Risk and Resilience Modelling in Civil and Environmental Engineering

Professor

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General Information

Risk and resilience are central concepts in the management of human communities and of the environment. The surging impact of natural hazards, including the effects of climate change, requires a rational, quantitative approach to decision-making in civil and environmental engineering. This course will provide an overview of risk and resilience modelling from a civil engineering perspective. Conceptual frameworks and operational methods will be illustrated as well as case-study applications. The course will adopt a highly interactive approach. Individual projects will be developed during collegial tutored interactive online sessions which will provide additional theoretical and practical insights into course contents.

Materials

Course materials will be provided by the Lecturer through a dedicated Moodle page. All course activities will be held online.

Schedule

Dates	hrs	Description
2026/02/26 09:00-10:30	1.5	Course introduction; Lecture L01 - Risk: figures, concepts, and frameworks
2026/03/05 09:00-12:30	3.5	Lecture L02 – Risk estimation; IP1 selection
2026/03/12 09:00-12:30	3.5	Lecture L03 – Risk estimation: example applications; IP1 selection
2026/03/19 09:00-12:30	3.5	Lecture L04 – Resilience modeling
2026/03/26 15:00-18:00	3.0	Lecture L05 – Resilience modeling: example applications; IP2 selection
2026/04/02 09:00-12:00	3.0	Individual projects – Tutored work session 1
2026/04/17 09:00-12:00	3.0	Individual projects – Tutored work session 2
2026/04/17 14:00-17:00	3.0	Individual projects – Tutored work session 3
2026/04/23 09:00-12:00	3.0	Individual projects – Tutored work session 4
2026/04/23 14:00-17:00	3.0	Individual projects – Tutored work session 5
2026/04/30 09:00-12:00	3.0	Individual projects – Final revision; Quiz
2026/05/07 09:00-12:00	3.0	Individual project 1 - presentations
2026/05/14 09:00-12:00	3.0	Individual project 1 - presentations

Dates	hrs	Description
2026/05/22 09:00-12:00	3.0	Individual project 2 - presentations
		Total: 42 Hours - 7 Credits

Additional information

For any additional inquiries, please contact www.indicee.unifi.it - dott-dicea@unifi.it.