4.440/1.056 SYLLABUS

PROF. JOHN OCHSENDORF (JAO@MIT.EDU)
TA: NEBYU HAILE (NEBYU@MIT.EDU)
OFFICE HOURS: BY APPOINTMENT
LEC: MW 9:30-11:00 AM , ROOM 3-333
LAB: F 10:00 AM - 12:00 PM, ROOM 5-233

	DATE		SUBJECT
FEBRUARY	Mon	5	Introduction
	Wed	7	Compression structures
	Fri	9	LAB: Cables and arches
	Mon	12	Tension structures
	Wed	14	Designing for axial forces (Equilibrium HW due)
	Fri	16	LAB: Buckling and column project
	Tues	20	Truss design (Monday schedule)
	Wed	21	Forces and forms in beams
	Fri	23	LAB: Truss design/column project
	Mon	26	Beam design (Truss HW due)
	Wed	28	Forces and forms in frames
MARCH	Fri	1	LAB: Column testing (Built column due for testing)
	Mon	4	Frame design
	Wed	6	Structural failures
	Fri	8	LAB: Beams and frames (Column report due)
	Mon	11	Stability and indeterminacy
	Wed	13	Indeterminate beams and frames (Beam HW due)
	Fri	15	LAB: Review
	Mon	18	Mid Presentations
	Wed	20	Mid Presentations

	DATE		SUBJECT
MARCH	Fri	22	LAB: Beam project
	M-F	25-29	SPRING BREAK
APRIL	Mon	1	Indeterminate frames
	Wed	3	Lateral load systems
	Fri	5	LAB: Beam testing (built beam due)
	Mon	8	Final project overview
	Wed	10	Structural computation
	Fri	12	LAB: Design project (Beam report due)
	Mon	15	No class: Patriot's Day
	Wed	17	Research Frontiers
	Fri	19	LAB: Design project
	Mon	22	Reinforced concrete design
	Wed	24	Steel and timber design
	Fri	26	LAB: Design project (Project proposal due)
MAY	Mon	29	Sustainable materials
	Wed	1	Sustainable structures
	Fri	3	LAB: Final project (Project preliminary calculations due)
	Mon	6	Design for strength and serviceability
	Wed	8	Course overview
	Fri	10	LAB: Final project
	Mon	13	**FINAL 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)