

Department of Mechanical Engineering
ME-409 Final Year Design Project
Project List



F/SOP/FYDP 02/03/00

Batch: 2022

Semester: Fall 2025

Rev: 02

S.No	Project Title	Student Name			Supervisor / Co-Supervisor	Industry
1	Optimization of 3D printed Rocker Arm Shaft and Dust Sealing Mechanism for Lunar Rover	1.	ME-22003	Mehmeez Kaleem	Dr. Tariq Jamil	N/A
		2.	ME-22020	Muhammad Shahareeb		
		3.	ME-22009	Anousha Asif		
		4.	ME-22008	Laiba Saeed		
2	Techno-Economic Feasibility on the Total Potential for Wind Power Generation	1.	ME-22251	Nabeel Mustafa	Dr. Muhammad Uzair Yousuf	Mr. Abdullah Hussain, Manager Maintenance, Lotte Chemical Pak. Ltd.
		2.	ME-22237	Hafiz Muhammad Bilal Qadri		
		3.	ME-22243	Muhammad Huzaifa		
		4.	ME-22244	Sheheryar Warsi		
3	AI-Driven Lifecycle Cost Analysis and Operational Optimization of Compressors at FPCL	1.	ME-22022	Malik Muhammad Rafay	Dr. Tariq Jamil / Mr. Mirza Muhammad Ali Baig	Mr. Basit Iqbal Khan, Manager Projects & Material Management, FPCL
		2.	ME-22032	Ali Rashid		
		3.	ME-22031	Muhammad Bilal Akber		
		4.	ME-22301	Maaz Ahmed Siddiqui		
4	Machine Learning Approach for Modelling Stresses and Strains in Subsea Pipelines	1.	ME-22007	Syeda Hooria Nadeem	Mr. Imran Sikandar / Dr. Ubaida Fatima	Assistance by: University of Aberdeen U.K. & British Petroleum/Sister affiliates
		2.	ME-22025	Wajahat Ullah Khan		
		3.	ME-22010	Saboor Shehzad		
		4.	ME-22040	Muhammad Muneeb Khan		
5	Development of Machine Vision-Enabled Autonomous Fire Detection System for Drone	1.	ME-22006	Noor Ul Ain Naeem	Dr. Haider Ali	Mr. Aleem, Operational Coordinator, ASHOMCo – Saudi Aramco Co-generation Plants
		2.	ME-22001	Mehak Fatima		
		3.	ME-22037	Muhammad Daniyal Toor		
		4.	ME-22126	Muhammad Irfan Khan		
6	Implementation of a Digital Twin Framework for Smart Monitoring of Mechanical Systems	1.	ME-22033	Abdullah	Dr. Haider Ali	Dr. Ahmer Ali Bozdar Baloch, Senior Researcher, Dubai Electricity and Water Authority (DEWA) R&D Centre
		2.	ME-22026	Hafiz Mehmood Ali Siddiqui		
		3.	ME-22057	Muhammad Yaseen Raza		
		4.	ME-22021	Syed Muhammad Sufyan Ul Haq		
7	Experimental Evaluation of FDM-Printed Thermoplastic Polyurethane (TPU) Substrates for Use in Conductively Coated Stretchable Thin-Film Sensors	1.	ME-22103	Muhammad Zain Ul Haq	Dr. Shehroze Tahir Khan / Prof. Dr. Murtuza	Mr. Baseeruddin, Founder, 3D Consultech
		2.	ME-22104	Abdullah		
		3.	ME-22093	Muhammad Saim Ud Din		
		4.	ME-22122	Hermann Ali Effendi		
8	Numerical Investigation of Delamination on Composite Material	1.	ME-22242	Kashan Shabbir	Dr. Tariq Jamil / Mr. Muhammad Bilal	N/A
		2.	ME-22250	Jalal Abbas		
		3.	ME-22241	Nehal Ahmed		
		4.	ME-22245	Abdul Rehman		
9	Structural Validation of Engine Test Bed Model Considering Ceiling Mounted Loads as Benchmark	1.	ME-22096	Minhaj Uddin Qureshi	Dr. Tariq Jamil / Mr. Shaukat Ali Shaikh	Ehsan Ahmed, Squadron Leader, Pakistan Air Force
		2.	ME-22303	Muhammad Mujtaba		
		3.	ME-22123	Muhammad Abdullah Aleem		
		4.	ME-22112	Syed Muhammad Hasan Abdul Azim		
10	Techno-Economic Assessment of Direct Air Capture Implementation in Pakistan	1.	ME-22120	Faizan Raza	Dr. Haider Ali	Funded by SHEC
		2.	ME-22099	Zeeshan Hashmi		
		3.	ME-22114	Sherafgan Khan		
		4.	ME-22119	Maaz bin Zahid		
11	Validation of Engine Test Bed thru Scaled Down Model Similitude Studies	1.	ME-22083	Muavia Tasleem Qureshi	Dr. Tariq Jamil / Dr. Shehzaib Yousuf Khan	Ehsan Ahmed, Squadron Leader, Pakistan Air Force
		2.	ME-22080	Muhammad Waqas		
		3.	ME-22073	Hassan Rizwan		
		4.	ME-22086	Mohammad Danyal		

