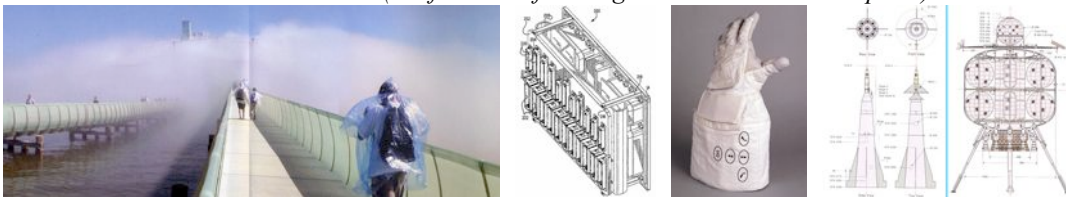


**Six exciting seminars for innovative designers:** These are informative seminars to help you become a better designer. **This course is offered this fall semester only.** It is intended for graduate and upper division undergraduate students.

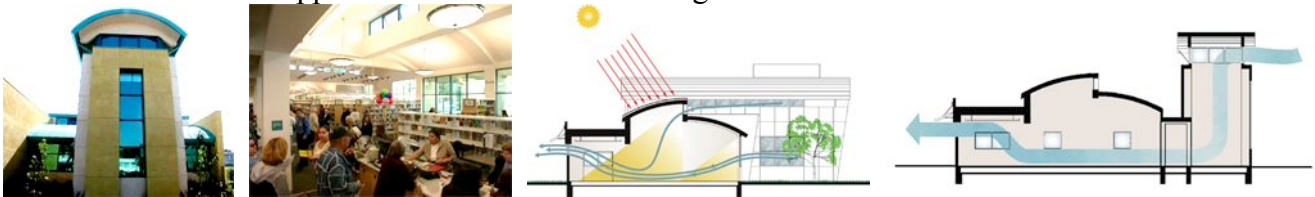
Professors Douglas Noble and Karen Kensek have invited leading experts from extraordinary design firms to give short seminars about their areas of interest. Last year, this course was one of the 2007 winners of the **NCARB Prize** for the creative integration of practice and education in the academy.

Architecture 599: Special Topics in Building Science (#11314R) includes a series of six seminars – you take **two**. Typically, a seminar consists of five or six lectures and a field trip. **Enroll on-line** for the class for 2 units and email Karen Kensek ([kensek@usc.edu](mailto:kensek@usc.edu)). **In case some seminars are full, please email Karen your top four choices in order.** Placement is based on date of enrollment.

**Seminar 1: Prosthetic Skins** *(see footnotes for images under course description)*



**Seminar 2: Current Applications of Sustainable Design**



**Seminar 3: Prefabricated Residential Design** *(images from [www.livinghomes.net](http://www.livinghomes.net))*



**Seminar 4: Digital Tools: Design, Analysis, and Fabrication** *(left 2 images)*



**Seminar 5: Acoustics, Sound Systems, and Auditorium Design** *(right 2 images)*

**Seminar 6: Sustainable Case Studies: A Primer for LEED Professional Accreditation**



## SCHEDULE

**Remember – choose 2 seminars for 2 units. Class times (especially field trips) subject to change.**

Please note that a student may only take up to 8 units of Arch 599 courses for credit towards his/her degree.

- Seminar 1:** Prosthetic Skins (Wednesdays, noon – 2 pm)
- Seminar 2:** Current Applications of Sustainable Design (Thursdays, 6:30 – 8:30 pm)
- Seminar 3:** Prefabricated Residential Design (Mondays, 7 – 10 pm)
- Seminar 4:** Digital Tools: Design, Analysis, and Fabrication (Tuesdays, 6:30 – 8:30 pm)
- Seminar 5:** Acoustics, Sound Systems, and Auditorium Design (Tuesdays, 6:30 – 8:30 pm) **Meets in RTH 217.**
- Seminar 6:** Sustainable Case Studies: A Primer for LEED Professional Accreditation (Thursdays, 6:30 – 8:30 pm)

