

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



F/SOP/FYDP 02/03/00

Batch: 2021

Semester: Fall 2024

S.No	Project Title	Student Name	Supervisor / Co-Supervisor	Industry
1	Development of a Compact Off-Grid Solar-Powered Refrigeration System for Storing essential Medicines and Vaccines for Remote Clinics	1. ME-21158 Syed Muhammad Mousa Ali Subzwari 2. ME-21164 Muhammad Sadiq Daudpota 3. ME-21135 Abdul Rafay Ali Khan 4. ME-21146 Muhammad Talha Latif	Dr. Muhammad Uzair Yousof / Mr. Muhammad Anique Azam	N/A
2	Aeroelastic Analysis of 3D Printed Complex Infill Wing Geometries	1. ME-21073 Abdul Moiz 2. ME-21082 Muhammad Shaheer Khalid 3. ME-21070 Syed Muhammad Uzair Ali Hasni 4. ME-21060 Syed Huzaifa Ali Shah	Dr. Tariq Jamil	SUPARCO
3	Techno-Economic Feasibility Study of Concentrated Solar Thermal Power Plant in Arid Region	1. ME-21057 Abdur Rafay 2. ME-21079 Muhammad Wajahat 3. ME-21065 Hassan Salahuddin 4. ME-21068 Syed Muhammad Mubashir	Mr. Talha Bin Nadeem	Mr. Muhammad Saad, Project Engineer, Diwan International (Pvt.) Limited
4	Comprehensive Industrial Energy Audit and Efficiency Optimization	1. ME-21081 Ehsan Ishaq 2. ME-21061 Muhammad Kashan Asad 3. ME-21067 Muhammad Affan Zakir 4. ME-21080 Muhammad Noman Hassan	Dr. Aun Ali	Liberty Mills Limited
5	Development of Performance Evaluation Framework for Active Atmospheric Water Generation Systems for Accelerated Attainment of SDG6	1. ME-21183 Hashir Mahmood 2. ME-21185 Zain Ali Shah 3. ME-21206 Yousuf Baig 4. ME-21204 Muhammad Talha Ansari	Prof. Dr. Mubashir Ali Siddiqui / Mr. Muhammad Anique Azam	N/A
6	Design & Development of Assembly Integrity Test Bench for Cartridge Mechanical Seal in accordance with API 682 standard	1. ME-21235 Muhammad Bilal Siddiqui 2. ME-21239 Syed Alyan Ali Hashmi 3. ME-21244 Abdullah Ali Khan 4. ME-21249 Sami Uz Zaman	Prof. Dr. Mubashir Ali Siddiqui / Mr. Osama Anis	Mr. Rafay Saeed, Deputy Manager Machinery, Fauji Fertilizers FFBL
7	Design and Implementation of a Digital Twin for Mechanical System	1. ME-21113 Muhammad Abrar Ul Hassan 2. ME-21089 Abdul Samad 3. ME-21102 Abdul Sami 4. ME-21121 Hamza Mirza	Dr. Haider Ali / Dr. Syed Ahmad Raza	Dr. Ahmer Ali Bozdar Baloch, Senior Researcher, Dubai Electricity and Water Authority R&D Centre
8	Techno-Economic Analysis of a Carbon Capture Device for Climate Mitigation in Pakistan	1. ME-21001 Jaweria Pasha 2. ME-21037 Rehman Noor 3. ME-21014 Ali Zain 4. ME-21019 Abdul Rafay	Dr. Haider Ali	N/A
9	Investigation and Development of Dye Sensitized Solar Cells	1. ME-21088 Hafiz Muhammad Burhan Ansari 2. ME-21094 Muhammad Huzaifa 3. ME-21107 Raja Ibtisam Rabbani 4. ME-21106 Talha Ahmed	Dr. Mohammad Ehtesham ul Haque / Mr. Abdul Ghafar	N/A
10	Development of Drone for PV Cleaning Application	1. ME-21009 Syed Muzammil Ahmed 2. ME-21008 Syed Shayan Ahmed 3. ME-21012 Muhammad Ammar Siddiqui 4. ME-21013 Muhammad Ahsan Iqbal	Dr. Haider Ali / Dr. Syed Ahmad Raza	Mr. Aleem Ahmed, Operations Coordinator, ASHOMCo -Saudi Aramco Co- generation Plants
11	Integrated IoT-enabled Smart Monitoring and Control System for Centrifugal Pumps Using Innovative Materials and Variable Speed Drives	1. ME-21077 Muhammad Zain 2. ME-21064 Hammad Azhar 3. ME-21046 Mehmood Hussain 4. ME-21075 Muhammad Haisam	Dr. Shehroze Tahir Khan / Mr. Mirza Hammad Baig	Syed Amir Ahmed Firdosi, Deputy General Manager, KSB Pumps Co. Ltd.
12	Design and Development of Automatic Solar Cooker for Domestic	1. ME-21248 Muhammad Fakhir Uddin Ali	Dr. Syed Muhammad Asad Akhter /	N/A

