Template for Evidence(s)
UI GreenMetric Questionnaire

University : Gebze Technical University
Country : Türkiye
Web Address : www.gtu.edu.tr

[6] Education and Research (ED)

[6.1] Number of Courses/Subjects Related to Sustainability Offered)

Department	Course Code	Course Title	Purpose of the course
Environmental Engineering	ENVE 407	Sustainability Concepts in Environmental Engineering	This course aims to introduce sustainability concepts. It also aims to provide a generic framework that will enable environmental engineering students to better understand sustainability.
City and Regional Planning	CRP 526	Sustainable Settlements	This course aims to provide information in order to planning sustainable settlements, to explore components of urbanization in the context of environment and to review current approaches.
Biotechnology	BTEC 677	Soilless and Vertical Farming Technologies	The aim of this course is to improve the scientific background of students for high-tech applications of soilless and vertical farming and contribute to their competence for designing and optimizing such technologies with the help of the relevant plant physiology and plant nutrition knowledge and for using them in innovative applications.
Architecture	ARCH 642	Sustainable Building Materials	This course will be evaluated in terms of sustainability of the properties of building materials in the construction process through examples of sustainability in the framework of examining the choice of materials and necessary equipment to teach the principles of competence.
Architecture	ARCH 643	Environmental Building Design	Investigation of suitable environmental / sustainable / ecological design methods according to the climatic area, the formation of low environmental impact building design and environmental awareness.
Architecture	ARCH 541	Building And Human Health	Teaching factors which damages building health, building health, investigation of the relationship between comfort conditions and human health.
Architecture	ARCH 533	Sustainable Architecture	Interaction between natural environment and architecture, the concept of sustainability in architecture, development of sustainable architecture, components and basic design principles, examination of sustainable architecture examples around the world and Türkiye.
Architecture	ARCH 144	Architecture and Sustainability	To donate with ecological, sustainable design principles, which will reduce negative results of the interaction between human, artificial environment, and natural environment, and have less environmental effects, to constitute environmental conscious.
Management	BUS 421	Corporate Sustainability	The aim of this course is to equip students with basic information about the fields to be included in the education levels, financing, and implementation of Corporate Sustainability. As a continuation of the Corporate Sustainability Introduction course, in this course, the sub-headings of financing and use related to use are transferred.
Economics	ECON 464	Sustainability and Governance	This course aims to provide a better understanding of basic issues threatening sustainability such as global change, ecosystem deterioration, global warming, and resource constraints. It also targets to equip students with tools to provide solution to problems related to sustainability.
Molecular Biology and Genetics	MBG 512	Biosafety And Bioethics	The goal of this course is to teach biosafety issues, biosafety and biotechnological applications, biosafety in laboratory, waste management, registration, national and international regulations, bioethics, bioethical issues in medicine, environment and genetics, related regulations, and laws.
Chemistry	CHEM 428	Green Chemistry	To teach present principles of green chemistry, green catalytic reactions, and industrial applications
Materials Science and Engineering	MSE 627	Sustainable Polymers	To gain detailed knowledge about sustainable plastics and be informed about latest developments in the area.
Mechanical Engineering	ME 636	Sustainable Machining	To examine in detail the methods used in sustainable machining.
Geodetic and Geographic Information Technologies	GEOD 652	Sustainable Land Management	Global changing dynamics such as sustainable development, globalization, economic reforms and technology requires new land administration infrastructures and tools. Land management, one of these tools, provides using land resources more effectively. Effective land management needs land information e.g., information about land resource location, size, land capacity, land tenure and land use. The Cadastre is the primary means of providing information about land. In this course context, current approaches to land administration process will be described, setting and developing of land management systems be thought. Land Information System (LIS), one of the major application areas of Geographic Information Systems (GIS), basically subjects parcel-based land administration operations for land ownerships. The aim of this course is to develop the capabilities of the basic functions of LIS using GIS to implement processes to enhance institutional capacity building.
Example of Courses/Subjects Related to Sustainability (Gebze Technical University, TR)			

