

Department of Civil Engineering
CE-409-Final Year Design Project
Project List

Batch: 2022

S. No.	Project Title	Supervisor/Co-Supervisor
G-1	Testing of Developed Fabrics and Adhesives in Concrete Strengthening Applications	Prof. Dr. Asad-ur-Rehman Khan Engr. Syeda Hiba Haider
G-2	Numerical & Experimental Investigation on the Behaviour of TFRP Strengthened Reinforced Concrete Columns	Prof. Dr. Asad-ur-Rehman Khan Engr. Ayesha Akram
G-3	Evaluating Durability Properties of GFRP Bars Under Extreme Environmental Conditions	Prof. Dr. Abdul Jabbar Sangi Dr. Fawwad Masood Engr. Muhammad Saad Ifrahim
G-4	Comprehensive Study of GFRP Bar Bond Behavior Using Beam End Test	Prof. Dr. Abdul Jabbar Sangi Dr. Fawwad Masood Engr. Muhammad Saad Ifrahim
G-5	Flexural Behaviour of Concrete Beams Reinforced with Hybrid Reinforcement	Prof. Dr. Abdul Jabbar Sangi Dr. Fawwad Masood Engr. Muhammad Saad Ifrahim
G-6	Dynamic Properties of Sandy Soil from Resonant Column Test and Validation through PLAXIS Modeling	Prof. Dr. Amanullah Marri
G-7	Comparative Study of Proctor Compaction Methods on Cohesive Soil Strength	Prof. Dr. Amanullah Marri
G-8	CBR Testing of Stabilized Soil and Modelling of Pavement Layers in Plaxis	Prof. Dr. Amanullah Marri
G-9	Numerical Simulations of Pile Foundations in Soft Clay Under Lateral Loading	Prof. Dr. Amanullah Marri
G-10	BIM-LIDAR-VR Integrated Framework for Interactive Building Maintenance	Dr. Farrukh Arif Engr. Waleed Ahmed Khan
G-11	BIM-Enabled Decision Support Framework for Maintenance Management of Built Assets	Dr. Farrukh Arif
G-12	Design and Constructability of a Sustainable Modular Housing Structure	Dr. Farrukh Arif

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G-13	Soil Reinforcement for Pavement Using Sustainable Materials	Dr. Sadaf Qasim Dr. Sajjad Ali
G-14	Estimating Parameters for Constitutive Modelling of High and Ultra-High Strength Concrete Using an Artificial Intelligence	Dr. Shamsoon Fareed Dr. Fatima Khalid
G-15	Influence of Nano-Particles on Mechanical Properties of Ultra High Strength Concrete	Dr. Shamsoon Fareed Engr. Ayesha Ayub
G-16	Influences of Nano-Particles on the Dynamic Strength of Ultra-High Performance Concrete	Dr. Shamsoon Fareed Engr. Ayesha Ayub
G-17	Low Cost Housing Units Using Supplementary Cementitious Materials Bamboo and Hollow Blocks	Dr. Syed Salman Mobeen Dr. Fawwad Masood
G-18	Improving Rainfall Estimation Using Gauge Calibrated Satellite Sources	Engr. Haris Akram Bhatti
G-19	Rainfall Data Convergence: Integrating Satellite and Rain Gauge Estimates for Enhanced Hydrological Design	Engr. Haris Akram Bhatti
G-20	Seismic Risk Assessment and Retrofitting Priority of Government School Buildings in Karachi Using Field Surveys, Fragility Functions	Dr. Aslam Faqeer Mohammad Engr. M. Hammad
G-21	Engineering Assessment and Structural Evaluation of a Dangerous Reinforced Concrete (RC) Building in Karachi	Dr. Aslam Faqeer Mohammad
G-22	Identification of Accident Location (Black Spot) in Selected Railway Line	Dr. Sajjad Ali
G-23	Traffic Signal Need Assessment and Optimization for A High-Volume Congested Roundabout	Dr. Sajjad Ali
G-24	Location Optimization of Small Port: An Evaluation for Maritime Infrastructure Development	Dr. Sajjad Ali

