, cost-benefit analysis of renewable investments.
ENR 2015	Energy Storage Systems	3	Mechanical, electrochemical, and thermal storage technologies.
ENR 2019	Bioenergy Technologies	3	Biomass conversion, microbial processes, and biogas production.

Specific technical competencies, such as **Wind Turbine Aerodynamics (ENR 1002)** and **Hydrogen Production Methods (ENR 1012)**, are directly linked to Target 7.2 (Increase global percentage of renewable energy) and Target 7.a (Enhance international cooperation for clean energy research).

4. Occupational Integrity: SDG 8 (Decent Work) and SDG 3 (Good Health and Well-being)

Bergama MYO integrates economic growth with worker safety, ensuring that "Decent Work" is synonymous with a "Safety Culture."

- **İSG 2004 (Occupational Health and Safety):** With a weight of 2 ECTS and an **Impact Factor of 2** (as it is shared by both Alternative Energy and Computer Technology programs), this course doubles its institutional credit weight. It provides rigorous training in **Law No. 6331**, identifying chemical, physical, and biological risk factors to prevent occupational disease and injury.
- **ENR 2012 (Internship/Staj):** This 23-ECTS course (extending to 30 ECTS when aggregated with specialized program requirements like BİL 1018) creates a critical synergy between SDG 8 and SDG 3. Students must observe industrial OHS procedures and report on environmental sustainability practices within professional industrial settings.

5. Circular Economy and Resource Management: SDG 12 (Responsible Consumption and Production)

The curriculum emphasizes the mitigation of industrial environmental footprints through resource efficiency and waste recovery.

- **ENR 1016 (Waste Management and Recycling):** This course introduces the classification of waste and technical recovery for metals, plastics, and organic waste (Biogas/Compost). These processes are linked to circular economy metrics, focusing on reducing waste generation through prevention and recycling (Target 12.5).
- **ENR 2021 (Industrial Ecology):** Focuses on **Life Cycle Assessment (LCA)**, teaching students to analyze environmental impacts from product origin to disposal.
- **ENR 2014 (Sustainable Mining):** Specifically analyzes **Boron mining**, focusing on sustainable extraction technologies and environmental impact mitigation, crucial for responsible mineral production.

6. Temporal Impact Distribution (4-Semester Academic Journey)

The "Sustainability Journey" of a student at Bergama MYO shows a distinct temporal progression where the Z-axis (SDG Intensity) rises sharply toward graduation:

- **Year 1 (Semesters 1 & 2):** Foundational intensity. Courses focus on energy physics, waste classification, and the basics of natural resource potential.
- **Year 2 (Semesters 3 & 4):** A significant **"Intensity Plato"** occurs in Semester 4. This peak is driven by the 23-30 ECTS total impact of the Internship (ENR 2012/BİL 1018) combined with advanced modules like **ENR 2020 (Sustainable Development)**. ENR 2020 synthesizes advanced concepts including Wave Energy, Ocean Thermal Energy Conversion (OTEC), and global sustainability strategies.

7. Cross-Disciplinary Digital Integration (SDG 9: Industry, Innovation, and Infrastructure)

The Computer Technology and Machinery programs serve as technical enablers for **Industry 4.0** and sustainable infrastructure monitoring. The deployment of specific digital tools is essential for modern "Green Infrastructure":

- **SolidWorks (İSM 2025):** Enables 3D modeling and static simulation, reducing material waste in mechanical prototyping.
- **Cisco Packet Tracer (BİL 2011/2020):** Used for modeling network infrastructure and smart grid monitoring systems.
- **Arduino & Sensors (BİL 2016/2022):** Provides competencies in instrumentation and control, vital for energy efficiency monitoring and automated industrial systems.

8. Conclusion: Institutional Alignment Summary

Bergama MYO's curriculum demonstrates a robust and sophisticated alignment with global sustainability goals. By integrating technical mastery in clean energy (SDG 7) with rigorous safety standards (SDG 8) and circular economy principles (SDG 12), the institution fulfills its strategic mandate to produce a specialized workforce for the green economy. **Strategic**

Recommendation: To further elevate institutional impact, the MYO should continue to leverage the "Program Factor" by expanding shared sustainability modules across all vocational disciplines, ensuring a unified transition toward sustainable industrial infrastructure (SDG 9).

SDG Impact Analysis Report: Efes Vocational School (Efes MYO) Curriculum

1. Introduction and Methodology

1.1. Objective

This institutional audit evaluates the alignment of the Efes Vocational School (Efes MYO) curriculum with the United Nations Sustainable Development Goals (SDGs). The report provides a critical analysis of how vocational training provides the technical competencies necessary to meet the targets of **SDG 2 (Zero Hunger)**, **SDG 3 (Good Health and Well-being)**, **SDG 9 (Industry, Innovation, and Infrastructure)**, and **SDG 11 (Sustainable Cities and Communities)**.

1.2. Methodology

The evaluation methodology utilizes a dual-layered approach:

1. **Qualitative Mapping:** Individual course modules and learning outcomes are mapped to specific UN SDG Targets to determine functional alignment.
2. **Quantitative Weighting:** The European Credit Transfer and Accumulation System (AKTS/ECTS) weights are used to calculate the "Educational Volume" (EV). This quantification measures the school's academic commitment to sustainability-related expertise.

1.3. Scope of Analysis

The analysis encompasses the following associate degree programs:

- Food Technology (*Gıda Teknolojisi*)
- Cultural Heritage and Tourism (*Kültürel Miras ve Turizm*)
- Civil Aviation Transportation Management (*Sivil Hava Ulaştırma İşletmeciliği*)
- Civil Aviation Cabin Services (*Sivil Havacılık Kabin Hizmetleri*)

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2. Institutional Competency Analysis: SDG 2 (Zero Hunger)

The Food Technology program serves as the primary academic engine for SDG 2, specifically addressing **Target 2.1**, which aims to ensure access to safe, nutritious, and sufficient food year-round.

