

Courses offered (general structure) 2023-2024

Reduction Of Seismic Risk		First semester					Second semester				
		Month 1	Month 2	Month 3	Month 4	Month 5	Month 1	Month 2	Month 3	Month 4	Month 5
1 st year	Series	Dynamics of Structures (G.O'Reilly, H.Sucuoglu-METU Ankara *)	Reinforced Concrete Structures (B. Mihaylov - U. Lièges*, G. Guerrini)	Applied Mathematics (M.Martinelli – IMATI – CNR*)	Computational Mechanics (S.Morganti)	Probability and Statistics for Eng Appl (P.Bazzurro, P.Venini)	Seismic Hazard and Applied Seismology (V.Poggi – OGS Trieste*)	Foundation engineering and Earth Retaining Structures (G.Andreotti)	Nonlinear Response Analysis (R.Wiebe, Univ. of Washington*)	Fundamentals of Seismic Design (R.Monteiro)	
	Parallel	-					Geotechnical Earthquake Engineering (C.G..Lai)				
2 nd year	Series	Risk Assessment and Loss Estimation (P.Bazzurro + D.Vamvatsikos NTU Athens * + M.Kohrangi)	1 choice ■	Bridge structures (G.M. Calvi)	Masonry structures (G.Magenes, F.Graziotti)	1 choice ■■	Thesis				
	Parallel	-									

<i>Choices</i>		Steel Structures (R.Nascimbene) ■			Seismic Isolation and Dissipation (A.Filiatrault) ■■				Geomatics and GIS –b (A.Taramelli) ■	
		Geomatics and GIS a – (A.Taramelli) ■			Risk Emergency Management and Legislation (Monti et al.) ■■					

Mathematics and statistics	
Solid and structural mechanics	
Structural/geotechnical design, assessment and retrofit	
Hazard and risk analysis	
Complementary	

Courses offered (general structure) 2023-2024

Hydrogeological Risk Assessment & Mitigation		First semester					Second semester				
		Month 1	Month 2	Month 3	Month 4	Month 5	Month 1	Month 2	Month 3	Month 4	Month 5
1 st year	Series	Continuum Mechanics (S.Manenti)	Continuum Mechanics	Applied Mathematics (M.Martinelli – IMATI – CNR*)	Engineering Geology (C.Meisina)	Probability and Statistics for Eng Appl (P.Bazzurro, P.Venini)	Hydro morphology (** t.b.a.)	Computational Fluid Dynamics (S.Sibilla, A.Fenocchi)	1 Choice ■	Geomatics and GIS –b (A.Taramelli)	
	Geomatics and GIS –a (A.Taramelli)										
	Parallel	Fluvial Hydraulics (A.Fenocchi)					Landslides Hazard and Risk (Meisina + Bordoni)				
2 nd year	Series	Hydrological Risks (M.Martina)	Reliable Design and Management of Urban Hydraulic infrastructures (E.Creaco)		Structural measures for flood risk mitigation (A.Fenocchi)	1 Choice ■■	Thesis				
	Parallel	Flood Propagation (G.Petaccia)									
Choices						Landslide modeling and mitigation strategies (D.Gioffré) ■■		Foundation Engineering and Earth Retaining Structures ■■	Snow Avalanches and Related Mountain Natural Hazards (Barbolini *-Pasian) ■		
						Risk Emergency Management and Legislation (A.Monti et al) ■■					

Mathematics and statistics	
Fluid and continuum mechanics	
Hazard and exposure; definition and modeling	
Risk analysis	
Measures for risk mitigation	
Complementary	