

USC SCHOOL OF ARCHITECTURE_ARCH 605B_Spring 2017

FACULTY:

Mario Cipresso, Kim Coleman, John Dutton, Lorcan O'Herlihy/Ian Dickenson, Lawrence Scarpa, Patrick Tighe, Geoffrey von Oeyen
Aaron Neubert, coordinator, Michael Hricak, comprehensive rover, ARUP, consulting engineers

COURSE OBJECTIVES:

Arch 605B presupposes that the understanding of complex building systems and the technical requirements relevant to contemporary architectural practice are an essential part of a rigorous design process. Students are tasked with exhibiting technical ability and awareness in a variety of areas including structural systems, site design, critical thinking, environmental systems, accessibility, life safety, sustainability, and financial considerations. The comprehensive nature of the studio serves to enhance the development of architectural proposals that are simultaneously provocative, conceptually rich, and highly resolved.

In this studio, you'll implement the knowledge and skills you've accumulated in your graduate school education, combining them with everything you bring from your previous academic and professional experiences. The comprehensive, semester-long problem requires you to extend your understanding of design issues, and to definitively address the interaction of the conceptual, formal, experiential, regulatory and technical requirements of architectural design.

With your project this semester, you'll demonstrate your ability to incorporate and integrate the considerations that are part of any work of architecture: thorough analysis of precedents, program and site; topical, organizational and formal explorations; environmental conditions and forces; topography; life safety, egress and accessibility requirements; structure; principles of sustainability; building systems - ventilation and lighting; and materiality and tectonics. Your goal is to thoughtfully consider the many contours of the architectural problem, within the context of the practical necessities of making a competent building, and create a coherent, integrated, skillful statement.

SEMESTER STRUCTURE:

The semester involves an extended design project - to be investigated in considerable breadth and depth - split into pragmatic and expressive complimentary halves. During the first half of the semester, you will be working in teams to outline the Planning and Engineering of your project with a strong bias towards solving the practical problems and achieving the greatest efficiencies possible. Following midterm reviews, the second half of the semester is devoted to the independent Architectural Development and Detailing of your proposal taking into consideration the complete range of architectural expression. Guiding the iterative and linear development of your studio project are a series of formal deliverables documenting your understanding of various aspects of a comprehensive architectural proposal.

While each of the 605B sections will have independent tectonic and/or material topics, all share the same site, program, general guidelines and pacing, and every student will be similarly addressing the comprehensive focus of the studio. The studios will come together for shared reviews at several times during the semester, to encourage cross-studio discussions and debate. These reviews will be tied to major milestones of development during the semester.

PROGRAM AND SITE:

You will be developing a satellite campus for The USC Marshall School of Business' Center for Entrepreneurial Studies. The project site is located in the Broadway Historic Theater and Commercial District of Downtown Los Angeles. The program will consist of the following requirements not to exceed 25,000 sf:

- Public Entry
- Shipping/Delivery Entry
- Lobby (Information Desk/Kiosk, Waiting Area, Restrooms)
- Café/Retail
- Mechanical/Storage
- Gallery/Exhibition
- Conference/Presentation
- Shared Offices/Work Area
- Private Offices
- Public Restrooms
- "Entrepreneur-In-Residence" Studio

DELIVERABLES:

A. Planning and Engineering Phase: Midterm Review Requirements

1. Precedent Research + Documentation
2. Site Analysis + Documentation
3. Program Analysis + Design
4. Circulation Design
5. Site Plan @ 1/64"=1'-0"
6. Floor Plans/Roof Plans @ 1/16"=1'-0" or 1/32"=1'-0"
7. Sections @ 1/16"=1'-0" or 1/32"=1'-0"
8. Building Model W/ Site @ 1/16"=1'-0" or 1/32"=1'-0"
9. Structural Model W/ Site @ 1/16"=1'-0" or 1/32"=1'-0"
10. Mechanical Systems Axonometric Drawing(s)
11. Preliminary Budget Analysis

B. Architectural Development and Detailing Phase: Final Review Requirements

1. Precedent Research + Documentation
2. Site Analysis + Documentation
3. Program Analysis + Design
4. Circulation Design
5. Site Plan @ 1/64"=1'-0"
6. Floor Plans/Roof Plans @ 1/16"=1'-0" or 1/32"=1'-0"
7. Sections @ 1/16"=1'-0" or 1/32"=1'-0"
8. Building Model W/ Site @ 1/16"=1'-0" or 1/32"=1'-0"
9. Structural Model W/ Site @ 1/16"=1'-0" or 1/32"=1'-0"
10. Mechanical Systems Axonometric Drawing(s)
11. Preliminary + Final Budget Analysis
12. Exterior Envelope Detail Section or Section Axonometric or Model – (Scale TBD)
13. Environmental Systems Detail Section or Section Axonometric or Model – (Scale TBD)
14. Interior Envelope Detail Section or Section Axonometric or Model – (Scale TBD)
15. 3D Visualization – (Scale TBD)