2.1. Food Security and Nutrition Synthesis

The curriculum moves beyond theoretical knowledge to provide technical skills in food preservation and quality control. By mastering cereal, meat, dairy, and vegetable technologies, students gain the ability to reduce post-harvest losses and improve food stability—critical components of a resilient food supply chain.

2.2. Core Technical Modules Mapping (SDG 2)

Course Code	Course Title	AKTS	UN Target Alignment	Technical Competency Focus
GTP 1008	Cereal Technology	4	Target 2.1	Quality assessment of grains; mitigating microbial spoilage in storage.
GTP 2005	Meat Technology	5	Target 2.1	Analysis of nutritional value; post-mortem changes; quality factor management.
GTP 2010	Fruit & Vegetable Tech	5	Target 2.1	Preservation technologies (freezing, canning) to extend shelf life.
GTP 2012	Dairy Technology	5	Target 2.1	Composition standardization and production of stable dairy proteins.
MSH 0198	Nutrition and Health	3	Target 2.1	Understanding biological functions of nutrients and dietary patterns.

Total Educational Volume for SDG 2: 22 AKTS

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3. Institutional Competency Analysis: SDG 3 (Good Health and Well-being)

Alignment with SDG 3 focuses on **Target 3.4** (Physical and mental health) and **Target 3.d** (Strengthening capacity for early warning and risk management).

3.1. Safety, Hygiene, and Emergency Response

The curriculum bridges laboratory precision with aviation-grade emergency response. Inclusion of **MSH 0226 (Emergency Health Services)** ensures that graduates are integrated into the national health system's auxiliary response structure, while **GTP 1006 (Microbiology)** provides the foundational skills to identify and prevent foodborne pathogens, supporting public health safety.

3.2. Critical Health and Well-being Modules

Course Code	Course Title	AKTS	UN Target Alignment
GTP 1007	Laboratory Safety/First Aid	4	Target 3.d
KBN 2003	First Aid (Advanced)	5	Target 3.d
MSH 0185	Addiction	4	Target 3.4
MSH 0190	Flight Physiology	5	Target 3.4
MSH 0226	Emergency Health Services	4	Target 3.d

KBN 2005	CRM/Human Factors	6	Target 3.4
GTP 1006	General Microbiology	4	Target 3.3

3.3. Mental Health and Human Factors

KBN 2005 (CRM) is a vital addition to the safety curriculum. By focusing on "Psychological Resilience" and "Stress Management," the program addresses mental well-being in high-pressure environments, a critical aspect of workplace health and safety.

Total Educational Volume for SDG 3: 32 AKTS

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4. Institutional Competency Analysis: SDG 9 (Industry, Innovation, and Infrastructure)

Efes MYO aligns with **Target 9.1** (Develop resilient infrastructure) and **Target 9.4** (Greater resource-use efficiency and adoption of clean technologies).

4.1. Resilient Infrastructure and Innovation

Innovation is specifically addressed in **GTP 2008 (Packaging)**. By teaching "Smart and Nano Packaging," the curriculum introduces technologies that address **food waste reduction**. This creates a technological bridge between industrial innovation (SDG 9) and food security (SDG 2).

4.2. Infrastructure and Sustainable Logistics Mapping

Course Code	Course Title	AKTS	UN Target Alignment
SİV 1001	Civil Aviation Activities	4	Target 9.1
SİV 1004	Airport Management	2	Target 9.1
SİV 2003	Navigation Systems	3	Target 9.1
SİV 2007	Numerical Modeling/OR	4	Target 9.4
GTP 2008	Packaging	5	Target 9.4
MSH 0213	Green Logistics	4	Target 9.4

4.3. Technological Integration Points

- **Green Operations: MSH 0213 (Green Logistics and Reverse Logistics)** represents a significant commitment to sustainable industrial cycles, focusing on minimizing the environmental footprint of transportation systems.
- **Aviation Precision:** Use of FMS, GPS, and CNS/ATM systems in **SİV 2003** ensures students are trained in advanced navigation infrastructure required for global connectivity.

Total Educational Volume for SDG 9: 22 AKTS

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5. Institutional Competency Analysis: SDG 11 (Sustainable Cities and Communities)

The Cultural Heritage program is the primary driver for **Target 11.4**: *Protect and safeguard the world's cultural and natural heritage.*

5.1. Heritage Protection and Restoration

The curriculum leverages the school's local context, providing students with direct expertise in the management of the **Ephesus (Efes)** site, the historical layers of **Istanbul**, and the engineering legacy of **Mimar Sinan** (water structures and bridges). This local relevance ensures that global targets are met with specialized regional knowledge.

5.2. Sustainable Heritage Management Modules

Course Code	Course Title	AKTS	UN Target Alignment
KMT 1007	Conservation Legislation	5	Target 11.4
KMT 1002	World Cultural Heritage	5	Target 11.4
KMT 2003	Turkey's World Heritage	5	Target 11.4
KMT 2009	Cultural Asset Management	5	Target 11.4
KMT 2006	Restoration/Conservation	4	Target 11.4
SİV 1004	Airport Environmental Mgt.	2	Target 11.4
MSH 0213	Green Logistics	4	Target 11.2

5.3. Urban Texture and Environment

The integration of "Urban Cultural Textures" in **KMT 1002** and "Airport Environmental Management" in **SİV 1004** demonstrates a multi-disciplinary approach to sustainable urban planning, linking cultural preservation with modern infrastructure.

