



DYNAMICS OF STRUCTURES	
Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Academic discipline	ICAR/08 (CONSTRUCTION SCIENCE)
Department	DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE
Course	CIVIL ENGINEERING FOR MITIGATION OF RISK FROM NATURAL HAZARDS
Curriculum	Reduction of seismic risk
Year of study	1°
Period	1st semester (20/09/2021 - 13/10/2021)
ECTS	6
Lesson hours	51 lesson hours
Language	English
Activity type	WRITTEN AND ORAL TEST
Teacher	SUCUOGLU HALUK (titolare) - 6 ECTS
Prerequisites	Calculus, linear algebra, matrix structural analysis
Learning outcomes	To learn principles of dynamics of structures using finite elements and introduction to earthquake engineering
Course contents	<ul style="list-style-type: none">-Equation of motion for SDOF systems, its solution-Free vibration response, viscous damping-Response to harmonic excitation-Response to general excitation-Numerical evaluation of dynamic response-Generalised SDOF systems-Equations of motion for MDOF systems-Free vibration analysis-Modal expansion, damping in structures, damping matrix-Modal response analysis of undamped systems

	<ul style="list-style-type: none"> -Modal response analysis of damped systems -Torsional response of 3D systems
Teaching methods	a)Lecture: 3 hours per day from Tuesday to Thursday. b)Tutorial: 4 hours per week.
Reccomended or required readings	---
Assessment methods	a) homework b) final exam
Further information	---
Sustainable development goals - Agenda 2030	\$lbl legenda sviluppo sostenibile