Course Code	Course Title	Course Code	Course Title
ARCH 101	Techniques Of Architectural Presentation	CRP 231	Economics
ARCH 102	Computer Applications In Architecture	CRP 232	Urban Economics
ARCH 136	Topological Studies and Contextual Approaches in Architectural Design	CRP 252	Landscape Planning & Design
ARCH 142	Building Science I	CRP 301	Project V
ARCH 144	Architecture and Sustainability	CRP 312	Planning Theory
ARCH 146	Principles of Detail Design in Buildings	CRP 313	Urban Conservation and Renewal
ARCH 186	Eco-technological Approaches in Architectural Design	CRP 314	City and Environment
ARCH 221	Architectural Design III	CRP 315	Sectoral Planning
ARCH 222	Architectural Design IV	CRP 326	Migration and City
ARCH 226	Photograph In Architecture	CRP 401	Project VII
ARCH 242	Structural Systems And Technologies I	CRP 402	Project VIII
ARCH 243	Material Tecnologies In Architecture	CRP 411	Urban Growth
ARCH 244	Environmental Control Systems	CRP 413	Current Issues in Planning
ARCH 261	Structural Analysis	CRP 426	Tourism Area Planning
ARCH 262	Structure Soil Relation	CRP 431	Metropolitan Planning and Governance
ARCH 282	History And Theory Of Architecture II	CRP 436	Urban Ecology and Planning
ARCH 321	Architectural Design V	CRP 446	Public Space and the City
ARCH 322	Architectural Design VI	CRP 456	Hictorical City Planning
ARCH 331	Urban Planing Theory	CRP 466	Principles of Urban Landscape Design
ARCH 332	Urban Design	CRP 521	Urban Morphology
ARCH 334	Labor And Public Improvement Law	CRP 524	Transportation And Environment
ARCH 336	Landscape Design	CRP 526	Sustainable Settlements
ARCH 341	Structural Systems and Technologies II	CSE 425	Introduction to Operations Research
ARCH 356	Introduction To Bio-Digital Architecture	CSE 470	Cryptography and Computer Security
ARCH 366	Measurment Techniques	CSE 483	Fuzzy Logic And Modelling
ARCH 386	Architectural Competitions/Mimarlık Yarışmaları	CSE 485	Introduction To Robotics
ARCH 416	High-rise Buildings	ECON 321	Growth Theory
ARCH 421	Architectural Design VII	ECON 322	Development Economics
ARCH 426	Emergency Safety In Buildings	ECON 461	Environmental Economics
ARCH 441	Construction And Detail Design	ECON 462	Energy Economics
ARCH 446	Garden Technologies In Buildings	ECON 464	Sustainability and Governance
ARCH 466	Architectural Photogrommetry	ECON 530	Public Finance
ARCH 471	Analysis of Historic Building	ECON 560	Social Policy
ARCH 472	Conservation Studio	ECON 590	Public Finance
ARCH 495	Architectural Design VIII	ELEC 418	Advanced C++ For Engineering And Basic Sciences
ARCH 519	Special Topics In Architecture I	ELEC 421	Sensors and Actuators
ARCH 520	Architectural Design Studio I	ELEC 422	Introduction to Industrial Instrumentation and Automation
ARCH 521	Contemporary Approaches in Architectural Design	ELEC 426	Introduction to Electric Power Systems and Smart Grids
ARCH 522	Knowledge and Programming in Architecture	ELEC 432	Special Topics in the Analysis of Electronic Circuits
ARCH 523	Psychology In Architecture	ELEC 433	Numerical Computation Software
ARCH 524	Paradigms about Architecture	ELEC 441	Microwave Techniques And Devices
ARCH 525	Architecture and Sacred Space Concept	ELEC 444	Antenna Theory
ARCH 530	Architectural Design Studio II	ELEC 451	Introduction to Digital Microelectronic Circuits
ARCH 533	Sustainable Architecture	ELEC 453	Nonlinear Electronic Circuits
