CE 207 JAN 3:0

Geo-environmental Engineering

Instructor

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Teaching Assistant

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Department: Civil Engineering

Course Time: Tue, Thu 8.30 to 10

Lecture venue: Lecture hall GT lab

Detailed Course Page:

Announcements

Brief description of the course

The course is suitable for civil engineering students and professionals, environmental engineers and geologists

Prerequisites

Nil

Syllabus

Sources, production and classification of wastes, Environmental laws and regulations, physico-chemical properties of soil, ground water flow and contaminant transport, contaminated site characterization, estimation of landfill quantities, landfill site location, design of various landfill components such as liners, covers, leachate collection and removal, gas generation and management, ground water monitoring, end uses of landfill sites, slurry walls and barrier systems, design and construction, stability, compatibility and performance, remediation technologies, stabilization of contaminated soils and risk assessment approaches.

Course outcomes

Understanding geo-environmental challenges and corresponding design such as landfill designs, contaminant transport, barrier design, climate change effects

Grading policy

50% final

40% internal exams and assignments

10% seminar

Assignments

2 assignments

Resources

Sharma, H.D., and Reddy, K.R., Geoenvironmental Engineering: Site Remediation, Waste Containment and Emerging Waste Management Technologies, John Wiley & Sons, Inc., Hoboken, New Jersey, 2004.
Rowe, R. Kerry, Quigley, Robert M., Brachman, Richard W. I., and Booker, John R. Barrier Systems for Waste Disposal Facilities , 2nd edn 2004. Spon Press, Taylor & Francis Group, London. Tchobanoglous, G., Theisen, H. and Vigil, S.A., Integrated Solid Waste Management - Engineering Principles and Management Issues, McGraw Hill (1993)