CALENDAR:

WEEK	DATE	ACTIVITY/ASSIGNMENT	LECTURE (Mondays 4:00pm WPH B27)
1	M 01/09	Studio Introduction/A.1 Precedent Research	John Dutton
	W 01/11		
	F 01/13		
2	M 01/16	holiday MLK Day	
	W 01/18	A.1 Due/A.2 Site Analysis + Documentation	
	F 01/20		
3	M 01/23	A.2 Due/A.3.1 Program Analysis + Design	Mario Cipresso/Kim Coleman
	W 01/25		
	F 01/27	last day to drop without W	
4	M 01/30		
	W 02/01		
	F 02/03		
5	M 02/06	A.3.2 Circulation Design	Lorcan O'Herlihy/Ian Dickenson
	W 02/08		
	F 02/10	interim review 1 /A.3.1/2 Due	
6	M 02/13	A.3.3 Structural + Mechanical Design	Arup
	W 02/15	Arup Consultations	
	F 02/17	Arup Consultations	
7	M 02/20	holiday President's Day	
	W 02/22		
	F 02/24		
8	M 02/27	A.3.3 Due/A.4 Budget Analysis	Michael Hricak
	W 03/01	midterm reviews	
	F 03/03	midterm reviews	

9	M	03/06	A.4 Due/B.1.1 Exterior Envelope	Patrick Tighe/Geoffrey von Oeyen
	W	03/08		
	F	03/10		
10	M	03/13	holiday Spring Recess	
	W	03/15	holiday Spring Recess	
	F	03/17	holiday Spring Recess	
11	M	03/20	B.1.2 Environmental Systems	Arup
	W	03/22	Arup Consultations	
	F	03/24	Arup Consultations	
12	M	03/27		
	W	03/29		
	F	03/31		
13	M	04/03	B.1.3 Interior Environment	Lawrence Scarpa
	W	04/05		
	F	04/07	last day to drop with a mark of W	
14	M	04/10		
	W	04/12		
	F	04/14	interim review 2/B.1/2/3 Due	
15	M	04/17		
	W	04/19		
	F	04/21		
16	M	04/24		
	T	04/25	stop day/pencils down @ 6:00pm	
	W	04/26	EXPO installation	
	TH	04/27	EXPO Final Reviews and Exhibition	
	F	04/28	EXPO Final Reviews and Exhibition	
17	W	05/03	portfolio due 12:00pm	

**calendar subject to change*

BIBLIOGRAPHY:

- Frampton, Kenneth. Studies in Tectonic Culture. MIT, 2001
- Borden, Gail Peter and Michael Meredith, eds. Matter: Material Processes, Routledge, 2012.
- Koolhaas, Rem, Delirious New York: A Retroactive Manifesto for Manhattan, Monacelli Press, 1997
- Reiser, Jesse, Atlas of Novel Tectonics, Princeton Architectural Press, 2006
- Alejandro Zaera-Polo, The Politics of The Envelope;
- Cook, Peter, Drawing: The Motive Force of Architecture, Wiley, 2008
- Yee, Rendow. Architectural Drawing: A Visual Compendium of Types and Methods. Wiley, 2007.
- Ching, Francis D.K. Architectural Graphics. Wiley, 2009.
- Balmond Cecil, Informal, Prestel, 2007
- Allen, Edward & Joseph Iano. Fundamentals of Building Construction: Materials & Methods. Wiley, 2009.
- Allen, Edward & Joseph Iano. The Architect's Studio Companion. Wiley, 2012.
- Klaus Daniels, Technology in Ecological Building, Birkhäuser Basel, 1997
- Andrea Deplazes, Constructing Architecture, Birkhäuser Architecture, 2008
- Neufert Ernst, Neufert Architects' Data, Wiley-Blackwell, 2012
- Ching, Francis D.K. Building Construction Illustrated. Wiley, 2008.
- Engel Heinrich, Structure Systems, Hatje Cantz, 2007
- Herzog Thomas, Timber Construction Manual, Birkhäuser Architecture, 2004
- Knippers Jan, Plastics + Membrane Construction Manual, Birkhauser, 2011
- Killory, Christine & Rene Davids, eds. Detail in Process. Princeton, 2008.
- Patterson, Mic. Structural Glass Facades and Enclosures. Wiley, 2011.
- Pfeifer Günter, Masonry Construction Manual, Birkhauser, 2002
- Schittich Christian, Glass Construction Manual, Birkhäuser Architecture, 2007
- Schittich, Christian. Building Skins. Birkhäuser, 2002.
- Werner Sobek, Steel Construction Manual, Birkhäuser, 2000
- Vambersky Jan, Concrete Construction Manual, Birkhäuser, 2002
- Watts, Andrew. Modern Construction Envelopes. Springer, 2011.
- Watts, Andrew. Modern Construction Handbook. Springer, 2009.
- Watts, Andrew. Modern Construction Facades. Springer, 2005.