Total Educational Volume for SDG 11: 30 AKTS

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6. Quantitative Educational Volume Summary

6.1. Total Cumulative AKTS Weighting

The cumulative academic weight dedicated to the target SDGs is as follows:

Sustainable Development Goal	Total AKTS Weight

SDG 2: Zero Hunger	22 AKTS
SDG 3: Good Health and Well-being	32 AKTS
SDG 9: Industry, Innovation, and Infrastructure	22 AKTS
SDG 11: Sustainable Cities and Communities	30 AKTS

6.2. Weighting Analysis by Program

The following table illustrates the curricular weight of SDG-aligned content within each program (based on a standard 120 AKTS associate degree total).

Program	Primary SDG Focus	Dedicated AKTS	Curricular Weight (%)
Food Technology	SDG 2	22	18.3%
Cultural Heritage & Tourism	SDG 11	24	20.0%
Civil Aviation (Admin)	SDG 9	13	10.8%
Civil Aviation (Cabin)	SDG 3	16	13.3%

6.3. Practical Impact: High-Weight Modules

The curriculum solidifies these competencies through intensive practical placements:

- **KMT 2020 (10 AKTS):** Heritage internship in public/private institutions.
- **SİV 1020 (10 AKTS):** Aviation management internship focusing on infrastructure.
- **GTP 1030 (8 AKTS):** Food technology placement for hygiene and process safety.
- **KBN 1018 (8 AKTS):** Cabin services internship focusing on safety protocols.

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7. Conclusion

7.1. Curricular Strength

The curriculum of Efes MYO demonstrates a sophisticated alignment with the UN SDGs. The school's strength lies in its ability to translate abstract global goals into concrete technical skills.

7.2. Strategic Impact

The analysis confirms that the school is a critical provider of the specialized workforce needed to:

- Maintain the safety and nutrition of the food supply (SDG 2).
- Operate high-risk environments with psychological resilience and emergency expertise (SDG 3).

- Implement green logistics and innovative technologies in infrastructure (SDG 9).
- Manage and restore the world's most significant cultural heritage sites (SDG 11).

Efes MYO graduates are equipped with a "Sustainability-First" technical background, making the institution a vital contributor to the fulfillment of the 2030 Agenda.

SDG Impact Report: Torbalı Vocational School Curriculum Analysis

1. Project Background and Methodology

1.1. Institutional Context

Torbalı MYO (Torbalı Vocational School) has formalized its strategic commitment to the United Nations 2030 Agenda by systematically integrating Sustainable Development Goals (SDGs) into its diverse vocational training portfolios. This institutional alignment spans the Food Technology, Cultural Heritage, and Aviation sectors, ensuring that technical specialization is inextricably linked with global sustainability mandates. By embedding these principles into core competencies, the school prepares a workforce capable of navigating the complex environmental and social challenges of the modern economy.

1.2. Methodological Framework

To objectively measure sustainability impact, this report utilizes a "Curriculum Mapping" methodology. This framework proceeds in two stages:

- **Content Alignment**: Specific course modules and weekly learning outcomes are cross-referenced against the targets of the SDGs.
- **Quantitative Weighting**: Impact is quantified using the European Credit Transfer and Accumulation System (ECTS/AKTS) values. This approach weights the reported impact by the actual academic effort and pedagogical resources dedicated to each sustainability theme, providing a transparent metric for institutional commitment.

2. Impact Analysis: SDG 3 – Good Health and Well-being

2.1. Food Safety and Nutritional Health

The Food Technology (GTP) department serves as a primary engine for public health protection. The curriculum moves beyond basic preparation to address the biochemical and microbiological foundations of health.

- **Nutritional Science**: **MSH 0198 (Nutrition and Health - 3 ECTS)** analyzes the physiological functions of nutrients and the direct correlation between dietary patterns and long-term health outcomes.
- **Microbiological Vigilance**: **GTP 2003 (Food Microbiology - 5 ECTS)** provides critical training in the detection and eradication of foodborne pathogens, specifically *Salmonella* and *Shigella*. By mastering hygiene applications and cross-contamination prevention, students are trained to mitigate large-scale public health risks.

2.2. Aviation Health and Emergency Response

In the Cabin Services (KBN) program, health is treated as a critical safety component.

- **Emergency Care**: **KBN 2003 (First Aid - 5 ECTS)** equips students with life-saving skills, including basic life support and cardiac event management.

- **Flight Physiology**: **MSH 0190 (Flight Physiology - 5 ECTS)** addresses specific aeronautical health challenges such as hypoxia and rapid decompression. Furthermore, it integrates broader health protocols, including infectious disease management, immunization strategies, and the rigorous management of medical waste.

2.3. Occupational Safety and Laboratory Wellbeing

The school establishes a robust "safety cluster" to ensure workplace wellbeing across industries. This includes **MSH 0197 (Kitchen Safety - 5 ECTS)** and **GTP 1007 (Laboratory Safety - 4 ECTS)**. These modules provide foundational training in personal protective equipment (PPE), chemical storage principles, and accident prevention, ensuring that the health of the practitioner is prioritized alongside the safety of the product.

3. Impact Analysis: SDG 9 – Industry, Innovation, and Infrastructure

3.1. Technological Advancements in Food Production

The Food Technology curriculum focuses on industrializing production through resource-use efficiency (SDG Target 9.4).

- **Industrial Efficiency**: Modules such as **GTP 1008 (Milling Technology - 4 ECTS)**, **GTP 2010 (Canning Technology - 5 ECTS)**, and **GTP 2009 (Oil Technology - 5 ECTS)** move beyond theory to practical industrial application.
- **Operational Optimization**: A key analytical focus is placed on "yield calculations" (*randıman hesapları*) and "flour efficiency" (*un verimi*). By training students to maximize output from raw materials, the program directly contributes to industrial sustainability and technological modernization in the pilot plant environment (GTP 2005).

3.2. Aviation Infrastructure and Management

The Civil Aviation Management (SİV) program addresses the management of global transport hubs.

