CE 374 K – Hydrology

Introduction

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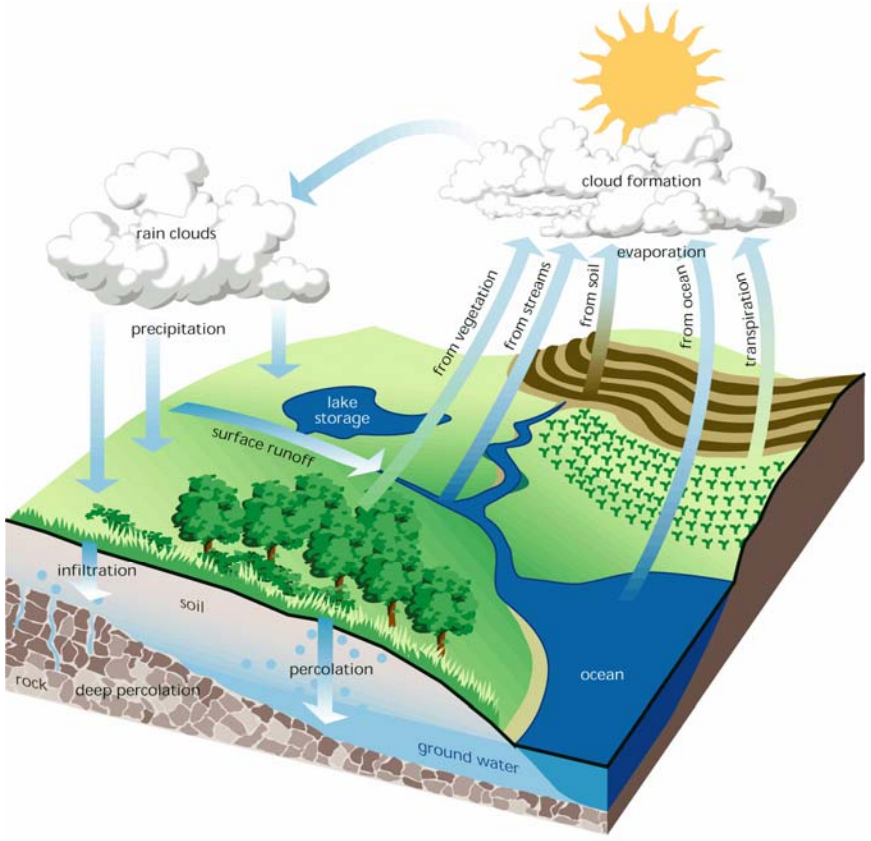
Course Objectives

- Introduce students to:
  - Principles and processes of the hydrologic cycle
    - Atmospheric moisture,
    - Surface runoff,
    - Infiltration, and
    - Groundwater
  - Statistics applied to hydrologic design



Course Objectives

- Civil Engineering program objectives addressed in this course:
  1. Identify broad context of CE problems
  2. Design elements of CE systems, components and processes
  3. Employ mathematics, science, and computing techniques to solve CE problems.
  4. Synthesize results to provide solutions that reflect social and environmental sensitivities.
  5. Develop teamwork skills.
  6. Oral, and written presentation of technical solutions.
  7. Understand the constantly evolving nature of CE, and recognize the need to stay abreast of the latest developments in the field.

Housekeeping

- **Prerequisites:** CE 311S (Statistics) and CE 356 (Hydraulics)
- **Text:** Applied Hydrology, Chow, Maidment and Mays
- **Homework:**
  - Due at beginning of lecture, due date on web site
  - Late homework penalized 50% per day late
  - Full credit (100%)
    - Clear presentation of problem and equations, No computational errors or mistakes, Answers clearly marked, Units used correctly
- **Software**
  - HEC-HMS and HEC-RAS

Housekeeping

- **Exams**
  - 3 exams
  - No makeups
  - Dates: Tues Mar. 1, Tues Apr. 26
  - No Final
- **Grading**
  - Participation: 5%
  - Homework: 20%
  - Exams (3): 45% (15% each)
  - Project: 30%
  - A >= 90, B >= 80, C >= 70, etc.

Projects

- Work in a team on a project dealing with hydrology
- Projects will deal with some aspect of a real, complex hydrologic issue of current interest
- Each group will make an oral presentation of their results to the class and deliver a final report to the instructor.
- Purposes of the project:
  - Enable you to explore in-depth an aspect of hydrology.
  - Provide experience formulating, executing and presenting a hydrologic investigation

Project Steps

- Students sign up for an area of interest
- Instructor prepares teams for the various areas
- Teams:
  - Select topic in their area and prepare proposal
  - Present oral progress report in class
  - Present final project in class
  - Submit draft final report (last class day)
  - Submit final report (at time of final)