UNIVERSITÀ DI PAVIA

## Anno Accademico 2021/2022

# RIVER TRAINING AND FLOODPLAIN PROTECTION

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| **Enrollment year** | 2020/2021 |
| **Academic year** | 2021/2022 |
| **Regulations** | DM270 |
| **Academic discipline** | ICAR/01 (HYDRAULICS) |
| **Department** | DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE |
| **Course** | CIVIL ENGINEERING |
| **Curriculum** | Idraulico |
| **Year of study** | 2° |
| **Period** | 2nd semester (07/03/2022 - 17/06/2022) |
| **ECTS** | 6 |
| **Lesson hours** | 47 lesson hours |
| **Language** | Italian, English |
| **Activity type** | ORAL TEST |
| **Teacher** | GHILARDI PAOLO (titolare) - 6 ECTS |
| **Prerequisites** | Basic knowledge of free surface hydraulics and sediment transport mechanics.<br>A knowledge of the main concepts of slope stability, hydrological processess and groundwater flow is warmly suggested. |
| **Learning outcomes** | To learn the main methods for river flow and sediment transport control, including interaction between river flow and structures. |
| **Course contents** | • flood control: detention basins, spillways, levees<br>• solid transport control: . Bank protection and stabilization, river training techniques<br>• Interaction between structures and water and sediment flow, e.g., brridges, culverts<br>• vulnerability reduction<br>• main regulations: PAI, PGRA, reference agencies and organizations |

## Teaching methods

Lectures with slides and multimedia projection, numerical exercises on typical practical cases.

**Reccomended or required readings**

Da Deppo L., Datei C., Salandin P.. Sistemazione dei corsi d'acqua. Libreria Cortina, Padova.

Przedwojski B. et al.. River Training Techniques. Balkema.

Course lecture notes available on Kiro

## Assessment methods

Oral exam

## Further information

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| **Sustainable development goals - Agenda 2030** | $lbl_legenda_sviluppo_sostenibile |