- **Physical Infrastructure**: **SİV 1004 (Airport Infrastructure - 2 ECTS)** details the physical architecture of airside and landside operations, including runways and aprons.
- **Integrated Management**: **SİV 2005 (Airport Management - 3 ECTS)** focuses on the integration of new technologies and operational processes, ensuring that aviation infrastructure is economically viable and technologically advanced.

4. Impact Analysis: SDG 11 – Sustainable Cities and Communities

4.1. Preservation of Cultural Heritage

The Cultural Heritage and Tourism (KMT) department is essential to the preservation of community identity and the protection of Turkey's unique heritage.

- **Heritage Conservation**: Through **KMT 1007 (Conservation of Cultural Heritage - 5 ECTS)** and **KMT 2003 (World Heritage in Turkey - 5 ECTS)**, students study the restoration and protection of globally significant sites.
- **Specific Site Analysis**: The curriculum explicitly examines UNESCO-listed sites and architectural masterpieces, including the **Halikarnas Mausoleum**, **Ephesus (Artemis Temple)**, the **Göreme National Park**, and the social complexes (**Külliyeler**) and mosques of **Mimar Sinan**. This granular focus ensures students can manage the delicate balance between sustainable tourism and archaeological preservation.

4.2. Sustainable Urban Transport and Environment

Sustainable community development is addressed in **SİV 1004** through its "Airport Environmental Management" component. This explores how aviation hubs serve as critical nodes in regional infrastructure, emphasizing the need for noise control, emission reduction, and the integration of airports into the sustainable urban fabric.

5. Impact Analysis: SDG 12 – Responsible Consumption and Production

5.1. Sustainable Packaging and Waste Management

GTP 2008 (Packaging - 5 ECTS) addresses the environmental footprint of the consumer goods sector. The course focuses on:

- The transition to bio-based and recyclable materials (glass, paper, and advanced polymers).
- "Recycling of Packaging Waste" as a core week-specific outcome.
- Analyzing the life-cycle sustainability of packaging to reduce the volume of waste entering terrestrial ecosystems.

5.2. Resource Efficiency in Logistics

The logistics modules bridge the gap between production and sustainable consumption.

- **Green Logistics**: **MSH 0213 (Logistics - 4 ECTS)** explicitly focuses on "Green Logistics and Reverse Logistics" (Week 11). This training is vital for reducing the carbon footprint of transport chains.
- **Supply Chain Optimization**: **MSH 0206 (Supply Chain Management - 4 ECTS)** emphasizes waste reduction through improved return cycles and envanter management.

5.3. Quality Standardization

The curriculum promotes production efficiency via **GTP 2012 (Codex and Standards - 5 ECTS)** and the "Quality Management Systems" within **GTP 2003**. By adhering to international food standards and rigorous quality control, the program reduces industrial waste caused by sub-standard production.

6. Impact Analysis: SDG 13 & 15 – Climate Action and Life on Land

6.1. Disaster Resilience and Meteorology

Climate adaptation is addressed through a cluster of aviation and management courses.

- **Disaster Management**: **MSH 0186 (4 ECTS)** provides training on climate-induced natural disasters, such as floods and forest fires, focusing on early warning systems and risk mitigation.
- **Meteorological Analysis**: This is supported by **SİV 2001 (Meteorology I - 3 ECTS)** and **SİV 2013 (Aviation English/Meteorology - 4 ECTS)**. These courses are essential for understanding weather patterns and adapting operational strategies to climate variability.

6.2. Agricultural and Biological Diversity

The Food Technology curriculum supports the sustainable use of land-based resources.

- **Raw Material Science**: The study of grains (**GTP 1008**) and edible oils (**GTP 2009**) includes harvesting techniques and storage conditions to prevent microbial degradation and loss of biological value.
- **Microbial Diversity**: **GTP 1006 (General Microbiology - 4 ECTS)** explores microbial ecosystems, supporting the preservation of biological diversity within the food supply chain and terrestrial biomes.

7. Quantitative Impact Summary (ECTS Distribution)

7.1. Aggregate Contribution Table

SDG Number and Title	Key Contributing Course Codes	Total Estimated ECTS Impact
SDG 3: Good Health and Well-being	GTP 2003, MSH 0198, KBN 2003, MSH 0190, MSH 0197, GTP 1007	27
SDG 9: Industry, Innovation, and Infrastructure	GTP 1008, GTP 2010, GTP 2009, SİV 1004, SİV 2005	19
SDG 11: Sustainable Cities and Communities	KMT 1007, KMT 2003, KMT 1002, KMT 2005, KMT 2009	24
SDG 12: Responsible Consumption and Production	GTP 2008, MSH 0213, MSH 0206, GTP 2012	18
SDG 13 & 15: Climate Action & Life on Land	MSH 0186, SİV 2001, SİV 2013, GTP 1006	15

7.2. Departmental Contribution Analysis

- **Food Technology (GTP)**: Acts as the institution's primary driver for SDG 3 and SDG 12. Its synergy between microbiology (GTP 2003) and quality systems (GTP 2012) creates a safety and efficiency cluster that far exceeds basic vocational standards.
- **Cultural Heritage (KMT)**: Provides the most profound alignment with SDG 11. By focusing on site-specific management for world-renowned sites like Ephesus and Göreme, it ensures the preservation of cultural capital.
- **Civil Aviation (SİV/KBN)**: Leads impact in SDG 9 and SDG 13. Through its focus on airport infrastructure and advanced meteorology, the department builds the resilience and efficiency of regional transportation networks.

8. Conclusion

8.1. Strategic Findings

The analysis of Torbalı MYO's curriculum reveals a sophisticated alignment with the 2030 Agenda. The institution successfully bridges technical skills with global sustainability requirements. By allocating significant ECTS (AKTS) weight to themes of safety, industrial efficiency, and heritage preservation, the school demonstrates that sustainability is a core academic pillar rather than a supplementary elective.

