

Şube No	Akademisyen (Lecturer)	Proje Adı (Project Name)	Proje Bölümü (Project Department)	Projeyi Alabilecek Öğrencilerin Bölümleri (Departments of students Who will register for the project)	Fakülte Dışında Açmak istenen bölüm
1	PROF.DR. A. İHSAN KUTLAR PROF.DR. NİHAT YILDIRIM	Design and contruction of a prototype load cell based on strain gage technology Pre-requisite: familiarity with Arduino	Mechanical Engineering	Electrical and Electronics Engineering	
2	PROF.DR. A. İHSAN KUTLAR PROF.DR. NİHAT YILDIRIM	Design and construction of a 4 channel data logger system for laboratory measurements Pre-requisite: familiarity with Arduino	Mechanical Engineering	Electrical and Electronics Engineering	
3	PROF.DR. A. İHSAN KUTLAR PROF.DR. NİHAT YILDIRIM	Design and contruction of a solar tracker unit with measurement and control of input and output parameters Pre-requisite: familiarity with Arduino	Mechanical Engineering	Electrical and Electronics Engineering	
4	PROF.DR. ÖMER EYERCİOĞLU	Investigation of properties of 3D Printed Structures	Mechanical Engineering	Metallurgical and Materials Engineering, Textile Enginnering	
5	PROF.DR. ÖMER EYERCİOĞLU	A Hybrid Manufacturing Process- Additive manufacturing and injection molding case studies	Mechanical Engineering	Metallurgical and Materials Engineering, Textile Enginnering	
6	DOÇ.DR. ALİ KILIÇ	Proje Başlığı: Smart Farmland Remote Monitoring and Risk Early-Warning System Proje Açıklaması: In this project, you are expected to design and prototype a remote farmland monitoring and early-warning system. You will collect key field parameters (e.g., soil moisture, air temperature/humidity, rainfall, and wind) and build a simple dashboard that shows real-time values, trends, and alerts. You should implement early-warning logic for frost risk (using temperature trend and dew-point estimation) and detect animal intrusion using motion sensing (optionally trigger an image capture event). Finally, you must include anti-theft and anti-tamper measures (enclosure opening detection, vibration/relocation alerts) and use secure communication with basic fault tolerance when the network is unavailable.	Mechanical Engineering	Electrical and Electronics Engineering, Industry Engineering	
7	PROF.DR. ADEM ATMACA	Binalar ve GES'ler için Dijital İkiz ve IoT Tabanlı Enerji İzleme ve Analiz Platformu	Mechanical Engineering	Electrical and Electronics Engineering	
8	PROF.DR. EMRAH ÖZAHİ	LEAN MANUFACTURING AND ENERGY OPTIMIZATION OF A PRODUCTION LINE USING OEE, VALUE STREAM MAPPING AND SIMULATION *** Requirement: The central requirement is to optimize both production performance and energy/thermal performance, rather than treating Lean and engineering efficiency separately. NEEDED PROCEDURE 1. CURRENT-STATE ANALYSIS Start by mapping the production system. Use: Value Stream Mapping (VSM) to identify: • Value-added time • Non-value-added time • WIP • Waiting • Bottlenecks • Transportation • Setup/changeover • Defects • Machine downtime At the same time, measure: • Machine power consumption • Compressed-air consumption • Cooling/heating demand • Temperature • Flow rate • Pressure 2. MECHANICAL ENGINEERING ANALYSIS The Mechanical Engineering students can investigate the physical systems behind the production line. For example: Compressed-air system Analyze: • Pressure drop • Pipe diameter • Air velocity • Compressor efficiency • Leakage • Energy consumption Or, if the factory has cooling/heating: and determine where thermal energy is being wasted! 