OBJECTIVES: This course is designed for graduate students enrolled in the Faculty of Engineering to develop analytical and technical skills in assessment and remediation of contaminated sites. The specific learning objectives are:

- Source – pathway – receptor analysis of subsurface contamination.
- Assessment of site contamination: delineation of the scope and extent of contamination in subsurface incorporated with reliability and risk analysis.
- Common remediation technologies and selection of a remediation technology for a specific contaminated site.
- Preliminary design of site remediation.

Specific topics:

- Introduction
- Sorption
- Volatilization
- Metals in soil
- Bio-basics
- Site assessment
- In-situ Remediation - overview
- Remediation - SVE
- Remediation - Thermal
- Remediation - Chemical
- Remediation - Bio
- Remediation - Metals
- Natural attenuation and containment

FORMAT: The course consists of weekly lectures and discussions, 3 assignments and a final project that include the assessment of a contaminated site, selection of remediation technology and preliminary remediation design for the site. The course instructor will assign a specific site to each student.
CONTACT HOURS:

2 hour lectures weekly on Thursdays, 3:30 PM – 5:30 PM, Sept 27 – Dec 1, 2012.

REFERENCES:
  USEPA website: http://cfpub.epa.gov/superrods/index.cfm?fuseaction=main.splash

EVALUATION:

Assignments (3) .......................... 30%
Final project ................................ 70%

INSTRUCTOR:

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