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S. No.	Project Title	Supervisor/Co-Supervisor
G-25	Driver Fatigue Assessment of Prevailing and Heavy Traffic Modes in Selected Urban Arterials	Dr. Sajjad Ali
G-26	Modelling Behavior of Transport User and Preference Towards Proposed Karachi Circular Railway (KCR)	Engr. Syed Muhammad Noman
G-27	Framework Development for Railway Infrastruchure and Rehabilitation: A Case Study of KCR	Engr. Syed Muhammad Noman
G-28	Public Transportation Routes Rationalization and Future Direction	Engr. Syed Muhammad Noman Dr. Syed Muzammil Abbas Rizvi
G-29	Managing Construction Logistics Along the BRT Project in Karachi	Dr. Rana Rabnawaz Ahmed Dr. Syed Muzammil Abbas Rizvi
G-30	A BIM Based Facility Management Model for Effective Maintenance of an Industrial Project	Dr. Rana Rabnawaz Ahmed Dr. Syed Salman Mobeen
G-31	Reducing Carbon Footprint Across the Supply Chain of an Infrastructure Project	Dr. Rana Rabnawaz Ahmed Dr. Syed Muzammil Abbas Rizvi
G-32	Re-evaluation of Kalabagh Dam's Technical and Environmental Feasibility Under Modern Climate and Socio-Political Conditions.	Dr. Areba Syed
G-33	Hydrological Modeling of the Hub River Watershed with QGIS and SWAT+: Guiding Best Management Practices for Sustainable Agriculture and Water Use	Dr. Areba Syed
G-34	Effect of Climate Change and Urbanization in Swat Valley	Dr. Areba Syed
G-35	Evaluation of Drinking Water Suitability in Malir District Using Drinking Water Suitability Index (DWSI)and Statistical Analysis	Dr. Areba Syed
G-36	Comparative Evaluation of the Effects of Potable and Contaminated Water on the Mechanical Properties of Compacted Soil	Dr. Sadia Moin

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G-37	Optimization of Aggregate Grading to Reduce Cement Content in Concrete Mixtures	Prof. Dr. Atif Mustafa Dr. Tariq Jamil
G-38	Assessment of Micro-Plastic and Disinfectant Interactions in Tap Water: Implications on Bacterial Re-Growth, Disinfection Efficiency, and Civil Water Infrastructure	Dr. Sadia Khan Dr. Mehmood Ali
G-39	Impact of Microplastics on Mangrove Ecosystems Along Karachi's Coastline and Its removal by Physical, Chemical and Biological Method	Dr. Mehmood Ali
G-40	Design Fabrication and Performance of a Biomass-Fueled Water Heating System for Sustainable Rural Applications	Dr. Mehmood Ali
G-41	Plant-Based Biowaste for Removal of Edible Oils from Municipal Wastewater	Dr. Sadia Khan Dr. Mehmood Ali
G-42	Assessment of Drinking Water Suitability in DHA Phase 8 Using Drinking Water Suitability Index (DWSI) and Statistical Analysis	Dr. Sadia Khan
G-43	Design of a Circular Economy-Green Building Principles Integrated Building Using Digital Tools	Dr. Farrukh Arif Engr. Faiza Saeed
G-44	Enhancing Building Envelope Design through Thermal Performance Assessment	Dr. Farrukh Arif Engr. Faiza Saeed
G-45	4D BIM with Construction Safety Simulation: A Case Study for Improved Site Safety	Engr. Farhan Saleem
G-46	BIM - Based Proactive Delay Detection and Mitigation in Construction Projects	Dr. Rana Rabnawaz Ahmed
G-47	Evaluating Material Recovery Potential Using Various Deconstruction Strategies: A Case Study from the Local Construction Sector	Dr. Rana Rabnawaz Ahmed