

Irrigation and Drainage CT4410

**Irrigation and
Drainage
CT4410**

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This morning

- Outline of the course
- Practicalities
 - Tasks
 - Procedures
 - Assessment
 - Blackboard
- What is irrigation about?



Outline of the course: goals

After this course you should be able to

- Make a (preliminary) design for an irrigation/drainage system, taking into account proper procedures and data.
- Discuss management implications in relation to hydraulic design and behaviour of the system.
- Explain the importance of modernization in irrigation.
- Present key issues and analysis to other students in a web-based platform.
- Link design decisions to relevant scientific literature.

Outline of the course: sessions

During 7 morning sessions several issues will be discussed (applying several formats, including lectures, discussions, exercises etcetera).

The material and issues developed in these sessions are to be applied in the exercises.

The sessions provide the background for the final exam.

Overview of sessions

- **Session I** What is irrigation
- **Session II** Irrigation game
- **Session III** Requirement and delivery
- **Session IV** Modelling of irrigation systems I
- **Session V** Distribution and management
- **Session VI** Modelling of irrigation systems II
- **Session VII** Irrigation and tradition

Products

Exercises

After each session, students prepare an exercise, applying the results of the session to their own ideas of irrigation system design in relation to scientific papers provided as study material. Details of each exercise are given on the discussion board in Blackboard.

Design assignment

Focus is on designing a simple irrigation system consisting of (1) a main canal grid for irrigation and drainage, (2) control structures and (3) one detailed typical secondary and tertiary unit. A simple hydraulic model is used, in which disturbances can be analyzed. Based on this modelling, the designer evaluates the design made. The detailed assignment is given in a separate document.

Peer review

During the course students will give feedback to each other.

Assessment

Final mark

Both the final design exercise and the final exam contribute 50% of the final mark.

Please note that it is obligatory to provide all the homework products before the deadlines given. The homework products are included in setting the mark for the final design.

In case one (or more) homework exercise(s) is (are) not provided in time, no final mark will be given.

Blackboard

- All the stuff I want you to use is on Blackboard.
- If you want to use more – or know more – just ask...
- Please note that the details on how to calculate canals and structures is pre-required knowledge.
 - You could check CT3410-09 for details on those issues.

And now we start irrigating!

