IUSS
Scuola Universitaria Superiore Pavia

Course: **Seismic Design of Steel Structures**
Lecturer: Prof A. Elghazouli
Date: 9 May 2017 – 1 June 2017
Classroom: Sala del Camino, 1-17 (10-19 May); 1-15 (22-1 June)

Course schedule

Week	Date	Lecture hours From____ To____	Tutorial hours From____ To_____	Subject	Tot h
1	Tue 9 May	9:00-12:00	14:00-17:00	Introductions, overview, contents & assignments	6
	Wed 10 May	9:00-12:00	14:00-17:00	Steel design to EC3, lectures and tutorials	6
	Thu 11 May	9:00-12:00	14:00-17:00	Composite design to EC4, lectures and tutorials	6
	Fri 12 May	9:00-12:00	14:00-17:00	Loading & general requirements in EC8 and other codes	6
2	Mon 15 May			Project work assignments	varies
	Tue 16 May			Project work assignments	varies
	Wed 17 May			Project work assignments	varies
	Thu 18 May	9:00-12:00	14:00-17:00	Seismic behaviour and design of moment systems	6
	Fri 19 May	9:00-12:00	14:00-17:00	Seismic behaviour and design of braced systems	6
3	Mon 22 May	9:00-12:00	14:00-17:00	Presentations and discussions on project work	6
	Tue 23 May	9:00-12:00	14:00-17:00	Presentations and discussions on project work	6
	Wed 24 May			Project work assignments	varies
4	Mon 29 May	9:00-12:00	14:00-17:00	Seismic assessment and design of other steel systems	6
	Tue 30 May	9:00-12:00	14:00-17:00	Special/research topics on steel/composite structures	6
	Wed 31 May			Independent study	varies
	Thu 1 June			FINAL EXAM	

Brief Contents Description and Course Syllabus:

Review of steel and composite design with focus on Eurocode 3 and Eurocode 4. General seismic design considerations. Review of fundamentals of structural dynamics and seismic analysis procedures. Seismic loading in Eurocode 8 and other international seismic codes. Behaviour and design of steel and composite moment resisting frames, with emphasis on the provisions of Eurocode 8. Behaviour and design of concentrically and eccentrically braced frames. Seismic assessment and design of other steel and composite lateral resisting systems. Discussions on special research topics on the seismic behaviour as well as in general on the robustness of steel and composite structures under extreme loading conditions.