ROSE School

The ROSE School Master's in Earthquake Engineering

Seismic Design of Steel Structures

Lecturer: **G.A. Rassati**
Date: 13/07/2026 – 24/07/2026
Semester: First
Credits: 3 ECTS (CFU)

Course Description

This short course focuses on fundamental concepts of seismic design of steel structures using the approach followed in North-American codes leading to ductility-based designs and laying the foundation for performance-based design approaches. The course begins with an overview of steel design fundamentals, followed by in-depth coverage of the AISC Seismic provisions. A synopsis of Prequalified Connections for Special and Intermediate Frames as well as AISC 342 round off the course, laying the premises for a code-supported performance-based design approach.

Learning Outcomes

Students will be able to:

- Understand North-American codes and approaches to steel design.
- Perform simple designs for lateral-force resisting systems.
- Operate synergistically among different codes and specifications to solve a design problem.