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12	Design and Trajectory Optimization of a Robotic Arm for Lunar Rover	1. ME-22118 Muhammad Hashir 2. ME-22111 Muhammad Fozan 3. ME-22107 Muhammad Bilal Ansari 4. ME-22092 Ammar Ahmed Khan	Dr. Aun Ali	Engr. Asaad Iqbal, Manager, SUPARCO
13	Thermal Enhancement and Flow Structures Investigations in an Impinging Jet Using Inserts and Surface Enlargement Elements	1. ME-22155 Muhammad Talha Arshad 2. ME-22152 Zain Ul Abdin 3. ME-22125 Muhammad Talal Khan 4. ME-22170 Ayaan Habib	Dr.-Ing Usman Allauddin	Dr. Patrick Verdin, Senior Lecturer, Faculty of Engineering and Applied Sciences Cranfield University
14	Modelling of Integrated Cooling and Desalination System	1. ME-22024 Muhammad Asad Ali 2. ME-22011 Maham Sohail 3. ME-22004 Maidah Fahim 4. ME-22035 Muhammad Ahsan	Prof. Dr. Muhammad Shakaib	N/A
15	Design of Stacking Machine for filled PP Bags of Granular Products	1. ME-22106 Muhammad Habib ur Rahim Siddiqui 2. ME-22115 Syed Hassan Abbas Kazmi 3. ME-22127 Zain Ali Khan 4. - -	Ms. Erum Khan	Mr. Rehan Siddiqui, General Manager Plant, MAPAK Edible Oil Pvt. Ltd.
16	Occupational Hazard Assessment and Risk Mitigation for Power Generation Systems at HO SSGCL	1. ME-22046 Areeba Siddiqui 2. ME-22047 Narmeen Naeem 3. ME-22066 Ibad Ahmed Khan 4. ME-22072 Yasir Tariq	Mr. Imran Sikandar / Mr. Muhammad Azam	SSGCL
17	Design & Fabrication of Thin Film Adhesion Testing Machine	1. ME-22163 Saad Nawab 2. ME-22153 Muaaz Bin Riaz 3. ME-22144 Muhammad Jaffer Ali 4. ME-22175 Aon Muhammad	Prof. Dr. Murtuza / Dr. Shehroze Tahir Khan	N/A
18	Testing and Performance Analysis of a Solar Still	1. ME-22143 Muhammad Abdul Rehman Khan 2. ME-22139 Muhammad Waqar 3. ME-22164 Muhammad Hamza Hashim 4. ME-22173 Abdullah Ashfaq	Mr. Masood Ahmed Khan	N/A
19	Design of Two Paraxylene Above-Ground Storage Tanks (15,000 MT Each) with Loading and Offloading Systems	1. ME-22187 Ebad Ur Rehman 2. ME-22184 Muhammad Athar Hussain 3. ME-22183 Abdul Sami 4. ME-22182 Abdullah Dareer Khan	Mr. Mirza Hammad Baig	Mr. Abdullah Hussain, Manager Maintenance, Lotte Chemical Pak. Ltd.
20	Optimization of Flue Gas Desulfurization (FGD) System Efficiency	1. ME-22310 Muhammad Mohsin 2. ME-22307 Areez Ahmed Jafri 3. ME-22309 Syed Muhammad Barik 4. - -	Mr. Mirza Hammad Baig / Dr. Saqib Sharif	Muhammad Jawad Qasim, Manager Boiler Maintenance, China Power Hub Generation Company
21	Dynamic Modeling and Optimization of ESP Performance and Retrofit Solutions	1. ME-22117 Syed Haseeb Ur Rehman 2. ME-22110 Muneeb Ur Rehman 3. ME-22091 Muhammad Hassan Siddiqui 4. ME-22101 Muhammad Omer Khan	Mr. Mirza Hammad Baig / Dr. Saqib Sharif	Muhammad Jawad Qasim, Manager Boiler Maintenance, China Power Hub Generation Company
22	Innovative Design and Development of a Novel Wind Turbine	1. ME-22240 Areeb Jalil 2. ME-22262 Anas Ahmad Khan 3. ME-22248 Ahsan Rasool 4. ME-22255 Habib Ahmed Qasmi	Dr. Kashif Noor / Ms. Hafiza Sumiya Mohsin	N/A
23	Design and Integration of Heat Storage System in Parabolic Trough Solar Cooker	1. ME-22141 Zain Ahmed 2. ME-22167 Omar Nadeem 3. ME-22136 Sohaib Kamal	Dr. Syed Muhammad Asad Akhter / Dr. Haider Ali	N/A

