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COURSE: Hydraulic-Hydrological Risk

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ACADEMIC YEAR: 2018/19

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TYPE OF EDUCATIONAL ACTIVITY: Affine

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TEACHER: Andrea Cantisani

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e-mail: andrea.cantisani@unibas.it

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web:

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phone: 0971 205157

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mobile (optional):

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Language: Italian/English

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ECTS: (lessons e  
tutorials/practice) 6

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n. of hours: (lessons e  
tutorials/practice) 54

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Campus: Potenza  
Dept./School: School of  
Engineering  
Program:

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Semester: II

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#### EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course aims to provide engineers with the knowledge and tools to understand, study and mitigate hydrological and hydraulic risk.

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#### PRE-REQUIREMENTS

The course includes the following pre-requirements: fluid mechanics and hydrology.

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#### SYLLABUS

The course opens with a first part dedicated to hydrology and hydraulics with a focus on the free surface flow and to hydrological and hydraulic risks. The second part deals with the use of HEC – RAS, the free software to hydraulic simulation of US Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC - CEIWR). Finally, applications and a project are provided.

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#### TEACHING METHODS

Theoretical lessons, Classroom tutorials, Project works.

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#### EVALUATION METHODS

Discussion of a project work.

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#### TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Educational material provided by the teacher.

Textbooks:

- V. Ferro, La sistemazione dei bacini idrografici; McGraw-Hill;
- A. Murachelli, V. Riboni, Rischio idraulico e difesa del territorio, Dario Flaccovio Editore;
- V.T. Chow, Open Channel Hydraulics, McGraw-Hill, Singapore;
- L. Giosa e A. Sole, La modellazione monodimensionale nello studio delle aree inondabili. Linee guida all'uso del modello HEC-RAS, Errecci Edizioni.

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#### INTERACTION WITH STUDENTS

At the beginning of the course, after describing the objectives, program and evaluation methods, the teacher provides students educational materials (shared folders, etc). Simultaneously, it collects a list of students who intend to enroll with name and email.

Office hour: Wednesday 5:00 – 7:00 pm - GIS Laboratory – 5th floor - School of Engineering.

In addition to weekly reception, the teacher is available at all times for a contact with the students, through e-mail.

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#### EXAMINATION SESSIONS (FORECAST)<sup>1</sup>

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26/06/2019, 24/07/2019, 18/09/2019, 16/10/2019, 13/11/2019, 11/12/2019

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<sup>1</sup> Subject to possible changes: check the web site of the Teacher or the Department/School for updates.



Università degli Studi della Basilicata  
**Scuola di Ingegneria**

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SEMINARS BY EXTERNAL EXPERTS    YES     NO

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FURTHER INFORMATION

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