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	usage	2. ME-21229 Sameer Raja 3. ME-21236 Muhammad Alamgir Khan 4. ME-21250 Shahzar Khan	Dr. Haider Ali	
13	Design and Development of Geothermal Air-conditioning system	1. ME-21149 Fawad Hassan 2. ME-21131 Syed Junaid Abbas Naqvi 3. ME-21151 Muhammad Muslim 4. ME-21150 Muhammad Younas	Dr. Muhammad Uzair	N/A
14	Reduction of the Drift and Evaporation losses of Cooling Tower at 330MW Coal Powerplant at Thar	1. ME-21126 Shaheer Khan 2. ME-21163 Muhammad Huzaiifa Mahmood 3. ME-21157 Khuzema 4. ME-21155 Muhammad Khuzaima Khan	Dr. Mumtaz Hussain Qureshi / Mr. Duraid Uddin	HUBCO Thar Coal Power Project (Thar Energy)
15	Energy, Economics and Environmental (3E) Analysis of Off-grid Photovoltaic Systems along with Hydrogen Storage System	1. ME-21017 Muhammad Shahmeer Hussain 2. ME-21027 Saad Ali Siddiqui 3. ME-21028 Muhammad Arham Aamir 4. ME-21024 Muhammad Shayan Bin Shahid	Dr. Syed Muhammad Asad Akhter	N/A
16	Design of Fire Fighting System for a Terminal / Depot	1. ME-21029 Haider Imran Ansari 2. ME-21018 Muhammad Arham Shah 3. ME-21033 Rovida Wajid 4. ME-21006 Yumna Shahid	Mr. Ahsan Ahmed	Syed Muhammad Ammar, Petrochemical Engineering Consultants
17	Development of an Online Tool for Solar Energy Potential Assessment in Pakistan	1. ME-21175 Najam Ghouri 2. ME-21238 Izaan Bin Aqeel 3. ME-21213 Shabbir Ahmed Khan 4. ME-21090 Ubaid Ur Rehman	Dr. Muhammad Uzair Yousuf	Powermech Solutions Pvt Ltd.
18	Design and Development of Dehumidification System for ambient operation of Advanced Lithium Batteries	1. ME-21004 Tayyaba Khalid 2. ME-21035 Maryam Parveen 3. ME-21069 Rafay Ahmed 4. ME-21058 Ahsan Zafar	Dr. Syed Muhammad Asad Akhter / Prof. Dr. Zahoor ul Hussain Awan	N/A
19	Cost Efficient Design and Optimization of LT/HT Steel Tubular Poles	1. ME-21016 Muhammad Taha Khan 2. ME-21025 Jawwad Saleem 3. ME-21015 Muhammad Yousuf 4. ME-21031 Abdul Malik	Dr. Tariq Jamil	K-Electric
20	Life Cycle Assessment (LCA) of Green Retrofitting of Existing Buildings (GREB) for Improved Energy Efficiency and Sustainability	1. ME-21112 Muhammad Umar Farooq 2. ME-21087 Aman Ahmed 3. ME-21056 Imran 4. ME-21209 Ubaidullah Khan	Prof. Dr. Mubashir Ali Siddiqui / Dr. Muhammad Uzair Yousuf	Muhammad Adnan Javed, Manager Sustainability, Facility & Utility, GSK.
21	Hazard Identification and Risk Assessment of Meter Manufacturing Plant in line with ISO 45001, ISO 14001, ISO 9001 requirements	1. ME-21053 Muhammad Hamid 2. ME-21074 Ammar Zulfikar 3. ME-21054 Hamza Ahmed 4. ME-21044 Syed Muhammad Muhib Hussain Naqvi	Mr. Imran Sikandar / Mr. Muhammad Azam	SSGCL
22	Investigation of Sorption Characteristics of Water-selective Metal-Organic Frameworks in Dehumidification	1. ME-21002 Sadia Ahmed 2. ME-21207 Muhammad umer Khalid 3. ME-21203 Talha Imtiaz 4. ME-21195 Muhammad Saad	Mr. Muhammad Anique Azam	Academia - Tecnologico de Monterrey, Mexico
23	Design, Develop and Fabricate a Core XY FDM 3D Printer incorporated with Advanced Technology (Funded)	1. ME-21005 Aymun Fayyaz 2. ME-21011 Muhammad Uzair 3. ME-21026 Muhammad Uzair Ahmed 4. ME-21040 Syed Muhammad Akif Naqvi	Dr. Shehroze Tahir Khan / Mr. Zain Shahid	3D Consultech
24	Design an Artificial Intelligence (AI) System for checking Sheet Metal parts to reduce Quality Control Time for Agriauto Stamping Company	1. ME-21240 Abuzar Ahmed 2. ME-21234 Muhammad Bilal Qaiser	Ms. Erum Khan	Mr. Mohsin Siddiqui, General Manager Plant,