3. INDUSTRIAL ENGINEERING ANALYSIS Develop a production model containing: • Cycle times • Processing times • Machine capacities • WIP • Demand • Batch sizes • Setup times • Machine availability Then use discrete-event simulation to model the production line. Possible software: • Arena • AnyLogic • Simio • MATLAB • Python You can compare: Current system → Lean improvements → Energy improvements → Combined optimized system LEAN TOOLS YOU COULD INCORPORATE • VSM — Value Stream Mapping Map the current and future state. • 5S Improve workplace organization. • SMED Reduce machine changeover/setup time. • Kaizen Identify and eliminate continuous sources of waste. • OEE This gives you an excellent quantitative measure of improvement. • Pareto analysis Identify the major causes of downtime, defects, energy consumption, etc. • Fishbone/Ishikawa Analyze root causes of problems. • Standard Work Develop improved operating procedures. 4. COMBINE LEAN + ENERGY This is where the project becomes more interesting than a standard Lean Manufacturing project. Traditional Lean asks: “How can we produce more efficiently?” Your project asks: “How can we produce more efficiently while minimizing energy consumption and maintaining product quality?” For example, suppose a machine operates continuously even when there is no production demand. Lean identifies this as overprocessing / unnecessary operation. Mechanical engineering determines: • machine power • thermal losses • compressed-air consumption • cooling requirements Industrial Engineering determines • the optimal operating schedule. So the final solution might be:Turn machine off → reduce energy → reduce unnecessary operation → maintain production → reduce cost, etc.	Mechanical Engineering	Industry Engineering	
9	PROF.DR. A. İHSAN KUTLAR PROF.DR. NİHAT YILDIRIM	Investigation and preliminary design of an axial flux electric motor	Mechanical Engineering	Electrical and Electronics Engineering	
10	DR. ÖĞR. ÜYESİ M. ERKAN KÜTÜK	Improvement of an Already Existing A3 Paper Folding Machine	Mechanical Engineering	Electrical and Electronics Engineering	
11	PROF.DR. Ö. YAVUZ BOZKURT	Development of Hybrid Cast Composites Reinforced with Additively Manufactured Lattice Structures	Mechanical Engineering	Metallurgical and Materials Engineering	
12	PROF.DR. Ö. YAVUZ BOZKURT	Development of a Multi-Layer Composite Impact Liner Using Silicone Molding	Mechanical Engineering	Metallurgical and Materials Engineering, Textile Enginnering	
13	PROF.DR. Ö. YAVUZ BOZKURT	Design and Manufacturing of a Textile-Reinforced Composite Bellows	Mechanical Engineering	Metallurgical and Materials Engineering, Textile Enginnering	
14	DR.ÖĞR.ÜYESİ MAHMUT FURKAN KALKAN	Deep Learning	Mechanical Engineering	Metallurgical and Materials Engineering	
15	PROF.DR. NECİP FAZİL YILMAZ	Additive Manufacturing	Mechanical Engineering	Metallurgical and Materials Engineering	
16	Dr. Öğr. Üyesi SEYDİ KAÇMAZ	Smart Food Storage and Inventory Optimization System	Electrical and Electronics Engineering	Industrial Engineering	
17	Dr. Öğr. Üyesi SEYDİ KAÇMAZ	Structural Health Monitoring	Electrical and Electronics Engineering	Civil Engineering	
18	Prof.Dr.Nüran DOĞRU	Remote controlled smart trolley	Electrical and Electronics Engineering	Mechanical Engineering	
19	Prof. Dr. Ergun ERÇELEBİ	Smart Building Energy Management System	Electrical and Electronics Engineering	Civil Engineering	
20	Prof. Dr. Ergun ERÇELEBİ	Smart Occupational Safety and Worker Monitoring System for Industrial Environments	Electrical and Electronics Engineering	Mechanical Engineering, Industrial Engineering	