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		4.	ME-22137	Abdullah Nadir Hussain		
24	Maintenance and Reliability Data Analysis, Optimization, and Dashboard Generation through CMMS Integration	1.	ME-22128	Aman Azhar Qadri	Dr. Kashif Noor	Lotte Chemical Pakistan, Port Qasim Site
		2.	ME-22014	Ahmed Hassan Azeemi		
		3.	ME-22036	Muhammad Ghayyoor Khan		
		4.	ME-22015	Naveed Qamar		
25	Design a model of Domestic Service connection for Domestic meters and Regulators with 3D Modeling including Simulation covering various aspects of Meter regulations	1.	ME-22075	Muhammad Haroon	Mr. Arshad Siddiqui / Mr. Muhammad Azam	SSGCL
		2.	ME-22074	Muhammad Hassan Saeed		
		3.	ME-22058	Muhammad Hunain Khan		
		4.	ME-22070	Ahmad Adnan		
26	Performance Evaluation of Dehumidification Systems for Advanced Lithium Batteries using different Desiccant Materials	1.	ME-22165	Muhammad Sufiyan Sayani	Dr. Syed Muhammad Asad Akhter / Prof. Dr. Zahoor ul Hussain Awan	N/A
		2.	ME-22142	Muhammad Waseem		
		3.	ME-22138	Rayan Ahmed Khan		
		4.	ME-22171	Abdul Ahad		
27	Designing of LPG Storage Depot with Cylinder Filling System as per Regulatory Requirements of Pakistan	1.	ME-22121	Wasay Alim Ur Rahman	Dr. Kashif Noor	Muhammad Hasan Arshad, Sr. Mechanical Engineer, Global PMC Pvt. Ltd
		2.	ME-22116	Syed Faizan Ahmed		
		3.	ME-22100	Abdul Hadi Javed		
		4.	ME-22094	Fahad Ali Siddiqui		
28	Feasibility Analysis of Converting an Existing Oil-Heated Machine to a Gas-Fired Machine	1.	ME-22048	Waniya Wasaaf	Mr. Adeel Ahmed Khan / Mr. Abdul Samad Khan	Mr. Jamal, Manager Utilities Mustaqim Dying & Printing Ltd
		2.	ME-22071	Abdul Wahab		
		3.	ME-22063	Sufyan Bin Abdul Rehman		
		4.	ME-22049	Ashna Khan		
29	Effect of Bed Dimensions on Water Adsorption from Powdered Water-selective Metal-organic Framework in Atmospheric Water Generator Design	1.	ME-22034	Wahaj Abdullah Amir Qureshi	Dr. Muhammad Anique Azam	Academia: Tecnologico de Monterrey
		2.	ME-22038	Muhammad Touqeer Siddiqui		
		3.	ME-22028	Muhammad Harris Asim		
		4.	-	-		
30	Development of a Sustainable Framework for Green Retrofitting in Existing Industrial Buildings	1.	ME-22312	Abdul Subhan Khan	Dr. Muhammad Uzair Yousuf / Prof. Dr. Mubashir Ali Siddiqui	Sindh HEC
		2.	ME-22316	Muhammad Shafat		
		3.	ME-22313	Muhammad Danish Mustafa		
		4.	ME-22208	Ali Hamza Khan		
31	Design of Dissolved Air Floatation system for Effluent Treatment Plant	1.	ME-22306	Muhammad Zaid Omar	Mr. Saeed Ahmed	Mr. Rehan Siddiqui, General Manager Plant, MAPAK Edible Oil Pvt. Ltd.
		2.	ME-22311	Aliyan Shahid		
		3.	ME-22130	Ayub Bin Abdul Qayyum		
		4.	ME-22190	Muhammad Maaz Qureshi		
32	Design and Performance Analysis of Sustainable Indirect Evaporative Cooling System for Hot Arid Climatic Regions	1.	ME-22314	Ubedullah Channa	Dr. Syed Muhammad Asad Akhter / Mr. Talha Bin Nadeem	N/A
		2.	ME-22302	Muhammad Shaheer		
		3.	ME-20103	Sheikh Murtaza Halim		
		4.	ME-20106	Arham Ahmed		
33	Development of Magnetic Crawler for UTG of Fuels Tanks	1.	ME-22149	Abdul Khaliq	Mr. Arshad Siddiqui / Mr. Muhammad Azam	Bureau Veritas
		2.	ME-22305	Waseem Abbas		
		3.	ME-22157	Abdul Karim		
		4.	ME-22158	Shahzad Ali		
34	Flow Modeling and Optimization of Gas Distribution in Electrostatic Precipitator (ESP)	1.	ME-22082	Muhammad Roomil Riaz	Mr. Mirza Hammad Baig / Dr. Saqib Sharif	Muhammad Jawad Qasim, Manager Boiler Maintenance, China Power Hub Generation Company
		2.	ME-22308	Insharah		
		3.	ME-22056	Syed Ali Sher Rizvi		
		4.	ME-22069	Mudabbir Hassan		
35	A User-Interactive Platform for Wind Power Techno-Economic Evaluation	1.	ME-22019	Usman Ahmed Khan Karimi	Dr. Muhammad Uzair Yousuf	N/A
		2.	ME-22041	Umar Saleem Khan		