8.2. Final Statement

Torbalı MYO plays a vital role in the regional and global economy by producing a technically proficient and SDG-aware workforce. Its graduates are uniquely equipped to contribute to public health, industrial innovation, and cultural preservation, fulfilling the institution's mission to foster sustainable development through education.

SDG Impact Report: Kiraz Vocational School Curriculum Analysis

1. Institutional Framework and Methodology

Scope of Analysis

This report evaluates the strategic alignment of Kiraz Meslek Yüksekokulu's (MYO) vocational curriculum with the United Nations Sustainable Development Goals (SDGs). The analysis centers on the "Laborant ve Veteriner Sağlık" (Laboratory and Veterinary Health) and "Süt ve Ürünleri Teknolojisi" (Milk and Products Technology) programs. These curricula are designed to produce technical experts capable of addressing systemic challenges in global food security, public health, and sustainable economic growth.

Quantified Methodology

To assess the density of educational impact, this report utilizes a quantified weighting model:

- **The 12-Teaching-Week Model:** This serves as an analytical abstraction used to measure "curricular density." By standardizing the instructional content over a 12-week semester, we can determine the intensity of student exposure to specific SDG-related themes.
- **ECTS Weighting:** The European Credit Transfer and Accumulation System (ECTS) values are employed as the primary metric for measuring the pedagogical "weight" and student workload of each module.
- **Impact Hours Calculation:** Formulated as ECTS / 12\text{ weeks}, this metric represents the proportional weekly commitment to a specific subject area, allowing for a comparative analysis of foundational versus elective impact.

Data Grounding

This analysis is strictly grounded in the official curriculum excerpts for the LVS series (modules 1001 through 2009), encompassing weekly instructional topics, laboratory protocols, and theoretical frameworks.

2. Contribution to SDG 2: Zero Hunger and Food Security

The Kiraz MYO curriculum provides critical technical support for SDG 2 by optimizing livestock productivity and ensuring the resilience of food production systems.

SDG 2 Curricular Alignment

Course Code	ECTS	Impact Factor
LVS 1007	3	Nutritional Optimization & Resource Efficiency
LVS 1008	3	Genetic Resilience & Herd Productivity

Sustainable Food Production (LVS 1007)

The "Animal Nutrition and Feeds" (*Yem Bilgisi ve Hayvan Besleme*) course focuses on the efficient conversion of resources into food. Key instructional areas include:

- **Resource Management:** Detailed study of "concentrated feeds" (*konsantre yemler*) and "silage" (*silaj*) to optimize nutrient delivery.
- **Ruminant Nutrition:** Specialized protocols for dairy and beef cattle, sheep, and goats to ensure high-quality protein production.
- **Waste Reduction:** Use of "Feed evaluation systems" (*Yem değerlendirme sistemleri*) to minimize metabolic waste and maximize caloric efficiency.

Genetic Diversity and Husbandry (LVS 1008)

The "Cattle Breeding and Husbandry" (*Sığır Yetiştiriciliği*) module addresses the long-term sustainability of livestock populations. By focusing on "Animal Breeding/Improvement" (*Hayvan ıslahı*) and "Genetic Factors" (*Genetik faktörler*), the curriculum directly supports the SDG 2 target of maintaining genetic diversity in domesticated animals to ensure food system resilience.

3. Contribution to SDG 3: Good Health and Well-being

The LVS program integrates a "One Health" approach, recognizing that human health is inextricably linked to animal health and environmental safety.

Protective Medicine and Diagnostics

Course **LVS 1013** (Internal Diseases) emphasizes "Protective Medicine" and "Vaccinations" (*Aşılamalar*). Students are trained in diagnostic fundamentals, including "Anamnesis" (*Anamnez*) and "Physical Examination methods" (*Muayene yöntemleri*), which are essential for the early detection of zoonotic diseases. Furthermore, **LVS 1015** provides training in "Restraint Methods" (*Zapt-ı Rapt*), ensuring safety during medical interventions.

Clinical and Laboratory Standards

Technical proficiency in health diagnostics is developed through **LVS 1006** (Medical Laboratory) and **LVS 1009** (Laboratory Safety):

- **Laboratory Techniques:** Training includes Hemoglobin and hematocrit determination, PCR-based analysis, and spectrophotometric methods.
- **Biosafety Protocols:** Implementation of "Biosafety Levels" (*Biyogüvenlik Seviyeleri*) and "Sterilization/Disinfection Methods" ensures diagnostic accuracy while preventing laboratory-acquired infections.

Bioethics and Professional Standards

Through **LVS 1011** (Professional Ethics), students study "Deontology" (*Deontoloji*) and "Bioethics." This framework ensures that veterinary services are conducted with social responsibility and ethical integrity.

Key Health Competencies

Derived from **LVS 1001** (Anatomy) and **LVS 1003** (Physiology):

- **Technical Proficiency in Systems:** Detailed understanding of the "Urogenital," "Myological" (Muscular), and "Circulatory" systems.
- **Homeostasis:** Knowledge of body temperature regulation and fluid-electrolyte balance.
- **Pathology Recognition:** Ability to identify physiological deviations from normal functions across various species.

4. Contribution to SDG 8: Decent Work and Economic Growth

The curriculum serves as a driver for regional economic stability by equipping the labor market with high-skill vocational technicians.

Vocational Skill Acquisition and Institutional Integrity

The program emphasizes ethical participation in the labor market. **LVS 1011** explicitly addresses "Professional Corruption" (*Mesleki yozlaşma*), teaching students to identify and avoid unethical behaviors. By fostering professional integrity, the curriculum supports the SDG 8.8 target of promoting safe and secure working environments through strong institutional ethics.