21	Doç. Dr. Mehmet KURTOĞLU	Design of a Smart Temperature-Controlled Food Storage System Using a Power Electronics Converter	Electrical and Electronics Engineering	Food Engineering	
22	Doç. Dr. Serkan ÖZBAY	Harnessing energy from vehicle movements on roadways	Electrical and Electronics Engineering	Civil Engineering	
23	Prof.Dr. Tolgay KARA	Autonomous mobile robot navigation and control via visual feedback	Electrical and Electronics Engineering	Electrical and Electronics Engineering, Mechanical Engineering, Computer Engineering	
24	Prof.Dr. Tolgay KARA	Electrical conductivity measurement techniques for textile fibers	Electrical and Electronics Engineering	Electrical and Electronics Engineering,Textile Engineering , Engineering Physics	
25	Dr. Öğr. Üyesi Ali Osman ARSLAN	Predictive Maintenance and Anomaly Detection Device for Industrial Systems	Electrical and Electronics Engineering	Mechanical Engineering, Computer Engineering	
26	Prof. Dr. Taner İnce	Design of a solar seed sprayer	Electrical and Electronics Engineering	Food Engineering	
27	Prof. Dr. Ahmet Mete VURAL	Regenerative Suspension System for Automobiles	Electrical and Electronics Engineering	Mechanical Engineering	
28	Prof. Dr. Ahmet Mete VURAL	IoT-Based Energy Monitoring System for Textile Dyeing Machines	Textile Engineering	Textile Engineering	
29	Dr.Öğrt. Üyesi Mehmet DEMİR	Rooftop Solar Power Plant Conceptual Design	Electrical and Electronics Engineering	Civil Engineering	
30	Dr. Öğr. Üyesi Musa Bute	Design of solid granule pumping machine	Electrical and Electronics Engineering	Mechanical Engineering	
31	Dr. Öğr. Üyesi Mahmut AYKAÇ	Smart Transmission	Electrical and Electronics Engineering	Mechanical Engineering	
32	Prof. Dr. Uğur Cem Hasar	Olive Oil Characterization by Microwave Signals	Electrical and Electronics Engineering	Food Engineering	
33	Prof.Dr.Sema Kayhan	Investigating the impact of battery thermal management on energy consumption and battery life in electric vehicles.	Electrical and Electronics Engineering	Mechanical Engineering	
34	Prof.Dr. Mustafa BAYRAM	Future projection for pasta (macaroni)	Food Engineering	Mechanical Engineering, Industrial Engineering	Gastronomi, İktisat, İşletme
35	Prof. Dr.Medeni MASKAN	Designing an ultrasonic malaxor for olive oil production	Food Engineering	Mechanical Engineering, Optic and Acoustical Engineering	Yok
36	Prof. Dr. Sibel FADİLOĞLU	Design of electrophoresis instrumental system for protein purification	Food Engineering	Mechanical Engineering, Electrical and Electronics Engineering	Yok
37	Prof. Dr. Esra İBANOĞLU	Exploring Polymorphic structures in chocolate on the production line	Food Engineering	Optic and Acoustical Engineering	Yok
38	Prof.Dr. Fahrettin GÖÇÜŞ	Color measurement of solid food materials	Food Engineering	Optic and Acoustical Engineering	Yok
39	Prof. Dr. Hüseyin BOZKURT	Advanced Statistical Application	Food Engineering	Industrial Engineering	Yok
40	Prof.Dr. Sevim KAYA	Design of packaging material for bulgur	Food Engineering	Industrial Engineering, Gastronomy, Chemistry	Gastronomi, Kimya
41	Prof. Dr. Emine ERÇELEBİ	Application of industrial engineering techniques for cost reduction in frozen foods	Food Engineering	Industrial Engineering	Yok
42	Prof.Dr. A. Coşkun DALGIÇ	Process simulation in food industry	Food Engineering	Industrial Engineering, Mechanical Engineering	Yok
43	Prof.Dr. Çiğdem AYKAÇ	Research on alternative polymers for food packaging	Food Engineering	Metallurgical and Materials Engineering	Yok
44	Doç. Dr. Hasene KESKİN ÇAVDAR	Development of a Low-Cost AI-Assisted System for Monitoring Lipid Oxidation	Food Engineering	Electrical and Electronics Engineering, Mechanical Engineering, Engineering Physics	Yok