ORGANIZATION AND PARTICIPATION:

Studio meeting hours are Monday, Wednesday and Friday from 2:00PM to 5:50PM. Be on time. Anticipate needing to stay late, and avoid planning other activities following studio.

605B studio lectures will occur on Fridays @ 2:00pm. You are required to attend all lectures. In addition, you are strongly encouraged to attend the School of Architecture lectures on Wednesday evenings, as well as interesting lectures at other nearby institutions.

Studio participation is critical to both individual and collective success. When not actively engaged with your instructor, be working in studio and available for spontaneous discussions and feedback.

Documentation is critical as a record of your process and a demonstration of your graphic and written communication skills. You will produce a portfolio that documents the work of this studio, to be submitted following final presentations for evaluation by the studio faculty.

You are required to submit a digital portfolio archive at both midterm and the end of the semester. Review with your instructor a selection of the best images / drawings / photos, and carefully follow all naming and formatting protocols. This is the official USC School of Architecture archive of your work, which also offers the opportunity to have your work considered for future school publications.

Keep your digital collections organized, so references such as Blackboard downloads and research materials are easy to find. Keep your hard-copy materials organized too, preferably in a binder.

BACK UP YOUR DIGITAL FILES REGULARLY. Protect against corruption and loss, as missing digital production is not grounds for submitting late work.

CLASS ATTENDANCE:

Attendance at all studio sessions, including lectures, reviews, and field trips, is required. Not being in class within the first 10 minutes is considered tardy; three tardies constitutes an absence. Failure to be present for the entire class session, unless approved by your instructor, may count as an absence.

Personal illness, family emergency, pre-approved academic reason, or religious observance may be excusable; notify your instructor of such situations as soon as possible and before the affected class session.

Unexcused absences from more than three classes will result in the lowering of your final grade one full letter grade. False representation of your attendance is a violation of the University's ethics policy.

Acceptance of late work may only be considered for excused absences, at the discretion of your instructor.

STUDIO PROTOCOL:

You are strongly encouraged to make the studio your primary workspace in order to benefit from the interactive studio environment, informal discussions and the exchange of ideas with your classmates.

You are expected to work a minimum of two hours outside of class for each hour of scheduled studio time; this is a minimum of 24 hours a week in addition to the 12 hours of studio.

Project requirements will be distributed in writing. Daily or weekly assignments may be given verbally or in writing and may differ somewhat from section to section. Timely completion of all assignments is crucial to your success.

Reviews are among the most important elements of your architectural education, so be present, attentive, engaged and participating at each review.

Maintain a healthy, collective working environment in studio. Respect your peers, so at a minimum:

If you want to listen to music, use headphones - at all hours.

Keep mobile phones turned off during studio and especially during reviews.

Respect others' equipment, work products and workspace.

Studio hours are not mealtimes and the studio is not a lunchroom; please eat elsewhere.

Internet use during studio is for direct studio purposes only.

Don't cut on vulnerable surfaces such as floors, desks and drawing boards. Use a cutting mat.

Don't use spray paint, spray adhesive, or other noxious products in the studio. Use such materials only in authorized areas.

READINGS:

Readings appropriate to the project will be distributed or posted on Blackboard throughout the semester by your individual studio instructor. You are responsible for completing all readings and discussing them in class. Theoretical, historical and referential contexts are critical factors in the production of intelligent architecture.

EVALUATION AND GRADING:

Each phase of the semester's production will be evaluated and graded based on the following distribution:

Midterm Presentation: Planning and Engineering Phase	35%
Final Presentation: Architectural Development and Detailing Phase	35%
Participation/Preparation/Effort	15%
Digital Documentation/Portfolio	15%

ACCREDITATION STATEMENT:

The USC School of Architecture's five-year Bachelor of Architecture program and the two-year Master of Architecture program are accredited professional architectural degree programs. All students can access and review the NAAB Conditions of Accreditation (including the Student Performance Criteria) on the NAAB Website, <http://www.naab.org/accreditation/>.