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		3. ME-21228 Hasnain Mehdi 4. ME-21216 Muhammad Bilal Khan		Agriauto Stamping Company Pvt Ltd
25	Localization of low-speed Electrical Generator and Turbine blade for River Turbine	1. ME-21167 Muhammad Habib ur Rehman 2. ME-21134 Syed Zaid Ali 3. ME-21309 Talha Muqaddam 4. ME-21165 Muhammad Rahim Khan	Mr. Muhammad Muzammil Ejaz	DES Pvt Ltd
26	Heat Transfer enhancement using Nanofluids in the Automotive Cooling System	1. ME-21050 Muhammad Hammad Wasim 2. ME-21078 Asad Zafar 3. ME-21062 Abdul Ahad Usman Baloch 4. ME-21042 Sajeel Ahmed Khan	Prof. Dr. Muhammad Shakaib	N/A
27	Real-Time Monitoring and Optimization of Portable Solar Panels Using AI	1. ME-21301 Jawad Hasan 2. ME-21306 Ali Khan 3. ME-21302 Faique Ahmed 4. ME-21308 Taha Shahid	Dr. Kashif Noor / Mr. Abdul Ghafar	N/A
28	Investigation of Machine Learning Applications in Computational Fluid Dynamics	1. ME-21208 Muhammad Abdullah Ahmed 2. ME-21211 Hasan Rehman 3. ME-21215 Muhammad Umair Uddin 4. ME-21219 Mansoob Akbar	Dr. Syed Ahmad Raza / Dr. Haider Ali	Dr. Ahmer Ali Bozdar Baloch, Senior Researcher, Dubai Electricity and Water Authority R&D Centre
29	Optimizing Indoor Comfort: Designing an Energy-Efficient HVAC System for a Gymnasium building	1. ME-21312 Muhammad Shaheer 2. ME-21168 Naveed Altaf Khan 3. ME-21190 Muhammad Usman Zahid 4. ME-21193 Muhammad Uzair Atique	Dr. Mohammad Ehtesham ul Haque / Mr. Abdul Samad Khan	N/A
30	Aerodynamics Analysis of Small Horizontal Axis Wind Turbine Blades by using 2D and 3D CFD Modelling	1. ME-21066 Syed Aqib Ali 2. ME-21051 Syed Hassan Adnan 3. ME-21043 Shahood Soomro 4. ME-21052 Hassan Ali Khan	Dr. Mohammad Ehtesham ul Haque	N/A
31	Design and Optimization of a Trigenation System for an Industrial Gas Power Plant	1. ME-21108 Umer Habib 2. ME-21100 Muhammad Hasan Nadeem 3. ME-21105 Adil Saleem 4. ME-21115 Muhammad Ausaf Alam	Dr. Mumtaz Hussain Qureshi	Shahood Aqil, Deputy Manager, Artistic Garment Industries Denim
32	Experimental Investigation of Tensile / Compression property of PLA / PETG / PC using 3D - Printer via FDM technology	1. ME-21072 Ali Zahid 2. ME-21059 Muhammad Ashar 3. ME-21047 Abdullah Bin Amanullah 4. ME-21255 Rahul Kumar	Dr. Kashif Noor / Ms. Hafiza Sumiya Mohsin	N/A
33	Design of HVAC System for a Multistory Building with Energy Analysis and BIM (ME&P)	1. ME-21304 Salma Khan 2. ME-21036 Manahil Nisar 3. ME-21038 Bushra Rajput 4. ME-21023 Abdul Samad Ayan	Mr. Arshad Siddiqui / Mr. Zain Shahid	SEM Engineers
34	Autonomous self-driving car with advance feature	1. ME-21189 Muhammad Huzaiifa 2. ME-21254 Anas Ahmed 3. ME-21188 Ali Iqbal 4. ME-21130 Abdul Wahab	Dr. Tariq Jamil / Dr. Muhammad Hassan ul Haque	ARC Lab
35	Development of a Small Capacity Absorption Cooling System Driven by Solar Thermal Energy	1. ME-21242 Muhammad Ibad Wasim 2. ME-21233 Muhammad Owais Malik 3. ME-21222 Muhammad Ebad Ur Rehman 4. ME-21232 Muhammad Nasir	Dr. Muhammad Uzair	N/A
36	Development of a Heavy-Lift Drone for High-Rise Facade Cleaning in Volatile Environments	1. ME-21237 Abdul Hadi 2. ME-21225 Aamir Tufail 3. ME-21214 Farrukh Ali Beg	Mr. Imran Sikandar / Mr. Muhammad Azam	Bureau Veritas