ARCH 534	Architecture in the Anthropocene Epoch	ELEC 454	Simulation of Electronic Circuits
ARCH 541	Building And Human Health	ELEC 456	OP-AMs and Applications
ARCH 542	Ecological Building Materials	ELEC 457	FPGA-based system design
ARCH 544	Energy-Efficient Structural Design Principles	ELEC 458	Embedded System Design
ARCH 545	Waste Management In Building Production	ELEC 464	Mobile Communications
ARCH 546	Contemporary Building Materials	ELEC 466	Satellite Communications
ARCH 561	Building Quality	EMS 620	Mining Geology Technical Applications
ARCH 562	Analysis Of Construction Defects	ENVE 301	Water Supply and Sewerage Systems
ARCH 564	House Production And Its Technology	ENVE 311	Understanding Climate Change and Solutions
ARCH 565	Potentials of Reuse and Recycle of Building Materials	ENVE 313	Principles of Cleaner Production
ARCH 566	Earthquake Resistant Design Principles	ENVE 314	Environmental Impact Assessment
ARCH 568	Life Cycle Environmental Performance of Building Materials	ENVE 319	Agricultural Waste Valuation and Management
ARCH 570	Restoration Studio	ENVE 320	Energy Storage Technologies and Applications
ARCH 571	Traditional Building Types and Potentials for their Re-Use	ENVE 406	Nature Based Solutions to Design Circular City
ARCH 572	Restoration And Conservation Of Historic Environments	ENVE 407	Sustainability Concepts in Environmental Engineering
ARCH 578	Preservation Project In Historic Urban Environments	ENVE 537	Water Reuse Technologies and Applications
ARCH 581	Late Ottoman Architecture	ENVE 549	Exergy and Environment
ARCH 582	History of Furniture	ENVE 552	Industrial Ecology and the Circular Economy
ARCH 583	Postwar Architecture in Turkey	ENVE 621	Water Quality Management
ARCH 622	Sustainable Design Approaches In Educational Facilities	ENVE 625	Biomass and Waste Technologies
ARCH 624	Performative Architectural Design	GEOD 652	Sustainable Land Management
ARCH 625	Discussions on Architecture and Semiotics	IE 101	lntroduction to Industrial Engineering and Career Planning
ARCH 626	Contemporary Poetics in Architecture	IE 112	Algorithms and Programming for Industrial Engineers
ARCH 627	House, Its Surroundings and Social Interaction	IE 203	Economics for Engineers I
ARCH 641	Organization And Supervision In Building Construction	IE 204	Economics for Engineers II
ARCH 642	Sustainable Building Materials	IE 205	Introduction to System Analysis
ARCH 643	Environmental Building Design	IE 304	Production Information Systems
ARCH 644	Low Embodied Energy Building Materials	IE 434	Design for Human Factors
ARCH 645	Construction and Demolition Waste Management	IE 468	Energy Policy, Planning and Markets
ARCH 646	Experimental Studyof Building Materials	ITF 503	Economics of International Trade
ARCH 647	Detailing Principles in Architectural Design	MBG 272	Microbiology
ARCH 671	Techniques In Architectural Conservation Practice	MBG 274	Microbiology Laboratory
ARCH 672	Cultural Heritage Preservation and Examples in Turkey	MBG 307	Biochemistry Laboratory
ARCH 681	Use of Archival Documents in Architectural Studies	MBG 347	Introduction to Biotechnology
ARCH 682	The Late Ottoman Period Search for Identity and Architecture	MBG 348	Molecular Biotechnology
ARCH 683	Introduction to Ottoman (Language) Readings in The History of Architecture	MBG 410	Bacterial Ecology
ARCH 684	Construction Techniques and Building Materials of the Late Ottoman Architecture	MBG 423	Molecular Mechanisms of Epigenetics

