Department of Architecture
University of Florida

ARC 6685
Life Safety

Gary W. Siebein

TENTATIVE COURSE OUTLINE

Week	Day and Date	Lecture Title	Reading Assign.
1	T, 8/26	Introduction to course **Assign Paper 1**	
2	T, 9/2	Introduction to Life Safety in Architecture History of Fires in Architecture and Building Code Regulation ***1 Topic for Famous Fires Assignment due***	Egan Siebein Cowan FPH Sec.1 PFP Chap 1
3	T, 9/9	Human Behavior in Fires Physiology of fire and smoke ***2 Abstract, bibliography and outline due***	FPH Sec.1.2 PFP pp 18-27 SFPE Chap.1-16
4	T, 9/16	***I Student papers and seminar discussion of famous fires***	
5	T, 9/23	***I Student papers and seminar discussion of famous fires (if needed)*** **Assign Paper 2** **Assign Code Synopsis Presentation**	
6	T, 9/30	The Nature of Fire and Fire Hazards Systems Theory in Fire Protection Fire Growth and Decay Theories Fire Severity Models ***3 Topic for Paper 2 selected***	FPH Sec. 1,4, 4.4, 7.2 SFPE Chap.1-3 to 1-14 PFP Chap 3 & 4 SFPE Sec. 2
7	T, 10/7	Fire Control Systems and Building Code Regulations Classification of Buildings by Occupancy and Construction Type; Height-Area Limits Fire Rating Indices of Construction ***II Code Synopsis Presentations by students*** ***Occupancy, Construction type, Height Area***	101, LSCH FBC, IBC PFP pp 27-41, Chap 6 FPH 7-1, 7-5 & 7-15 PFP Chap 12 FPH Sec.5, 7-6 to 7-7 SFPE 1.26, 3.5-3.8
8	T, 10/14	Theory, Research and Requirements for Egress Building Accessibility and Egress Requirements ***II Code Synopsis Presentations by students*** ***Fire resistance ratings, flame spread, egress*** ***4 Occupancy, Construction type, Height Area Analysis of Project***	SFPE 1.15, 2.6; SBCC, 101, FPH Sec. 7-3 to 7-4, 9 ANSI, 101, LSCH PFP pp 27-29, FBC
9	T, 10/21	Fire Protection by Active Systems	FPH Sec 16-1 to 16-6

		& Detection Devices	PFP Chap 9
		Fire Alarm Systems	FPE 3.1, IBC, IFC
		Standpipe Systems	FPH Sec. 18-6
			PFP Chap 7, 8 & 10
		Sprinkler Systems - Types	FPH Sec. 17- & 18-1 to 18-5,ASSH
		Sprinkler Systems - Design	FPH Sec.17-1 to 17-4, ASSH
			SFPE 3.2
		Special Fire Extinguishing Systems	FPH Sec. 19
		5 Draft of Paper 2 submitted	SFPE 3.3 & 3.4
		II Code Synopsis Presentations by students	
		Smoke detection, Fire alarm systems, Standpipe systems, Sprinkler systems	
		5 Fire Resistance Ratings, Flame Spread Analysis of Project	
10	T, 10/28	Smoke Control in Buildings	FPH Sec. 7-10 to 7-11
			SFPE 1.25, 2.3, 2.7, & 3.9
		Smoke Control in HVAC Systems	Systems Chap. 58
			PFP pp 159-161, IBC, IMC, IFC
		II Code Synopsis Presentations by students	
		Smoke control systems, smoke venting, smoke barriers	
		6 Egress analysis for project	
11	T, 11/4	Guest Lecture by Fire Code Enforcement Official	
		Integration of Life Safety Systems in Professional Architectural Practice	
		II Code Synopsis Presentations by students - make up topics	
		7 Interim review of paper/project 2	
		7 Fire alarm analysis for project	
12	T, 11/11	***Veterans Day - no class***	
13	T, 11/18	Legal aspects of Fire Protection: Codes, Municipal Authorities, etc.	PFP Chap 11
		Guest Lecture by Fire Protection Officer	
		Field trip to Fire Department	
		Fire Investigation and Fire Department Operations	
		9 Smoke control systems analysis for project	
14	T, 11/25	***1hanksgiving Break -no class***	
15	T, 12/2	No Class, Jury Week	
		Presentation and discussion of student papers	

