

**Professor:** Navid Nastar, Ph.D., P.E., S.E., F.ASCE (nastar@usc.edu)  
Office: KAP 230A

**TA/Lab Instructor:** Amit Jain (jain651@usc.edu)  
Office: KAP 225  
Office Hours: Monday 9:00 AM-10:30 AM; Tuesday 10:30 AM -12:00 PM

**Class Website:**

Blackboard (<https://blackboard.usc.edu/>) is used as the main method of communication between the professor/TA and students. Class material including announcements, handouts, assignments, solutions, lab material, project, etc. will be available on Blackboard during the semester. Students are responsible for downloading the material in a timely manner and printing their own hardcopies if needed. Students are expected to visit the class Blackboard site frequently for updates.

The lab software (SAP2000®) is available on all work stations in SAL 109. In addition, students can remotely access the program via Viterbi MyDesktop (<https://mydesktop.vlab.usc.edu>) outside of lab hours. More information can be found at <https://viterbiit.usc.edu/instructional-support/>.

**Textbook:**

Handouts including relevant design tables and code sections will be provided by professor via Blackboard.

Main text (strongly recommended):

“Principles of Structural Design; Wood, Steel, and Concrete”. Second Edition. Ram Gupta. CRC Press (ISBN 978-1-4665-5231-9).

Secondary text (optional):

"Simplified Engineering for Architects and Builders". James Ambrose, and Patrick Tripeny. John Wiley & Sons, Inc.

**Grading:**

Breakdown of the course final grade is as follows:

15%	Lab attendance and performance
20%	Assignments and project
30%	Midterm exam
35%	Final exam

	<b><u>Location</u></b>	<b><u>Time</u></b>
<b>Lecture</b>	KAP 158	Monday 5:00-7:20 PM
<b>Lab</b>	SAL 109	Tuesday 2:00-3:20 PM
	SAL 109	Thursday 6:00-7:20 PM

**CLASS SCHEDULE**

Note: The following schedule is tentative and subject to change during the semester.

<u>Week</u>	<u>Date</u>	<u>Topic</u>	<u>Assignment (tentative)</u>	<u>Reading</u>
1	Jan. 7	Introduction, Structural Engineering Learning from structural failures		Class handouts
2	14	Statics / ASD / LRFD Shear and bending moment diagrams	HW#1	Chapter 1 Class handouts
3	21	No Class (MLK Day, University Holiday)		Chapter 1
4	28	Loads and framing systems, dead and live loads	HW#2	Chapters 1, 2 Class handouts
5	Feb. 4	Introduction to bending and shear stresses Timber design and timber framing systems	HW#3	Chapters 6, 7 Class handouts
6	11	Timber beams, timber columns (posts)	HW#4	Chapters 6, 7 Class handouts
7	18	No Class (President's Day, University Holiday)		
8	25	Steel design and steel framing systems Review	HW#5	Chapters 9, 11 Class handouts
<b>9</b>	<b>Mar. 4</b>	<b>Midterm exam</b>	HW#6	
10	11	No Class (Spring Recess)		
11	18	Steel beams, steel columns	HW#7	Chapters 10, 11 Class handouts
12	25	Concrete design and concrete framing systems	HW#8	Chapter 14 Class handouts
13	Apr. 1	Concrete beams, concrete slabs	HW#9	Chapter 14 Class handouts
14	8	Lateral forces and Lateral Force Resisting Systems (LFRS) Wind forces and introduction to wind design	HW#10	Chapter 4 Class Handouts
15	15	Seismic forces and LFRS, seismic design	HW#11	Chapter 5 Class handouts
16	22	Seismic forces for multi-story buildings High-rise structural systems	HW#12	Chapter 5 Class handouts
17	29	No Class (Study Days)	Design Project	
<b>18</b>	<b>May 6</b>	<b>Final Exam Monday <u>4:30-6:30 p.m.</u> Please note the exam start time of 4:30 p.m. (not 5 p.m.)</b>		

### **Statement for Return of Course Assignments**

Returned paperwork, unclaimed by a student, will be discarded after 4 weeks and hence will not be available should a grade appeal be pursued following receipt of the student's grade.

### **Statement for Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to the TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. [Website for DSP](#) and contact information: (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX) [ability@usc.edu](mailto:ability@usc.edu).

### **Statement on Academic Integrity and Conduct**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus*, the Student Guidebook, contains the University Student Conduct Code (see University Governance, Section 11.00), while the recommended sanctions are located in Appendix A.

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, [policy.usc.edu/scientific-misconduct](http://policy.usc.edu/scientific-misconduct).

### **Support Systems**

Student Health Counseling Services - (213) 740-7711 – 24/7 on call  
[engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call  
[suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 – 24/7 on call  
[engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) | Title IX - (213) 740-5086

[equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

Bias Assessment Response and Support - (213) 740-2421

[studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs - (213) 740-0776

[dsp.usc.edu](http://dsp.usc.edu)

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

[studentaffairs.usc.edu/ssu](http://studentaffairs.usc.edu/ssu)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

[diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

[dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

[dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.