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		3.	ME-22030	Khurram Soomro		
		4.	ME-22029	Safwan Ahmed		
36	Performance Analysis of a Cooling System with Nano-Fluid	1.	ME-22064	Muhammad Irshad	Prof. Dr. Muhammad Shakaib	N/A
		2.	ME-22145	Sahil Kumar		
		3.	ME-22174	Mushahid Ali		
		4.	ME-20258	Taha Bin Aamir		
37	Steam Optimization through Steam Trap Audits, Condensate Management, and Flash Steam Recovery	1.	ME-22304	Allah Bux Memon	Mr. Abdul Samad Khan / Mr. Adeel Ahmed Khan	Mr. Mubashir Waseem, Asst. Manager Utilities, Indigo Textile Pvt. Ltd.
		2.	ME-22097	Ali Zameer		
		3.	ME-22108	Daniyal Zafar		
		4.	ME-22109	Abdul Rafay Tipu		
38	Experimental Investigation to improve Heat Transfer of Paraffin Based PCMs	1.	ME-22076	Muhammad Hassan Irshad	Ms. Bushra Fatima / Dr. Muhammad Uzair	N/A
		2.	ME-22317	Nayab Murtaza		
		3.	ME-22078	Shaheer Ahmed		
		4.	ME-22318	Syeda Raheen Hassan		
39	Study of a Hydrokinetic Turbine for River Applications	1.	ME-21173	Syed Izaan Ur Rehman	Prof. Dr. Muhammad Shakaib	N/A
		2.	ME-22315	Muhammad Taha Imran		
		3.	ME-22319	Muhammad Usman		
		4.	ME-20009	Syed Aman Hussain		
40	Project Planning, Equipment Portfolio Management, and Framework Development for Mechanical Systems	1.	ME-22193	Mohammed Rohaan Khan	Dr. Muhammad Muzamil / Mr. Muhammad Umaid Ghauri	N/A
		2.	ME-22188	Jibrail Amin		
		3.	ME-22181	Arhan Zahid		
		4.	ME-22200	Syed Mustafa Taqvi		
41	Design and Implementation of a GHG Inventory Management System for Emission Sources in a Textile Processing Unit Based on IPCC Guidelines	1.	ME-22166	Syed Muhammad Zahad	Dr. Saqib Sharif	Mr. Hasan Mehdi, DGM, Artistic Milliners Pvt Ltd (Unit # 5)
		2.	ME-22161	Omar Mahmood		
		3.	ME-22186	Mohammad Hassan		
		4.	ME-22160	Muhammad Abdul Sami		
42	Design an Inventory management system (online and physical both) for Agriauto Stamping Company	1.	ME-22203	Muhammad Aneeq	Ms. Erum Khan	Mr. Mohsin Siddiqui, General Manager Plant, Agriauto Stamping Co. Pvt. Ltd. (at Bin Qasim)
		2.	ME-22189	Muhammad Sarim		
		3.	ME-22199	Syed Ahsan Hasan		
		4.	ME-22202	Bilal Hussain		
43	Experimental Investigations of Welding Characteristics of Dissimilar Material	1.	ME-22266	Muhammad Hammad	Ms. Erum Khan / Dr. Kashif Noor	N/A
		2.	ME-22053	Sadia Saher		
		3.	ME-22005	Summiya Hassan		
		4.	ME-22002	Atka Obaid		
44	Design of an HVAC System using Cogeneration for a Processing Plant	1.	ME-22230	Syed Muhammad Asher	Prof. Dr. Mubashir Ali Siddiqui / Dr. Muhammad Anique Azam	Mr. Muhammad Talha Baig, Project Manager, Universal Engineering
		2.	ME-22252	Muhammad Asad Ashfaq		
		3.	ME-22261	Muhammad Aon		
		4.	ME-22234	Muhammad Umer		
45	Design and Fabrication of a Muffle Furnace with a Capacity to generate Heat upto 1200 C	1.	ME-22213	Qazi Ahmad Ali	Ms. Erum Khan / Dr. Muhammad Muzamil	N/A
		2.	ME-22198	Syed Ali Qamber Jaffery		
		3.	ME-22194	Muhammad Arham		
		4.	ME-22185	Syed Hussain Mahmood		
46	Design and Fabrication of Cooling System for Performance enhancement of PV Panel	1.	ME-22233	Taha Ahmed Siddiqui	Dr. Syed Muhammad Asad Akhter / Dr. Haider Ali	N/A
		2.	ME-22239	Ryan Uddin		
		3.	ME-22201	Abdul Moeed Alam Siddiqui		
		4.	ME-22191	Muhammad Sabih Nasir		
47	Energy Assessment of a Thermal Energy Storage System	1.	ME-22079	Muneer Abbas	Mr. Abdul Samad Khan	N/A

