

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

Batch: 2021

S. No.	Project Title	Supervisor/Co-Supervisor
G-1	Strengthening of Reinforced Concrete Columns under Axial Compression Loading Using Taparan FRP	Prof. Dr. Asad-ur-Rehman Khan Engr. Ayesha Akram
G-2	Strengthening of Reinforced Concrete Beams in Shear Using Taparan FRP	Prof. Dr. Asad-ur-Rehman Khan Engr. Juwairia Asad
G-3	Strengthening of Reinforced Concrete Beams in Flexure Using Taparan FRP	Prof. Dr. Asad-ur-Rehman Khan Engr. Juwairia Asad
G-4	Durability Assessment of Structural Components of Bridge	Prof. Dr. Asad-ur-Rehman Khan Dr. Wajeeha Mahmood Dr. Fatima Khalid
G-5	Evaluating Bond Behavior between GFRP Reinforcing Bars and Concrete	Prof. Dr. Abdul Jabbar Sangi Dr. Fawwad Masood Engr. Muhammad Saad Ifrahim
G-6	Tension Stiffening Behavior of GFRP-Reinforced Concrete	Prof. Dr. Abdul Jabbar Sangi Dr. Fawwad Masood Engr. Muhammad Saad Ifrahim
G-7	Mechanical Characterization of GFRP Bars in Compression	Prof. Dr. Abdul Jabbar Sangi Dr. Fawwad Masood Engr. Muhammad Saad Ifrahim
G-8	Modeling Soil Behavior under Static Loading Using Plaxis	Prof. Dr. Amanullah Marri Engr. Shoaib Akhter
G-9	Deformation Characteristics of Soil under Repeated Loadings	Prof. Dr. Amanullah Marri
G-10	Modeling Soil Behavior under Dynamic Loading Using Plaxis	Prof. Dr. Amanullah Marri Engr. Shoaib Akhter
G-11	Flexural Behaviour of Self-Healing PVA Fibres Reinforced Concrete	Prof. Dr. Tehmina Ayub Prof. Dr. Sadaqat Ullah Khan
G-12	Stress Corrosion Cracking of A615 Steel Bars Exposed to Natural and Simulated Environment	Prof. Dr. Tehmina Ayub Prof. Dr. Sadaqat Ullah Khan

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S. No.	Project Title	Supervisor/Co-Supervisor
G-13	Stress Corrosion Cracking of A615 Steel Bars Exposed to Natural and Simulated Environment	Prof. Dr. Tehmina Ayub Prof. Dr. Sadaqat Ullah Khan
G-14	Effect of Industrial Waste as Supplementary Materials on the Production of High-Performance Self-Healed Concrete	Prof. Dr. Tehmina Ayub Dr. Fatima Khalid
G-15	1D Coupled Landslide Modelling for Surface Wave Generation	Dr. Haider Hasan Engr. Shahrukh Khan
G-16	Circular Economy Principles' Integrated Design and Digitization of Green Building	Dr. Farrukh Arif Engr. Faiza Saeed
G-17	Living Lab - Digital Twin Integrated Framework for Development of Energy Efficient Housing Community Guidelines	Dr. Farrukh Arif Engr. Faiza Saeed
G-18	Decision-Support Framework for Bridge Infrastructure Maintenance using Predictive Condition Assessment and Immersive Visualization	Dr. Farrukh Arif Engr. Waleed Ahmed Khan
G-19	Comparative Analysis of Slope Stability through Vegetation Covers	Dr. Sadaf Qasim Engr. Sadia Moin
G-20	Effect of Climate on Strength of Soil	Dr. Sadaf Qasim Engr. Sadia Moin
G-21	Mechanical Properties of Ultra-High Strength Concrete	Dr. Shamsoon Fareed Engr. Ayesha Ayub
G-22	Axially Loaded Ultra High Strength Concrete Columns under High Mass Low Velocity Impact Loading	Dr. Shamsoon Fareed Engr. Adnan Rais Ahmed
G-23	Ultra High Strength Reinforced Concrete Slabs under High Mass Low Velocity Impact Loading	Dr. Shamsoon Fareed Dr. Fatima Khalid
G-24	Ultra High Strength Reinforced Concrete Beams under High Mass Low Velocity Impact Loading	Dr. Shamsoon Fareed Engr. Samra Masood

