

Applied Hydroinformatics in Aquatic Systems

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Seminar Content and structure

Následující tabulka zobrazuje HTML náhled na zvolený rozvrh. Tiskovou verzi získáte volbou výstupu ve formátu PDF.

Den	08:45- 09:30	09:30- 10:15	10:30- 11:15	11:15- 12:00	12:15- 13:00	13:00- 13:45	14:00- 14:45	14:45- 15:30	15:45- 16:30	16:30- 17:15	17:30- 18:15
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- Content: Applied Hydroinformatics
- Number: 10 lectures
- Duration: 1h 30min
- Examination: written test
- Lecture hand outs - PPT
- Literature – PPT
- Participsation in lectures

Applied Hydroinformatics course

1. Hydroinformatic fundamentals

- a. Definition
- b. Historical Development
- c. Goals and Challenges

2. Magic of simulation modelling

- a. Simulation model as virtual reality
- b. Model structure
- c. Governing equations
- d. Numerical methods

3. Model build proces

- a. Model formulation, conceptualization, schematization
- b. Surveys
- c. Model calibration and verification
- d. Model usage

Applied Hydroinformatics course

4. Model Data

- a. Data types
- b. Data architecture, Data model
- c. Errors in data
- d. Other data aspects

5. Data Collection, Surveys

- a. Concept of monitoring
- b. Types of surveys
- c. Practical aspects

6. Power of Data Visualisation

- a. From 0D to 3D visualisation
- b. GIS systems
- c. Internet presentation

Applied Hydroinformatics course

7. Hydroinformatic Systems

- a. Tools and Technologies
- b. Model example
- c. DSS /HIS systems
- d. Coupled models

8. Applied Hydroinformatics

- a. Changes in Living Environment
- b. Climate Change Challenges
- c. Urban water planning
- d. Role of simulation modelling

9. Case studies

- a. Urban water master plan
- b. Urban flood studies
- c. Other studies

Applied Hydroinformatics course

10. Hydroinformatics as game changer

- a. Complex water environment understanding
- b. Environmental and economic aspects
- c. Decision support for policy makers
- d. Investment optimization
- e. Education and social aspects
- f. Role of technology
- g. Impact on business

11. Hydroinformatics summary

- a. Written test