Regional Economic Impact

The curriculum links technical livestock management to economic outcomes:

- **Enterprise Stability:** Training in "Herd Management" (*Sürü yönetimi*) specifically targets the operational efficiency of "Dairy and Beef Enterprises" (*Süt ve besi sığırı işletmelerinde*).
- **Market Readiness:** Practical modules in clinical support (**LVS 2009**) and equipment maintenance ensure graduates have immediate employability in the agricultural and veterinary sectors.

5. Contribution to SDG 12: Responsible Consumption and Production

The curriculum promotes a circular and responsible production lifecycle, particularly in the intersection of animal health and food technology.

Lifecycle of Responsible Production

The curriculum ensures that students in the "Milk and Products Technology" pathway understand the full lifecycle of responsible production. This is achieved by synthesizing:

1. **Metabolic Health: LVS 1007** teaches the nutritional requirements of "Lactation and Dry periods" (*Laktasyondaki ve kurudaki ineklerin beslenmesi*), ensuring raw milk quality begins with healthy animal metabolism.

2. **Sterile Processing: LVS 1009** provides rigorous training in "Disinfection and Sterilization methods," which are critical for preventing contamination in the food supply chain.

Waste and Safety Management

Students learn to minimize the environmental footprint of laboratory and agricultural activities through the study of "Laboratory hygiene" and the safe handling of biological samples (blood, urine, and body fluids), aligning with responsible hazardous waste management.

6. Quantitative Impact Summary

ECTS Weighting by SDG Association

SDG Goal	Total Associated ECTS	Primary Representative Courses
SDG 2: Zero Hunger	6	LVS 1007, 1008
SDG 3: Good Health	27	LVS 1001, 1003, 1005, 1006, 1009, 1013, 2009
SDG 8: Decent Work	6	LVS 1011, 1008
SDG 12: Responsible Production	9	LVS 1007, 1008, 1009

Curricular Intensity Analysis

Based on the 12-week model, the "Impact Hours" for high-intensity credit modules are:

- **LVS 1001 (Anatomy):** 0.42 Impact Hours (5 ECTS / 12 Weeks)
- **LVS 1003 (Physiology):** 0.42 Impact Hours (5 ECTS / 12 Weeks)

Foundational science courses (5 ECTS) represent "high-intensity" impact because they establish the physiological and anatomical knowledge base required to meet all subsequent health, safety, and production targets. Technical or elective modules (3 ECTS) provide specialized applications but rely on the density of these foundational hours.

7. Conclusion: Strategic Educational Alignment

Kiraz Meslek Yüksekokulu functions as a critical catalyst for sustainable development within the veterinary and food technology sectors. By integrating rigorous foundational sciences (Anatomy/Physiology) with specialized training in genetic resilience, diagnostic health, and professional ethics, the institution ensures that its graduates are prepared to meet the technical and moral demands of the UN Sustainable Development Goals. The curriculum effectively bridges the gap between vocational training and global sustainability targets, ensuring a resilient future for regional agriculture and public health.

DOKUZ EYLÜL UNIVERSITY

SDG Impact Report: School of Applied Sciences (Uygulamalı Bilimler Yüksekokulu)

1. Institutional Overview and Audit Scope

This report constitutes a formal sustainability audit of the School of Applied Sciences (Uygulamalı Bilimler Yüksekokulu), performed from the perspective of Senior Academic Curriculum Oversight. The objective is to evaluate the alignment of the 8-semester undergraduate pedagogical framework with the United Nations Sustainable Development Goals (SDGs).

While the audit scope nominally includes Gastronomy and Culinary Arts, Tourism, and International Trade programs, the data synthesis is currently weighted toward the **Gastronomy and Culinary Arts (GMS)** department due to the high density of specialized sustainability data available within its current syllabi. The audit analyzes the curriculum through a standardized 12-teaching-week model per semester, determining how professional training translates into measurable sustainability competencies.

2. Audit Methodology: ECTS Weighting and Temporal Framework

The impact assessment utilizes the European Credit Transfer and Accumulation System (ECTS) as a proxy for the depth of SDG integration.

ECTS-to-Impact Conversion Logic

- **High Impact (5–6 ECTS):** Indicates comprehensive theoretical and practical integration where SDG principles are core to professional competency.
- **Moderate Impact (3–4 ECTS):** Indicates foundational or supportive thematic units contributing to specific sustainability knowledge.

Temporal Framework: Impact is calculated not only by ECTS weight but also by the "Topic Density" within the 12-week teaching model. Curricular relevance is identified through specific weekly modules (e.g., Week 12 specialized topics) that explicitly address environmental or social governance.

3. SDG 12: Sustainable Gastronomy and Circular Systems

SDG 12 (Responsible Consumption and Production) is integrated through a transition from theoretical sustainable practices to applied circular kitchen management.

Course Code	ECTS	Specific Weekly Sustainability Topic (Source: 12-Week Content)
GMS 1007	4	**Week 12:** Sustainable Gastronomy (*Sürdürülebilir Gastronomi*)
GMS 4074	5	**Week 3:** Zero Waste Recipes (*Atıksız Mutfak Reçeteleri*); **Weeks 12–14:** Farm to Table (*Tarladan Tabağa*)

GMS 3098	5	**Week 1:** Slow Food Philosophy and Mission (*Slow Food hareketinin ortaya çıkışı*)
GMS 3102	5	**Week 1:** Cultural Values and Geographical Indication (*Kültürel değerler ve coğrafi işaretleme*)

4. SDG 8: Economic Resilience, Tourism, and Decent Work

The curriculum addresses SDG 8 by fostering labor standards and economic sustainability within the service sector.