NAAB STUDENT PERFORMANCE CRITERIA**B.6 Comprehensive Design**, comprising A.2,4,5,8,9; B.2,3,4,5,8,9:

- A.2 Design Thinking Skills
- A.4 Technical Documentation
- A.5 Investigative Skills
- A.8 Ordering Systems Skills
- A.9 Historical Traditions & Global Culture
- B.2 Accessibility
- B.3 Sustainability
- B.4 Site Design
- B.5 Life Safety
- B.7 Financial Considerations
- B.8 Environmental Systems
- B.9 Structural Systems

B.10 Building Envelope Systems**B.12 Building Materials and Assemblies**

Unsatisfactory performance warnings will be issued when work does not meet minimum requirements. University guidelines relative to plagiarism pertain to original design work; you are expected to do all your own design and presentation work. Receiving substantial assistance, or appropriating another's design work, will be treated as plagiarism.

ACADEMIC INTEGRITY:

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 Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://web-app.usc.edu/scampus/university-governance/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

RELIGIOUS OBSERVANCES:

The University recognizes the diversity of our community and the potential for conflicts involving academic activities and personal religious observation. The University provides a guide to such observances for reference and suggests that any concerns about lack of attendance or inability to participate fully in the course activity be fully aired at the start of the term. As a general principle students should be excused from class for these events if properly documented and if provisions can be made to accommodate the absence and make up the lost work. Constraints on participation that conflict with adequate participation in the course and cannot be resolved to the satisfaction of the faculty and the student need to be identified prior to the drop/add date for registration. After the drop/add date the University and the School of Architecture shall be the sole arbiter of what constitutes appropriate attendance and participation in a given course. Any student concerned

about missing class for a recognized religious holiday should bring this matter up with your instructor in the first week of classes. A list of recognized religious holy days may be found at: <http://orl.usc.edu/religiouslife/holydays/>.

DISABILITY ACCOMMODATIONS:

The University of Southern California is committed to full compliance with the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA). As part of the implementation of this law, the University will continue to provide reasonable accommodation of academically qualified students with disabilities so those students can participate fully in the University's educational programs and activities. Although USC is not required by law to change the "fundamental nature of essential curricular components of its programs in order to accommodate the needs of disabled students," the University will provide reasonable academic accommodations. The specific responsibility of the University administration and all faculty serving in a teaching capacity is to ensure the University's compliance with this policy.

The general definition of a student with a disability is any person who has "a physical or mental impairment which substantially limits one or more of such person's major life activities," and any person who has "a history of, or is regarded as having, such an impairment." Reasonable academic and physical accommodations include but are not limited to: extended time on examinations; substitution of similar or related work for a non-fundamental program requirement; time extensions on papers and projects; special testing procedures; advance notice regarding book lists for visually impaired and some learning disabled students; use of academic aides in the classroom such as note takers and sign language interpreters; early advisement and assistance with registration; accessibility for students who use wheelchairs and those with mobility impairments; and need for special classroom furniture or special equipment in the classroom.

Obtaining Accommodations:

General: 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 your studio instructor 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. The phone number for DSP is (213) 740-0776.

Physical Accommodations: DSP will work with classroom scheduling, the course instructors and their departments, and the students to arrange for reasonable accommodations.

Academic Accommodations: Students seeking academic accommodations due to a physical or learning disability should make the request to the course instructor prior to or during the first week of class attendance, as well as registering with DSP as early in the semester as possible. Course instructors will require that a student present verification of documentation when academic accommodations are being requested.

WRITING CENTER:

For assistance with academic writing, students may wish to take advantage of the Writing Center maintained by USC. Evaluation of paper clarity, organization, syntax and grammar is available by appointment, free of charge. If you'd like to improve your writing and your ability to communicate your ideas, consider using this valuable resource. See their website at <http://dornsife.usc.edu/writingcenter/> for more information.

SUSTAINABILITY INITIATIVE:

The School of Architecture has adopted the 2010 Initiative for Sustainability, which includes the following language: "The design should engage the environment in a way that dramatically reduces or eliminates the need for fossil fuel."

This intention impacts our design process in a number of ways, including:

- orientation of buildings and site development to minimize negative environmental force impacts and take advantage of positive ones;
- building modestly: providing the minimum space necessary to handle required programmatic needs; maximum practical use of daylighting; careful use of orientation and provision of control/shading mechanisms to handle associated heat loads; maximum practical use of passive solar techniques for heating and cooling; maximum practical use of natural ventilation techniques; selection of hybrid systems for ventilation, heating and cooling which permit this.

No school can lay a claim to Sustainability sensitivity that does not institute and vigorously pursue a recycling program. This recycling program is in force at all times. We pledge to provide adequate, well-marked recycling containers for each section and to provide a posted, printed recycling protocol so you know what goes where.