

Imperial College London // Department of Civil and Environmental Engineering // Structural Engineering MSc programmes

MSc in Advanced Structural Engineering(Adv Struct Eng)

optional: with specialisation in Steel Structures (S)

with specialisation in Concrete Structures (C)

with specialisation in Mechanics, Modelling and Simulation (M)

MSc in Earthquake Engineering

MSc in Advanced Structural Engineering with Data Science

Autumn Term (6 modules; Oct – Dec)

MSc in Advanced Structural Engineering							MSc in Earthquake Engineering		MSc in Advanced Structural Engineering with Data Science		
Compulsory (2 modules)				Steel Components Reinforced Concrete 1							
Adv Struct Eng		Steel Structures (S)		Concrete Structures (C)		Mech, Model, Sim (M)					
		Required Electives (3 modules)	FEA Structural Stability Steel Technology	Required Electives (3 modules)	FEA Structural Dynamics Prestressed Concrete	Required Electives (3 modules)	FEA Structural Dynamics Structural Stability	Compulsory (3 modules)	FEA Structural Dynamics Geotechnical Hazards	Compulsory (2 modules)	Machine Learning Statistical Modelling
Optional Electives (choose 4)	FEA Structural Dynamics Structural Stability Composite Structures Prestressed Concrete Timber and Masonry Steel Technology Cem Mater / Geo Haz	Optional Electives (choose 1)	Structural Dynamics Composite Structures Prestressed Concrete Timber and Masonry Cem Mater / Geo Haz	Optional Electives (choose 1)	Structural Stability Composite Structures Steel Technology Timber and Masonry Cem Mater / Geo Haz	Optional Electives (choose 1)	Composite Structures Prestressed Concrete Timber and Masonry Steel Technology Cem Mater / Geo Haz	Optional Electives (choose 1)	Structural Stability Composite Structures Prestressed Concrete Timber and Masonry Steel Technology	Optional Electives (choose 2)	FEA Structural Dynamics Structural Stability Composite Structures Prestressed Concrete Timber and Masonry Steel Technology

Spring Term (6 modules; Jan – Apr)

MSc in Advanced Structural Engineering								MSc in Earthquake Engineering		MSc in Advanced Structural Engineering with Data Science	
Compulsory (1 module)				Advanced Structural Analysis							
Adv Struct Eng		Steel Structures (S)		Concrete Structures (C)		Mech, Model, Sim (M)					
		Required Electives (2 modules)	Plated Structures Design Steel Buildings	Required Electives (2 modules)	Reinforced Concrete 2 Concrete Materials	Required Electives (2 modules)	Nonlin Struct Analysis Plated Structures	Compulsory (3 modules)	Nonlin Struct Analysis Seismic Design Struct Structural Retrofitting	Compulsory Core	Data Engineering Project Data Science
Optional Electives (choose 5)	Design Steel Buildings Design of Bridges Nonlin Struct Analysis Plated Structures Theory of Shells Struct Reliability Theory Reinforced Concrete 2 Structural Retrofitting Seismic Design Struct Conc Mater / Geo Eng / Mater Sel	Optional Electives (choose 3)	Design of Bridges Nonlin Struct Analysis Theory of Shells Struct Reliability Theory Reinforced Concrete 2 Structural Retrofitting Seismic Design Struct Conc Mater / Geo Eng / Mater Sel	Optional Electives (choose 3)	Design Steel Buildings Design of Bridges Nonlin Struct Analysis Plated Structures Theory of Shells Struct Reliability Theory Structural Retrofitting Seismic Design Struct	Optional Electives (choose 3)	Design Steel Buildings Design of Bridges Theory of Shells Struct Reliability Theory Reinforced Concrete 2 Structural Retrofitting Seismic Design Struct Conc Mater / Geo Eng / Mater Sel	Optional Electives (choose 2)	Geo Eng Design Steel Buildings Design of Bridges Struct Reliability Theory Reinforced Concrete 2 Plated Structures Theory of Shells	Optional Electives (choose 3)	Design Steel Buildings Design of Bridges Theory of Shells Struct Reliability Theory Reinforced Concrete 2 Structural Retrofitting Seismic Design Struct Plated Structures Nonlin Struct Analysis

— Not all Optional Electives may be available for students to attend owing to timetabling constraints

— Modules indicated by italic font are run by other Programmes in the Department of Civil and Environmental Engineering

— Abbreviations used in the table: "Struct" -- Structural/Structures; "Nonlin" -- Nonlinear; "Timber and Masonry" -- Design of Timber and Masonry Structures; "Cem Mater" -- Cementitious Materials; "Mater Sel" -- Materials Selection; "Geo Haz" -- Geotechnical Hazards; "Conc Mater" -- Concrete Materials; "Geo Eng" -- "Geotechnical Earthquake Engineering"

Summer term: Individual Design Project or Research Dissertation (May – Aug/Sep)