- **GMS 1003 (Introduction to Tourism - 4 ECTS):** Analyzes the economic structure of the tourism industry and tourism policy (*Turizm politikası*).
- **GMS 1012 (Overview of Food and Beverage Sector / *Yiyecek İçecek Sektörüne Genel Bakış* - 3 ECTS):** Examines management, organization, and emerging trends in the service economy.
- **GMS 1008 (Occupational Health and Safety / *İşçi Sağlığı ve İş Güvenliği* - 3 ECTS):** Provides high-density labor protection training. Audit identifies **Week 5** (Kitchen accidents), **Week 6** (Legal processes), and **Weeks 12–14** (Legal regulations) as primary drivers of decent work standards.
- **GMS 3069 (Entrepreneurship / *Girişimcilik* - 5 ECTS):** Connects small business economics and the role of SMEs to national economic performance.
- **GMS 4091 (Human Resources Management / *İnsan Kaynakları Yönetimi* - 6 ECTS):** Focuses on career management, fair payment systems, and equal opportunity (*İstihdamda Fırsat Eşitliği*).

5. SDG 2: Food Safety, Nutrition, and Global Health

Alignment with SDG 2 (Zero Hunger) emphasizes the "Safety" and "Nutrition" pillars, ensuring the delivery of healthy, non-toxic food systems.

Curriculum Element	SDG 2 Alignment (Safety/Nutrition)
GMS 1014 (Hygiene and Sanitation / *Hijyen ve Sanitasyon*)	Foundational microbiological control and infection prevention.
GMS 4041 (Food Control/HACCP/ISO 22000 / *Gıda Kontrolü*)	Implementation of advanced safety legislation and hazard analysis.
GMS 2018 (Nutrition / *Beslenme*)	Clinical study of nutrient groups and the food-health relationship.
GMS 3094 (Vegetarian Cuisine / *Vejetaryen Mutfağı*)	Sustainable dietary modeling and plant-based nutritional techniques.

GMS 3031 / 2044 (Food Chemistry / *Gıda Kimyası*)	**Week 13:** Analysis of toxic minerals (*Toksik mineraller*) and nutrient stability.

6. SDG 9: Digitalization, Supply Chain, and Industrial Innovation

Industrial innovation is synthesized through the integration of Information Technology (IT) and logistics infrastructure. **GMS 4058 (Information and Communication Technologies / *Bilgi ve İletişim Teknolojileri*)** provides the technical framework for automation and POS systems. **GMS 4080 (Supply Chain Management / *Tedarik Zinciri Yönetimi*)** introduces essential industrial standardization, specifically in **Week 10** through Supplier Certification Program Examples (*Tedarikçi Sertifikasyon Program Örnekleri*). Furthermore, **GMS 4072 (New Product Development / *Yeni Ürün Geliştirme*)** drives innovation by addressing environmental packaging solutions and market-ready design processes.

7. Integrated Professional Skills: Language and Communication

The supportive language framework—including **GMS 2007, 2010, 2032, 3104, and 4088**—acts as a cross-cutting competency. By enabling professional translation, cross-cultural negotiation, and international terminology management, these courses facilitate global partnerships and the international trade components of the SDGs.

8. Conclusion: Aggregate Curricular Alignment Score

An analysis of cumulative ECTS points and 12-week topic density reveals that the School of Applied Sciences maintains its strongest impact in the economic and labor sectors. The SDGs are ranked by curricular density as follows:

1. **SDG 8: Economic Resilience and Decent Work** (21 ECTS – Deepest integration via HRM and Occupational Safety).
2. **SDG 12: Responsible Consumption and Production** (19 ECTS – High density in Zero Waste and Slow Food modules).
3. **SDG 2: Zero Hunger / Food Safety and Nutrition** (19 ECTS – Core impact via Gıda Kimyası and HACCP systems).
4. **SDG 9: Industrial Innovation and Infrastructure** (15 ECTS – Targeted impact through IT and Supply Chain logistics).

SDG Impact Report: Devlet Konservatuvarı (State Conservatory)

1. Executive Overview and Institutional Mission

The State Conservatory (Devlet Konservatuvarı) operates as a high-performance hub for artistic excellence, fulfilling a dual mandate of sophisticated technical training (SDG 4) and the preservation of intangible cultural heritage (SDG 11). As a Senior Sustainability Consultant, I evaluate this institution not merely as a school of the arts, but as a critical infrastructure for "educational sustainability" (SDG 4.7). The longitudinal nature of the 10-semester curriculum ensures the intergenerational transfer of rare specialized skills—such as Harp (Arp) and classical Ballet—that are essential for the survival of both national and global cultural ecosystems. By integrating health-conscious pedagogy (SDG 3) and material responsibility (SDG 12), the Conservatory positions itself as a leader in sustainable artistic practice.

2. Methodology: The ECTS-Weighted Sustainability Framework

To analyze institutional impact, we utilize a mathematical mapping model that correlates pedagogical duration with academic effort, providing a quantitative baseline for sustainability reporting.

- **12-Teaching-Week Model:** This framework focuses on the 12 weeks of active, core instruction per semester, purposefully excluding examination periods to isolate the intensity of knowledge transfer.
- **ECTS as a Multiplier Factor:** The European Credit Transfer and Accumulation System (ECTS) serves as the primary metric for "Impact Intensity." It represents the allocation of student effort hours and institutional resources.
- **SDG Impact Score Formula:** The score is calculated as: (Relevant Instructional Weeks / 12) * ECTS Value.
    - *Worked Example:* For a high-intensity major work analysis course (e.g., MZP 4111) with 14 ECTS and 12 instructional weeks, the institution yields a maximum impact score of 14.0. Conversely, a foundational 2 ECTS course yielding 12 weeks of instruction results in a score of 2.0.