45	Doç. Dr. Hatice Neval ÖZBEK	Extraction of valuable components by microwave	Food Engineering	Food Eng., Mechanical Eng.	Yok
46	Dr. Öğr. Üyesi Fatih BALCI	Talking Packaging: Halochromic (Color-Changing) Starch-Zein Nanofiber Labels for Monitoring Meat Freshness	Food Engineering	Textile Engineering	Yok

47	Dr. Öğr. Üyesi Burcu GÖKKAYA ERDEM	Alternative Uses of Food Waste	Food Engineering	Gastronomy	Gastronomi
48	Prof. Dr. Abdulkadir Çevik	Artificial Intelligence Applications in Engineering	Civil Engineering	Mechanical Engineering, Electrical Engineering, Industrial Engineering	
49	Prof. Dr. Ali Firat Çabalar	Sustainable materials for geotechnical engineering applications	Civil Engineering	Metallurgical and Materials Engineering, Electrical Engineering	
50	Prof. Dr. Aytaç Güven	Artificial Intelligence and Geographical Information Systems Design Applications in Engineering	Civil Engineering	Mechanical Engineering, Electrical Engineering	
51	Prof. Dr. Esra Mete Güneyisi	Design of a steel transmission tower based on safety, efficiency and sustainability	Civil Engineering	Electrical and Electronics Engineering, Mechanical Engineering, Industrial Engineering	
52	Prof. Dr. Hamza GÜLLÜ	Post-Eartquake Damage Evaluation of Buildings	Civil Engineering	Mechanical Engineering, Electrical Engineering	
53	Prof. Dr. Mehmet İshak Yüce	Design and optimization of renewable energy sources and investigation of structural integrity	Civil Engineering	Mechanical Engineering, Industrial Engineering	
54	Prof. Dr. Mustafa Günal	Flood Prediction and Disaster Risk Analysis using GIS	Civil Engineering	Mechanical Engineering	
55	Prof. Dr. Mustafa Özakça	Design of the future house (Energy efficient, Water efficient, Social responsibility and innovative design)	Civil Engineering	Mechanical Engineering, Electrical Engineering, Industrial Engineering, Architecture, Students from departments other than those listed can take part in the project with the project advisor's approval.	
56	Prof. Dr. Nihat Atmaca	Energy-Efficient "Green Campus" Building Design	Civil Engineering	Mechanical Engineering, Industrial Engineering, Architecture	
57	Prof. Dr. Nildem Tayşi	Sustainable Power Generation Using Wind Energy Conversion Systems: Design and Performance Analysis	Civil Engineering	Mechanical Engineering, Electrical Engineering, Industrial Engineering	
58	Prof. Dr. Talha Ekmekyapar	Design of an Industrial Steel Building with Sprinkler Fire Extinguishing Sytem	Civil Engineering	Mechanical Engineering	
59	Prof. Dr. Mehmet Eren Gülşan	Design of a reinforced concrete factory by the consideration of both energy savings and vibration resistance	Civil Engineering	Mechanical Engineering, Electrical and Electronics Engineering	
60	Doç. Dr. Mehmet Tolga Göğüş	Design of extensometer for tensile testing of metals	Civil Engineering	Mechanical Engineering	
61	Dr. Öğr. Üyesi Abdulhadi PALA	Design of a Small-Scale Hydroelectric Power Plant	Civil Engineering	Mechanical Engineering, Electrical and Electronics Engineering	
62	Dr. Öğr. Üyesi Ayşe Yeter Günal	Flood Prediction and Disaster Risk Analysis using Artificial Intelligence	Civil Engineering	Mechanical Engineering	
63	Prof.Dr.Bülent GÖNÜL	"Life is not possible without Quantum Mechanics"	Engineering Physics	Electrical and Electronics Engineering, Mechanical Engineering	
64	Doç. Dr. R.Güler YILDIRIM	Engineering Applications of Excel	Engineering Physics	Food Engineering	
65	Prof.Dr.Ömer F. Bakkaloğlu	Design of solar cell	Engineering Physics	Mechanical Engineering, Optic and Acoustic Engineering, Electrical and Electronics Engineering	
