UNIVERSITÀ DI PAVIA

Anno Accademico 2017/2018

HYDROLOGICAL MODELLING AND RISK ASSESSMENT	
Enrollment year	2017/2018
Academic year	2017/2018
Regulations	DM270
Academic discipline	ICAR/02 (MARITIME HYDRAULIC CONSTRUCTION AND HYDROLOGY)
Department	DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE
Course	ENVIRONMENTAL ENGINEERING
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	2nd semester (05/03/2018 - 15/06/2018)
ECTS	6
Lesson hours	45 lesson hours
Language	Italian
Activity type	WRITTEN AND ORAL TEST
Teacher	MARTINA MARIO LLOYD VIRGILIO (titolare) - 6 ECTS
Prerequisites	No
Learning outcomes	to perform the flood risk analysis of a territory and its main assets
Course contents	1. Main hydrological processes 2. Hydrological and hydraulic models for the flood simulation 3. Definition of flood risk 4. The hazard factor: methods and models for the assessment 5. The vulnerability factor: data, methods and models for the assessment 6. The exposure factor: data and their organization 7. Models for the computation of flood risk 8. Creating maps with QGIS 9. R codes for the risk analysis

Teaching methods

a. Oral presentation with the support of slides
b. Training in the computer laboratory

Reccomended or required readings

Course slides

Assessment methods

a. written exam with open questions on theory and application
b. presentation on a real study of flood risk assessment

Further information

During the course they will be used the QGIS software (www.qgis.org) and the R programming code (www.r-project.org)

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