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S. No.	Project Title	Supervisor/Co-Supervisor
G-25	FEA of RC Beams Strengthened with Externally Bonded FRP & Metal Sheets	Dr. Syed Salman Mobeen Engr. Muhammad Saad Khan
G-26	Performance Based Evaluation and Design of High-Rise RCC Buildings with Buckling Restrained Bracing in the Lateral Load Resisting System	Dr. Syed Salman Mobeen Dr. Aslam Faqeer Mohammad
G-27	Energy Decarbonisation of Wastewater Treatment Operation	Dr. Syeda Saria Bukhary
G-28	SMART PPE: Enhancing Construction Workers' Safety through Smart Helmet Technology	Engr. Farhan Saleem
G-29	Sustainable Water Resource Management in the Malir River Basin	Engr. Haris Akram Bhatti Engr. Hamna Hasan
G-30	Precipitation Driven Water Quality Analysis and Modeling at Hub and Darawat Dam	Engr. Haris Akram Bhatti Engr. Hamna Hasan
G-31	Permeable Pavements: A Green Solution for Reducing Urban Flooding	Engr. Haris Akram Bhatti
G-32	Comparative Analysis of GFRP RC vs Steel RC in a Mid-rise Building	Dr. Fawwad Masood Engr. Adnan Rais Ahmed
G-33	Real Estate Property Management using Blockchain-Oriented Geospatial Technique	Dr. Sajjad Ali Engr. Syed Muhammad Shahrukh Ali
G-34	Analysis of Fuel Reduction Approach in Urban Railway	Engr. Syed Muhammad Noman
G-35	Feasibility Assessment of Mass Transportation System	Engr. Syed Muhammad Noman
G-36	Digital Twin Aided Carbon Footprint Analysis for an Industrial Project	Dr. Rana Rabnawaz Ahmed

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S. No.	Project Title	Supervisor/Co-Supervisor
G-37	Digital Footprint of HBIM: A Step towards Innovative Preservation of Architectural Buildings	Dr. Rana Rabnawaz Ahmed
G-38	Application of Circularity Principles to Address Health and Safety Challenges in Construction Sector	Dr. Rana Rabnawaz Ahmed
G-39	Enhancing Thermal Comfort through Physical Interventions: A Cost - Effective Solution for Institutional Facilities	Dr. Rana Rabnawaz Ahmed
G-40	Sustainable Urban Stormwater Management Using Simulation Models	Dr. Areba Syed
G-41	Climate Change Analysis and Its Potential Impacts on Water Resources	Dr. Areba Syed
G-42	Sustainable Water Distillation for Purification Using Solar Energy and Mirrors for Marginalized Communities	Dr. Areba Syed Dr. Abdul Ghaffar
G-43	Estimating Community Vulnerability through Groundwater Assessment and Mapping for Karachi	Dr. Areba Syed
G-44	Modelling Waves in Harbour	Dr. Haider Hasan Engr. Shahrukh Khan
G-45	Noise and Air Quality Assessment for Selected Section of Railway	Dr. Sajjad Ali
G-46	Noise Level Assessment for Segregated Traffic Mix in Selected Urban Spatio-temporal Conditions	Dr. Sajjad Ali
G-47	Air Quality Assessment for Segregated Traffic Mix in Selected Urban Spatio-temporal Conditions	Dr. Sajjad Ali
G-48	Design and Analysis of a Concrete Gravity Dam for Flood and Earthquake Using SAP2000	Prof. Dr. Rashid Ahmed Khan Engr. Adnan Rais Ahmed

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S. No.	Project Title	Supervisor/Co-Supervisor
G-49	Assessing the Readiness of Pakistan's Construction Industry for Implementing Circular Economy Principles	Dr. Nida Azhar
G-50	Carbon Dioxide Bio-fixation and Growth Kinematics Study of Microalgae Cultivation	Dr. Mehmood Ali Dr. Sadia Khan
G-51	Sensor & Satellite Based Water Quality Monitoring Using IoT & GEE Applications in Real Time	Dr. Abdul Ghaffar
G-52	Digital Twin Modeling for Real-time Progress Monitoring of a Building Construction Site	Dr. Farrukh Arif Engr. Syed Muhammad Shahrukh Ali
G-53	Development of Virtual Reality Application for Construction Worksite Safety	Dr. Farrukh Arif Engr. Waleed Ahmed Khan
G-54	Smart Building Monitoring Using Digital Twin Technology	Engr. Farhan Saleem
G-55	Reducing Project Delays due to Inefficient Document Management Practices in Local Construction Sector	Dr. Rana Rabnawaz Ahmed Engr. Syed Muhammad Shahrukh Ali
G-56	To Develop a BIM-Integrated Safety Issue Reporting System with Data Analytics for Enhanced Safety and Operational Construction Site Management	Dr. Nida Azhar