4.462 SYLLABUS

PROF. JOHN OCHSENDORF (JAO@MIT.EDU)
TA: RAMON WEBER (REWEBER@MIT.EDU)
OFFICE HOURS: BY APPOINTMENT
LEC: MW 9:30-11:00 AM, ROOM 3-333
LAB: W 5:00 PM - 7:00 PM, ROOM 8-205

	DATE		SUBJECT
FEBRUARY	Mon	5	Introduction
	Wed	7	Compression structures
	Wed	7	LAB: Cables and arches
	Mon	12	Tension structures
	Wed	14	Designing for axial forces (Equilibrium HW due)
	Wed	14	LAB: Buckling and column project
	Tues	20	Truss design (Monday schedule)
	Wed	21	Forces and forms in beams
	Wed	21	LAB: Truss design/column project
	Mon	26	Beam design (Truss HW due)
MARCH	Wed	28	Forces and forms in frames
	Wed	28	LAB: Column testing (Built column due)
	Mon	4	Frame design
	Wed	6	Structural failures
	Wed	6	LAB: Beams and frames (Column report due)
	Mon	11	Stability and indeterminacy
	Wed	13	Indeterminate beams and frames (Beam HW due)
	Wed	13	LAB: Review
	Mon	18	Mid Presentations
	Wed	20	Mid Presentations

	DATE		SUBJECT
MARCH	Wed	20	LAB: Beam project
	M-F	25-29	SPRING BREAK
APRIL	Mon	1	Indeterminate frames
	Wed	3	Lateral load systems
	Wed	3	LAB: Beam testing (built beam due)
	Mon	8	Final project overview
	Wed	10	Structural computation
	Wed	10	LAB: Design project (beam report due)
	Mon	15	No class: Patriot's Day
	Wed	17	Research frontiers
	Wed	17	LAB: Design project
	Mon	22	Reinforced concrete design
	Wed	24	Steel and timber design
	Wed	24	LAB: Design project (Project proposal due)
MAY	Mon	29	Sustainable materials
	Wed	1	Sustainable structures
	Wed	1	LAB: Final project (Project preliminary calculations due)
	Mon	6	Design for strength and serviceability
	Wed	8	Course overview
	Wed	8	LAB: Final project
	Mon	13	Review

Final grades will be calculated as follows:

Participation	5% (reduced for more than 3 absences)
Homework	20%
Lab reports	30%
Mid Project	15%
Final Project	30%

Required Text:

Allen, E. and Zalewski, W., *Form and Forces* (Wiley, 2009)