III Paper/project 2 due

REFERENCES

A.S.H.R.A.E. *ASHRAE Handbook: Heating, Ventilating, and Air-Conditioning Systems and Applications*. American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc., Atlanta, GA: latest edition (Systems)

Bouchard, John K. *Automatic Sprinkler Systems Handbook*. National Fire Protection Association, Quincy, MA: latest edition. (ASSH)

Cote, Arthur E., ed. *Fire Protection Handbook*. National Fire Protection Association, Quincy, MA: latest edition. (FPH)

Cote, Arthur and Percy Bugbee. *Principles of Fire Protection*. National Fire Protection Association, Quincy, MA: 1995. (PFP)

Cowan, Henry. *An Historical Outline of Architectural Science*.

DiNenno, Philip J., ed. *SFPE Handbook of Fire Protection Engineering*. National Fire Protection Association, Quincy, MA: latest edition. (SFPE)

Egan, M. David. *Concepts in Building Fire Safety*. John Wiley and Sons, New York: 1978. (Egan)

Fitzgerald, R.W. "Fire" in *Multi-Protection Design* edited by R.E.Kimmer and R.B. Sprankle. Defense Civil Preparedness Agency Publication No. TR-20, Vol. 6, Washington, D.C.: Dec., 1974. (MPD)

International Code Council. *International Building Code*. International Congress of Building Officials, Whittier, CA: latest edition. (IBC)

Lathrop, James K., ed. *Life Safety Code Handbook*. National Fire Protection Association, Quincy, MA: latest edition. (LSCH)

N.F.P.A. *Life Safety Code: NFPA 101*. National Fire Protection Association, Quincy, MA: latest edition. (101)

Packard, Robert, ed. *Ramsey/Sleeper. Architectural Graphic Standards*. John Wiley and Sons, New York: latest edition. (AGS)

Florida Building Codes.(FBC) latest edition available on line through the Florida DCA or purchased through the ICC

Course material will consist of student research and reading outside of class; seminar presentations and discussions by students; assigned reading in books noted on the course outline; and presentations by the instructor.

Products considered in the grade will consist of two major papers (Famous Fires (35%) and an applied design related project (35%); preparation of assigned work (10 submissions at 1% each =10%); seminar presentations with prepared visuals and handouts of assigned Code Section Synopsis Presentations (10%); interim submissions on work in progress (5%); class discussion of reading assignments and general participation (5%).

The class will meet once each week, Tuesdays, periods 7-9 in Room MAT 0013.

INFORMATION

Faculty: Gary W. Siebein, 156 ARCH, 331-5111
Electronic mail: gsiebein@siebeinacoustic.com
Office hours are Tuesdays periods 6 and 10, others by appointment

Other times can be arranged by prior appointment.

The required text is the current *Florida Building Code* available online or print purchase buy students.

Grading Scale

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Numeric Grade	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59
Quality Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0

Class attendance is required.

Students who have excused absences based on UF policies may turn in papers and projects late with no penalties assessed.

UF Academic Policies and Resources
For additional UF "Academic Policies & Resources," go to: https://go.ufl.edu/syllabuspolicies. These resources include information about:

Requirements for class attendance, make-up exams, and assignments
Processes for students with disabilities who may require accommodations
Current UF grading policies
Expectations for course evaluations and constructive feedback
The University's Honesty Policy regarding cheating, plagiarism, etc.
In-class recording of class lectures for personal use
Academic resources, including contact information
Campus health and wellness resources, including contact information