66	Assist. Prof. Dr. Mehmet KOÇAK	Wireless Transmission of Electricity	Engineering Physics	Optic and Acoustic Engineering, Electrical and Electronics Engineering	
67	Dr. Öğr. Üyesi Serap Çelik	Efficiency calculations of half-cut solar panels under shaded conditions	Engineering Physics	Optic and Acoustic Engineering, Electrical and Electronics Engineering	
68	Prof. Dr. Okan Özer	Thermodynamic- Based Simulation of Akkuyu Nuclear Power Plant	Engineering Physics	Mechanical Engineering, Electrical Engineering, Industrial Engineering	
69	Prof. Dr.Beşire GÖNÜL	An investigation of band gap tuning in semiconductors for photonic devices	Engineering Physics	Metallurgical and Materials Engineering, Optic and Acoustic Engineering	
70	Prof.Dr.Eser OLĞAR	Design and construction of absorptive acoustic panels	Engineering Physics	Optic and Acoustic Engineering, Civil Engineering, Mechanical Engineering	Architecture
71	Prof.Dr.A.Necmeddin YAZICI	Smart LED Desk Lamp and Flashlight Design with Thermal Control and Adjustable Optics	Engineering Physics	Optic and Acoustic Engineering, Electrical and Electronics Engineering, Mechanical Engineering	
72	Prof. Dr. Hüseyin TOKTAMIŞ	"Investigation of radiation absorpton of lime in drinking water of Gaziantep province."	Engineering Physics	All departments	
73	Prof.Dr.E.Vural KAFADAR	Enhancing Filter Coffee Brewing with Ultrasonic Waves	Engineering Physics	Optic and Acoustic Engineering, Food Engineering	
74	Prof.Dr.Hayriye TÜTÜNCÜLER	Investigation of dye sensitized solar cells	Engineering Physics	Optic and Acoustic Engineering, Food Engineering	
75	Doç.Dr.Mustafa YILMAZ	Water harvesting from moisture in the air by 3D mesh nets.	Engineering Physics	Optic and Acoustic Engineering, Mechanical Engineering	
76	Prof.Dr.Ramazan KOÇ	Paper and Water based battery design	Engineering Physics	Optic and Acoustic Engineering, Electrical and Electronics Engineering, Food Engineering	Chemistry
77	Prof.Dr.Ayda BEDDALL	Assembly of a Cosmic Muon Cloud Chamber and Muon tracking by Image Processing	Engineering Physics	Optic and Acoustic Engineering, Electrical and Electronics Engineering	
78	Prof.Dr.Ahmet BİNGÜL	Mass Constraint in Particle Physics	Engineering Physics	Optic and Acoustic Engineering, Industry Engineering	
79	Prof. Dr. Hatice Kübra Kaynak	Design and production of textile based sensors	Textile Engineering	Mechanical Eng. Electrical and Electronics Eng., Metallurgical and Materials Eng.	
80	Prof. Dr. Mehmet Topalbekiroğlu	Preparation of software for stepper motors for use in textile machines	Textile Engineering	Mechanical Eng. Electrical and Electronics Eng.	
81	Prof. Dr. Cem Güneşoğlu	AI assited textile trend assumption	Textile Engineering	Electrical and Electronics Eng. Industry Eng.	
82	Prof. Dr. H. İbrahim Çelik	Textile-Based Flexible Pressure Sensors	Textile Engineering	Electrical and Electronics Eng. Metallurgical and Materials Eng.	
83	Prof. Dr. Züleyha Değirmenci	Design of thermal jacket	Textile Engineering	Electrical and Electronics Eng.	
84	Doç. Dr. Mehmet Erdem Ince	The use of JUMP® statistical software package in engineering data analyses.	Textile Engineering	Mechanical Eng.Industry. Eng. Physical Eng.	
85	Doç. Dr. Halil İbrahim İçoğlu	Production and characterization of electrospun ceramic nanofibers	Textile Engineering	Metallurgical and Materials Eng.	
86	Dr. Öğr. Üyesi Hatice İbili	Production of Functional Textile Surfaces	Textile Engineering	Food Engineering	
87	Dr. Öğr. Üyesi Serap Gamze Serdar	Testing applications on textile	Textile Engineering	Food Engineering, Metallurgical and Materials Eng.	