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		2.	ME-22081	Syed Fakhir Maqsood		
		3.	ME-22062	Abdul Moez		
		4.	ME-22087	Syed Fazal Mustafa Shah		
48	CFD Study of Battery Spacing and Airflow for Efficient Cooling of Li-ion Packs	1.	ME-22212	Asadullah Anis	Prof. Dr. Muhammad Shakaib	Muhammad Umar Ayaz, Assistant Manager, Meraj Limited
		2.	ME-22196	Muhammad Ali		
		3.	ME-22197	Ebadullah Shaikh		
		4.	ME-22195	Muhammad Noman Khan		
49	Design and Fabrication of a Smart and Energy Efficient Dehumidifier for Controlled Environments	1.	ME-22067	Abdullah Arif	Dr. Muhammad Uzair	Mr. Syed Arshad Mahmood, CEO, MM Engineering / AMCO Industries Karachi
		2.	ME-22050	Iraj Kamran		
		3.	ME-22055	Syeda Fatima		
		4.	ME-22085	Agha Daniyal		
50	Experimental Investigations on Thermal Storage Materials for Low-Temperature Applications	1.	ME-22154	Shayan Ali	Dr. Aun Ali / Dr. Muhammad Muzamil	N/A
		2.	ME-22140	Talha Mufiq Khan		
		3.	ME-22151	Abdul Moiz		
		4.	ME-22147	Sarwan		
51	CFD study for Natural Convection in an Air-Cooled Condenser	1.	ME-22206	Ghalib Haider Aziz	Prof. Dr. Muhammad Shakaib / Mr. Abdul Mujeeb	N/A
		2.	ME-20019	Shaheer Adil		
		3.	ME-22192	Waleed		
		4.	ME-22263	Syed Muhammad Rayyan Ali		
52	Optimization of TIG Welding Parameters for Improved Mechanical Properties of Aluminum Weld Joints	1.	ME-22324	Atta Ur Rehman	Dr. Kashif Noor / Ms. Hafiza Sumiya Mohsin	N/A
		2.	ME-22327	Usman Maroof		
		3.	-	-		
		4.	-	-		
53	Study the effect of Machining and their parameters on the Additively Manufactured Specimens	1.	ME-20114	Muhammad Jawad Amjad	Dr. Muhammad Muzamil / Dr. Aun Ali	Mr. Shakir, Sr. Manager QC, Alsons Industries Pvt. Ltd
		2.	ME-20107	Hanzala Baloch		
		3.	ME-22321	Muhammad Shahmeer Iqbal		
		4.	ME-20092	Muhammad Aliyan Ahmed		

FYDP Coordinator

Surfe Hay
29/9/25

FYDP Review Committee Head

Mubashir
29/9

Chairperson

Mubashir
29/9
cnp