ARCHF 166	Design and Identity	MBG 430	Introduction to Biostatistics
ARCHF 216	Computational Design in Architecture	MBG 432	Molecular Immunology
ARCHF 256	Human Factors in Design	MBG 435	Fundamentals of Stem Cells
ARCHF 276	Sketch Techniques	MBG 438	Immunopathology
ARCHF 296	Technology Art and Design	MBG 439	Neurobiology
ARCHF 316	Design For All	MBG 441	Plant Biotechnology
ARCHF 346	Discussions On Contemporary Architecture	MBG 443	Plant Metabolic Engineering
ARCHF 356	Animation Methods in Architecture	MBG 460	Plant Molecular Genetics
ARCHF 376	Anatolian Civilization	MBG 461	Plant Physiology
ARCHF 436	Ecological Planning in Architecture	MBG 463	Molecular Plant Breeding
ARCHF 476	Architectural Heritage of Istanbul	MBG 473	Industrial Microbiology
BENG 411	Bioengineering Design	MBG 512	Biosafety And Bioethics
BTEC 504	Protein Biotechnology	MBG 515	Bacterial Genetics
BTEC 571	Seed Biology, Quality and Technologies	MBG 572	Bacterial Ecology
BTEC 573	Soilless Agriculture Technologies	MBG 575	Molecular Marine Microbiology
BTEC 574	Advanced Plant Nutrition: Mineral and Organic Fertilizers and Growth Stimulants	MBG 612	Protein Trafficking
BTEC 602	Agricultural Biotechnology and Global Food Security	MBG 617	Glycobiology
BTEC 671	Plant Abiotic Stress Physiology and Tolerance	MBG 643	Gene And Protein Engineering
BTEC 672	Biofortification and Human Health: Agronomic, Genetic and Biotechnological Approaches	MBG 645	Plant Biotechnology
BTEC 673	Agrochemicals, Environment and Human Health	MBG 654	Molecular Cytogenetics
BTEC 675	Organic Crop Production Technologies	MBG 661	Plant Molecular Genetics
BTEC 676	Beneficial Soil Microorganisms and Microbial Fertilizers	MBG 665	Molecular Plant Breeding
BTEC 677	Soilless and Vertical Farming Technologies	MBG 670	Bioremediation
BUS 308	Environmental Management	MBG 673	Industrial Microbiology
BUS 417	Corporate Social Responsibility	MBG 674	Enviromental Microbiology
BUS 421	Corporate Sustainability	MBG 676	Food Microbiology And Biotechnology
BUS 513	Entrepreneurship And Small Business Management	MBG 677	Microbial Deterioration
BUS 529	Organizational Culture and Leadership	MBG 678	Plant Microbe Interactions
BUS 639	Corporate Culture And Leadership	ME 101	Introduction to Mechanical Engineeringand Career Planning
BUS 651	Marketing Thought	ME 102	Mechanical Engineering Freshman Project
CE 232	Construction Materials	ME 107	Computational Systems in Mechanical Engineering
CE 301	Introduction to Civil Engineering Design	ME 241	Principles of Thermodynamics
CE 441	Construction Management	ME 242	Applications of Thermodynamics
CHEM 428	Green Chemistry	ME 314	Introduction to Composite Materials
CHEM 614	Clean Chemical Synthesis	ME 321	Manufacturing Processes
CHEM 670	Industrial Biocatalyst And Biotransformation	ME 412	Machining
CRP 112	Urban History	ME 414	Polymer Materials and Polymer Processing Techniques
CRP 113	Urban Sociology	ME 447	Heating, Ventilating and Air Conditioning
CRP 201	Project III	ME 636	Sustainable Machining
CRP 202	Project IV	MSE 627	Sustainable Polymers
CRP 213	Transportation Planning	NANO 515	Nanotechnology for Energy Applications
CRP 216	Forms of Visual Expression in Planning		

Full List of Courses/Subjects Related to Sustainability (Gebze Technical University, TR)

Description:

Above is a list of examples of sustainability-related courses offered and below that there is a full list of all sustainability-related courses offered at our University.
The total number of courses with sustainability embedded in 2022-2023 academic year is 245 (total number of courses: 1478).