88					
89	Prof. Dr. Eren ÖZCEYLAN	Comprehensive Assessment and Optimization of Municipal Solid Waste Collection Operations	Industrial Engineering	Computer Engineering	
90	Dr.Öğrt.Üyesi Zülat KENGER	Mobile 3D printer vehicle routing problem under carbon emission consideration	Industrial Engineering	Industrial engineering, Mechanical engineerin	
91	Dr.Öğr.Üyesi Ömer Nedim Kenger	Machine Learning	Industrial Engineering	Industrial Engineering, Computer Engineering	
92	Dr. Öğr. Üyesi Yunus EROĞLU	Multi-Agent Price Optimization in Competitive Markets using Q-Learning and Game Theory: This project involves the development of an AI-powered simulation model where multiple competing firms adjust their prices in a shared market using AI algorithms. The project will model the interaction among firms as a repeated game, where Nash equilibrium concepts are used to analyze final strategic positions. Students will simulate price adjustments over time, observe learning behavior, and visualize how rational competition converges or diverges.	Industrial Engineering	Industrial Engineering, Food Engineering, Civil Engineering, Engineering Physics, Textile Engineering, Mechanical Engineering, Electrical and Electronics	
93	Doç. Dr. Abdulaziz KAYA	Design Of A Pilot Water Treatment Plant For The Removal Of Anionic Dyes From Textile Wastewater With The Use Of Agricultural Waste-Based Adsorbents	Met. And Mat. Eng.	Industrial Eng., Textile Eng.	
94	Doç. Dr. Abdulcabbar YAVUZ	Flexible Electrode for Water Purification	Met. And Mat. Eng.	Food Eng., Textile Eng.	
95	Doç. Dr. Derya KAPUSUZ YAVUZ	Design and Prototype Development of a Smart Corrosion Early-Warning Label for Metal Surfaces	Met. And Mat. Eng.	Electrical and Electronics Eng.Industrial Eng., Mechanical Eng.	
96	Doç. Dr. Mikail ASLAN	Development and Cost–Performance Optimization of SiC/Al ₂ O ₃ Nanoparticle-Reinforced Mg–Al Alloys for Electric Vehicle Chassis and Battery Enclosure Components	Met. And Mat. Eng.	Mechanical Eng.	
97	Doç. Dr. Mustafa Güven GÖK	Investigation of Metal-Filled FFF Filament Waste Recycling for Fabrication of Metallic Compacts by Press-and-Sinter Processing	Met. And Mat. Eng.	Mechanical Eng.	
98	Ar. Gör. Dr. Sefa Emre SÜNBÜL	Critical Raw Materials Recycling for Energy Transition: Toward a Circular and Sustainable Future	Met. And Mat. Eng.	Industrial Eng., Mechanical Eng., Textile Eng.	
99	Dr. Öğr. Üyesi İlkey Sibel KERVANCI	Embedded AI-Powered Fault Prediction in Mechatronic Systems and Smart Inventory Management Based on It.	Computer Engineering	Mechanical Eng. Electrical and Electronics Eng., Industry Eng.	
100	Dr. Öğr. Üyesi Mehmet MERKEPÇİ	Design and Implementation of an AI-Assisted Optical Quality Inspection and Process Optimization System for Textile Production	Computer Engineering	Electrical and Electronics Engineering, Textile Engineering, Industrial Engineering.	
101	Dr. Öğr. Üyesi Umay Gülfem ELGÜN ÇİFTÇİOĞLU	AI-Driven Personalized Medical Nutrition Decision Support System for Chronic Health Conditions	Computer Engineering	Food Engineering	
102	Dr. Öğr. Üyesi Gözde ÖZSERT YİĞİT	Explainable AI-Based Feature Selection for Disease Diagnosis from Clinical and Omics Data	Computer Engineering	Electrical and Electronics Eng., Industrial Eng., Food Eng.	
103	Doç. Dr. Tolga Ulaş GÜRBÜZ	Machine-Learning-Assisted Microwave Detection of Food Deterioration	Computer Engineering	Electrical and Electronics Engineering, Food Engineering	

104	Doç. Dr. Levent KARACAN	Automated Visual Quality Control and Anomaly Detection in Engineering Processes Using Vision-Language Models (VLMs)	Computer Engineering	All departments	
105	Doç. Dr. Bülent HAZNEDAR	IoT-Based Digital Twin for Remaining Shelf-Life Prediction and Distribution Planning Optimization in the Cold Chain	Computer Engineering	Food Engineering, Industry Engineering	