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37	Design of a Storage Tank for High-Speed Diesel (HSD)	4.	ME-21221	Muhammad Misbah Mustafa	Dr. Mohammad Ehtesham ul Haque	Petrochem Engineering Services
		1.	ME-21123	Allauddin		
		2.	ME-21109	Syed Shahzeb Hasan Rizvi		
		3.	ME-21095	Ahmed Hassan Marfani		
38	Designing, Modification and Optimization of Farm Tire using FEA software ANSYS / Solidworks / ProE	4.	ME-21086	Mustafa Faisal	Dr. Mohammad Ehtesham ul Haque	Ghandhara Tyre & Rubber Company Limited
		1.	ME-21176	Muhammad Huzaifa Rizwanullah		
		2.	ME-21314	Syed Furqan Akhtar		
		3.	ME-21184	Aayan Ahmed Khan		
39	Design and Development of Bikes-Spoke Guard	4.	ME-21303	Syed Muhammad Yaseen	Dr. Aun Ali	N/A
		1.	ME-21111	Muhammad Muzzamil Hussain		
		2.	ME-21125	Syed Muhammad Baqar Rizvi		
		3.	ME-21210	Syed Muhammad Rizvi		
40	Machine Learning application in Novel Streak resolving Algorithm	4.	ME-21120	Absar Hussain	Dr. Mumtaz Hussain Qureshi	N/A
		1.	ME-21076	Syed Ahsan Raza Rizvi		
		2.	ME-21045	Muhammad Faheem Khan		
		3.	ME-21252	Syed Sibtain Raza Shah		
41	Experimental investigations of Weld characteristics for a Single Pass TIG Welding with Steel / Stainless Steel	-	-	-	Ms. Erum Khan / Dr. Kashif Noor	N/A
		1.	ME-21039	Fizza Fatima		
		2.	ME-21091	Faiz Ahmed Khan		
		3.	ME-21315	Insiyah		
42	Mitigating Carbon Footprint for Emission Reduction and Sustainability through Carbon Credits	4.	ME-21114	Muhammad Shahmeer	Prof. Dr. Mubashir Ali Siddiqui / Mr. Saqib Sharif	Mr. Hafiz Kashif, Director Operations, Artistic Milliners
		1.	ME-21137	Mohammad Ali Bin Naeem		
		2.	ME-21153	Muhammad Haris		
		3.	ME-21143	Asadullah Khanzada		
43	Design, Fabrication and installation of 20,000 CFM Low Noise Exhaust Fan for Households and Offices	4.	ME-21142	Hamza Ali Khan	Dr. Muhammad Muzamil / Mr. Muhammad Umaid Ghauri	N/A
		1.	ME-21318	Khalid Saifullah Ansari		
		2.	ME-21099	Abdul Nafay Khan		
		3.	ME-21218	Mohammad Hamza Kazmi		
44	Numerical Investigation of Mechanical Properties of Various Clay Minerals	4.	ME-21223	Hassan Mustafa	Dr. Tariq Jamil	N/A
		1.	ME-21311	Saad Mohiuddin Farooqi		
		2.	ME-21317	Shahzaib Ali Khan		
		3.	ME-21097	Syed Muhammad Taha		
45	Analysis of Existing LT/HT Steel Tubular Poles to Mitigate Safety Risks	4.	ME-21096	Muhammad Ali Gulfad	Dr. Tariq Jamil	K-Electric
		1.	ME-21103	Syed Saad Ali		
		2.	ME-21307	Ayesha Arif		
		3.	ME-21101	Saifullah Kamran		
46	Design and CFD Simulation of Advanced Air-Cooled Engine Assemblies for Improved Heat Transfer	4.	ME-21085	Ahmed Abdullah Watto	Mr. Saqib Sharif / Prof. Dr. Muhammad Shakaib	N/A
		1.	ME-21063	Ibrahim		
		2.	ME-21032	Mohamed Ansaif		
		3.	ME-21217	Jawwad Amir		
47	Stenter Machine Exhaust Gas Heat Recovery System for Industrial Process Utilization	4.	ME-21041	Qazi Dawood Ahmed	Mr. Adeel Ahmed Khan / Mr. Abdul Samad Khan	Mr. Jamal, Manager Utilities Mustaqim Dying & Printing Ltd
		1.	ME-21136	Syed Daniyal bin Shariq		
		2.	ME-21128	Muhammad Usman Khalid		
		3.	ME-21132	Muhammad Mushtaq Attari		
48	Design and Development of a small-scale Organic Rankine Cycle based on Solar Energy	4.	ME-21148	Muhammad Ahsan Masoom	Mr. Arshad Siddiqui	N/A
		1.	ME-21147	Muhammad Abdullah Khan Bin Sohail		
		2.	ME-21145	Emad Ur Rehman		
		3.	ME-21104	Owais Ahmed		
		4.	ME-21166	Sheikh Abdul Mohemin		

