

水文資訊系統 (Hydroinformatics)

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學分：3 學分

課程代號：D0430

助教資訊：

課程目的

The hydroinformatics course aims to provide theoretical and practical foundations underlying the incorporation of modern information and communication technology into modelling, control and decision-support systems in the field of hydraulics, hydrology and environmental management.

課程大綱

Module 1: Introduction

General introduction to hydroinformatics and the course

Module 2: Information management and GIS

Module 3: River and flood management

Artificial neural network

Module 4: Hydrological processes and modelling

Module 5 : Decision support and control systems

Optimisation methods

Real time control

Systems analysis and decision support

Module 6: Data driven modelling and computational intelligence

Module 7: Urban water systems modelling

Module 8: Advanced software engineering and information management

Module 9: Advanced numerical methods and computational hydraulics

Module 10: Hydroinformatics in practice

Module 11: Individual study

Module 12: Fieldtrips and fieldwork

成績計算方法

1. 作業 (20%)
2. 期中報告 (30%)
3. 期末報告(paper) (50%)

主要參考期刊

1. Journal of Hydrology
2. Journal of Hydroinformatics
3. Hydrologic processes