

2012 CEE Capstone Design Project Topics

Geological Engineering

Stress induced disturbance in deep open pit mines
Compressed air energy storage in bedded salt cavern
Correlating Acoustic Televiewer Signals with Rock Strength Parameters
Thermal Stress Management in Deep Underground Mines
Design of a Seepage Blockage Structure and Embankment Dam for Company X
In-Situ Stress Magnitude and Orientation in Hard Rock Core Specimens
Determining a DITEST STA-R™ Baseline Noise Window for Mining Applications
Design a Caribou Mine Tailings Dams
Management of stress in deep rocks through thermal cooling
Annular Pressure Distribution during HDD
Hydraulic Fracturing in Naturally Fractured Rock
Season Frost Effects in Road Foundations
Slope analysis in a section of the Cote Lake pit mine wall
Stabilization of a Weakened Natural Soil Slope in Northeastern BC
Evaluation of CO2 Sequestration Model and Development of a Graphical User interface
The Limitations of Centrifuge Permeameters in Determining Hydraulic Conductivity
HDD Design for Force mains under a River
Sustainability Assessment Framework for a Mechanically Stabilized Earth Wall
Paste and Fill Fences Designs

Environmental Engineering

Nitrate Removal in Rural Drinking Water Treatment Systems
Logic Run – Riverside Park Dam Project
Multi-Objective Water Distribution System Design and Optimization
Bauman Creek Restoration
Sustainable Modular and Mobile Petroleum Spill Remediation
Second Phase of the Investigation of Pump and Treat Systems Optimization Solutions at the 100-KR-4 Operable Unit
Development of a Hazard Taxonomy for Shale Gas Exploration and Exploitation in Canada
Design of Chemical Remediation Tank for Diesel Fuel Contaminated Soil in Wastewater Treatment Plant on Mine Sites in Nunavut
Design of a Bioreactor for Mine-impacted Water in a Cold Climate Region: Minto Mine, Yukon
Tracking Icebergs
Technical Design of a Commercial Grey water Reclamation System for Laundry Applications
Bioreactor Design for nitrate Removal in Tile Drainage Effluent

Civil Engineering

Intrawest's Blue Mountain Resort Private Airport Design
Functional Design of Road Configuration at UW
Courtland/Block Ling Intersection and Transit Interchange Design
Hospital Design Strategies for Tornadoes
Seeds of Hope Head Quarters Design (modular panel system)
Public Recreation Centre on Grand River
Arch Design for Replacement of the Lions Gate Bridge
RCH Expansion
Replacement of Hydro Transmission Structures
Edmonton Light Rail Transit (LRT) Bridge Design
Water Distribution System Expansion Project
Structural Design on Two-story Hockey Arena
Waterloo North Apartments Project
Reconstruction of Ira Needles Boulevard
Design of Highway Bridge 498
Low-rise Residential House (Xu House) in Nuskoka Region
Bridge Rehabilitation
Single-story Bamboo Structure with an Amphibious Foundation
Implementing Geothermal Heating and Cooling at CIF
Medium Capacity Multipurpose Concert hall for the Town of Oakville
Rosa Khutor Alpine Resort Gondola Design
S3 Modular Bridge Design
Pavement Preventative Maintenance Program for Arterials in Toronto
Geotechnical Optimization of Tailings Paste
UW Multimodal Transit Station
King Street Corridor Project
Multi-Story Parking Garage at UW
Conceptual Design of a Non-Motorized Multi-Use Bridge