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49	Feasibility of Hydrogen Gas Generators in Pakistan	1. ME-21127 2. ME-21020 3. ME-21156 4. ME-21154	Ghufran Rafiq Farooqi Saad Rizwan Umer Farooq Muhammad Mohsin	Mr. Zain Shahid / Dr. Muhammad Uzair	Energy Solutions Pvt. Ltd
50	Mechanical Characterizations and Comparison of Used Reinforce Steel for Green Construction	1. ME-21170 2. ME-21171 3. ME-21192 4. ME-21200	Syed Muhammad Usman Ali Muhammad Saad Ali Siddiqui Hadeer Siddiqui Muhammad Usman Khan	Prof. Dr. Murtuza / Mr. Abdul Qadir Ahmed	N/A
51	Design & Development of Indigenous Solar based Desiccant Air Conditioner	1. ME-21187 2. ME-21181 3. ME-21186 4. ME-21196	Malik Muhammad Hassan Tuaha Siddiqui Hamza Ahmed Sheikh Muhammad Hassaan	Mr. Muhammad Muzammil Ejaz	IES Global Pvt Ltd
52	Design and Prototype Development of Pressure Vessel Head Inspection System	1. ME-21124 2. ME-21160 3. ME-21141 4. ME-21133	Muhammad Fahim Muhammad Shahzaib Muhammad Umer Jafri Syed Ahmer Bin Sohail	Dr. Shehroz Tahir Khan	KINPOE
53	Energy & Exergy Analysis of Refrigeration Systems	1. ME-21172 2. ME-21199 3. ME-21197 4. ME-21256	Muhammad Daniyal Talha Ahmed Siddiqui Muhammad Hashir Burney Muhammad Aqib Khan	Mr. Adeel Ahmed Khan / Mr. Abdul Samad Khan	N/A
54	Experimental and Analytical Analysis of Biomass as an Alternate Fuel for Industrial Applications	1. ME-21092 2. ME-21257 3. ME-21110 4. ME-21122	Muhammad Bilal Muhammad Abdullah Junaid Ahmed Syed Ali Sajid	Mr. Saqib Sharif / Dr. Kashif Noor	Noman Sajjad, Amreli Steels
55	Design and Fabrication of Inspection Jig to inspect Alignment of Motorcycle Sprockets	1. ME-21305 2. ME-21055 3. ME-21313 4. ME-21180	Ali Abbas Sohaib Ur Rehman Muhammad Ali Ahmed Sheikh Muhammad Zohaib Ali	Mr. Saeed Ahmed / Mr. Mirza Hammad Baig	Daniyal Alam, Manager Vehicle Quality and Inspection, Atlas Honda Ltd.
56	Optimal Velocity Control Method in Path Following of an Autonomous Robot	1. ME-20086 2. ME-20318 3. ME-20314 4. ME-21003	Muhammad Areeb Ahmed Siddiqui Shaheer Ahmed Areeb Ali Yumna Nadeem	Ms. Erum Khan	Mr. Syed Muhammad Haris, KINPOE
57	Comparative Analysis of Residential Cooling / Heating Loads for a Wooden & RCC Construction	1. ME-21119 2. ME-20014 - -	Fahad Qureshi Owais Ahmed Shah - -	Ms. Amber Fishan Zafar / Ms. Bushra Fatima	MB Associates

FYDP Coordinator _____

FYDP Review Committee Head _____

Chairperson _____