Parameter	Logic / Definition
Semester Logic	Suffix-based identification: Odd (Güz) for 1st/3rd digits; Even (Bahar) for 2nd/4th digits.
Weekly Weighting	A standardized 12-week denominator provides a normalized baseline for intensity.
Normalization	Intensity values are benchmarked against the "Global Maximum Intensity" of 14.0 ECTS.

3. SDG 3: Good Health and Well-being (Physical and Vocal Sustainability)

The Conservatory implements a rigorous Kinesiology (KNS) and anatomical usage sequence designed to ensure the physiological longevity of the performer. This proactive approach to injury prevention and postural health constitutes a specialized form of health education tailored to the high-impact demands of dance and music.

- **Integrated Maintenance:** A critical component is KNS 4046, which serves as an **Integrated Technical Course**, synthesizing previous studies in diaphragmatic breathing (*Nefes*), Natural Spine (*Naturel Omurga*) alignment, and lumbopelvic stabilization.
- **Biomechanical Longevity:** Use of Pilates apparatus, including the Magic Circle and Therabands, targets scapular stabilization and myofascial stretching (*Gevşetici çalışma*) to mitigate the physical tolls of professional training.

SDG 3 Impact Table: Kinesiology & Body Usage | Course Code | ECTS | Pedagogical Focus / Health Outcome | | :--- | :--- | :--- | | KNS 1045 | 2 | Diaphragmatic breathing and Natural Spine alignment. | | KNS 2045 | 2 | Lumbopelvic stabilization and spinal mobilization. | | KNS 2046 | 2 | Scapular stabilization and postural alignment correction. | | KNS 3046 | 2 | Resistance training using Therabands for joint integrity. | | KNS 4046 | 2 | **Integrated Review:** Final synthesis of all techniques (Core, Breath, Spine). |

4. SDG 4: Quality Education (Technical Mastery and Artistic Pedagogy)

Quality education at the Conservatory is defined by a 14-step journey toward technical mastery and the promotion of innovation through composition. The curriculum transitions students from basic deciphering (*Deşifre*) to the sophisticated interpretation of complex concertos.

- **The 14-Step Mastery Process:** Exemplified in the Harp (Arp) curriculum (MZP 1015/1016), the institutional standard for "Quality" involves a meticulous pedagogical sequence:
    1. Repertoire Selection (*Repertuvar seçimi*)
    2. Deciphering (*Deşifre*)
    3. Learning orchestral reductions
    4. Solo-orchestra integration studies 5-13. Progressive rehearsals of individual sections (*Bölüm provası*)
    5. Final Exam Rehearsal (*Sınav provası*)
- **Educational Innovation:** The inclusion of Composition (SBA 1009/1010) focuses on "Producing movement" (*hareket üretme*), encouraging students to engage in the creative production of new artistic content, thereby fostering cognitive innovation within the arts sector.

5. SDG 11: Sustainable Cities and Communities (Cultural Heritage & Historical Preservation)

The Conservatory acts as a guardian of both the global artistic canon and national cultural identity. This dual focus ensures that urban artistic communities remain vibrant and historically grounded.

- **Preservation of the Global Canon:** Students perform and analyze works by Monteverdi (*Orfeo*), Verdi (*Aida*, *Don Carlos*), and Wagner (*Lohengrin*), maintaining the historical infrastructure of the performing arts.
- **National Heritage Integration:** Crucially, the curriculum (SBA 2005/2006) emphasizes **Turkish Ballet History** (*Türk balesi*) alongside the Romantic and Diaghilev eras. This ensures that national intangible cultural heritage is preserved with the same academic rigor as the European tradition.
- **Work Analysis (Eser Analizi):** These courses provide the historical and stylistic context necessary for art forms to remain relevant and sustainable within modern urban environments.

6. SDG 12: Responsible Consumption and Production (Material Sustainability)

Material usage in the Conservatory is governed by principles of longevity and responsible management of institutional assets, particularly within the Ballet and Material Usage sequences (SBA 2021/2022).

- **Resource Management Categories:** Instruction focuses on high-detail material handling including:
    - **Karakter-ışık-saç:** Integrated management of character, lighting, and hair/wig materials.
    - **Aksesuar:** Precise usage and care of character-specific accessories.
- **Circular Maintenance:** Specific curriculum components address the cleaning (*Temizleme*) and repair of costumes. By teaching students to maintain their materials, the institution reduces waste and extends the life cycle of specialized artistic resources.

7. Quantitative Impact Mapping: Maximum Intensity Projections

From a policy analyst's perspective, the "Academic Journey" of a Conservatory student is characterized by a strategic shift in **resource allocation** and **student effort hours**.

- **Exponential Impact Scaling:** While early semesters establish the baseline for health (SDG 3) and material responsibility (SDG 12), the institution’s contribution to Quality Education (SDG 4) and Cultural Heritage (SDG 11) scales as students advance.
- **Peak SDG Impact Zones:** The 9th and 10th semesters represent the "Global Maximum Intensity" of the institution. During this phase, high-weight ECTS courses (reaching 14.0) signify the culmination of the training, where technical mastery and heritage preservation reach their professional climax.

8. Conclusion and Future Recommendations

The State Conservatory's alignment with the UN 2030 Agenda demonstrates that artistic pedagogy is a structured contribution to global sustainability. My analysis yields three primary takeaways:

1. **Health-Pedagogy Integration:** By making Kinesiology a core requirement, the institution leads in specialized health education, ensuring sustainable careers for performers.
2. **Bicultural Heritage Guardianship:** The inclusion of both Turkish Ballet and the European canon provides a robust model for national and global cultural sustainability.
3. **High-Standard Technical Benchmarks:** The 14-step preparation process for major works sets an international standard for Quality Education (SDG 4) in the arts.

In summary, the Conservatory's curriculum is a finely tuned mechanism for the sustainable development of human health, cultural capital, and educational mastery.