	<b>Monday 7:00 - 10:00 pm</b>	<b>Tuesday 6:30 - 8:30 pm</b>	<b>Wednesday noon - 2 pm</b>	<b>Thursday 6:30 - 8:30 pm</b>	<b>Saturday – part of day (tentative) field trip</b>
<b>Week 1</b>	Aug. 27	Aug. 28	Aug. 29	Aug. 30	Sept. 1
	<b>First day of classes</b>				
<b>Week 2</b>	Sept. 3 <b>Holiday</b>	Sept. 4	Sept. 5 <b>SEMINAR 1</b>	Sept. 6 <b>SEMINAR 2</b>	Sept. 8
<b>Week 3</b>	Sept. 10 <b>SEMINAR 3</b>	Sept. 11 <b>SEMINAR 4</b>	Sept. 12 <b>SEMINAR 1</b>	Sept. 13 <b>SEMINAR 2</b>	Sept. 15 <b>SEMINAR 4</b>
<b>Week 4</b>	Sept. 17 <b>SEMINAR 3</b>	Sept. 18 <b>SEMINAR 4</b>	Sept. 19 <b>SEMINAR 1</b>	Sept. 20 <b>SEMINAR 2</b>	Sept. 22 <b>SEMINAR 3</b>
<b>Week 5</b>	Sept. 24 <b>SEMINAR 3</b>	Sept. 25 <b>SEMINAR 4</b>	Sept. 26 <b>SEMINAR 1</b>	Sept. 27 <b>SEMINAR 2</b>	Sept. 29 <b>SEMINAR 2</b>
<b>Week 6</b>	Oct. 1 <b>SEMINAR 3</b>	Oct. 2 <b>SEMINAR 4</b>	Oct. 3 <b>SEMINAR 1</b>	Oct. 4 <b>SEMINAR 2</b>	Oct. 6 <b>SEMINAR 4</b>
<b>Week 7</b>	Oct. 8	Oct. 9 <b>SEMINAR 4</b>	Oct. 10 <b>SEMINAR 1</b>	Oct. 11 <b>SEMINAR 2</b>	Oct. 13
<b>Week 8</b>	Oct. 15	Oct. 16 <b>SEMINAR 5</b>	Oct. 17 <b>SEMINAR 1</b>	Oct. 18	Oct. 20
<b>Week 9</b>	Oct. 22	Oct. 23 <b>SEMINAR 5</b>	Oct. 24	Oct. 25 <b>SEMINAR 6</b>	Oct. 27
<b>Week 10</b>	Oct. 29	Oct. 30 <b>SEMINAR 5</b>	Oct. 31	Nov. 1 <b>SEMINAR 6</b>	Nov. 3
<b>Week 11</b>	Nov. 5	Nov. 6 <b>SEMINAR 5</b>	Nov. 7	Nov. 8 <b>SEMINAR 6</b>	Nov. 10 <b>SEMINAR 6</b>
<b>Week 12</b>	Nov. 12	Nov. 13 <b>SEMINAR 5</b>	Nov. 14	Nov. 15 <b>SEMINAR 6</b>	Nov. 17 <b>SEMINAR 5</b>
<b>Week 13</b>	Nov. 19	Nov. 20 <b>SEMINAR 5</b>	Nov. 21	Nov. 22 <b>Holiday</b>	Nov. 24 <b>Holiday</b>
<b>Week 14</b>	Nov. 26	Nov. 27	Nov. 28	Nov. 29 <b>SEMINAR 6</b>	Dec. 1
<b>Week 15</b>	Dec. 3	Dec. 4	Dec. 5	Dec. 6	
<b>Last week of classes</b>					

## SEMINAR DESCRIPTIONS

**Remember – choose 2 seminars for 2 units. Class times (especially field trips) subject to change.**

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### Seminar 1: Doris Sung

#### *Prosthetic Skins*

This seminar will explore the tectonics of the “wall” as mediators of climatic changes and as extensions of the human body. Walls have been the dividers between two natures: man and environment. In the past, they were built to secure, separate and protect man from the dangers of outside. Although the modern movement tried to remove this barrier by increasing the amount of glass and transparency, the actual connection was only visible. This course will challenge the theoretical meaning of “invisibility” vis-à-vis comprehensive sensation(s), while considering the values of walls as energy-saving devices. Unconventional materials will be identified and used in developing detailed wall-sections and surface models. In groups, students will design a responsive and porous skin, activated by human occupation, movement, temperature/humidity changes, and tangible precipitation. Performance, in this case, will be a better measure than thickness or thinness.

Wednesdays, noon – 2 pm: Sept. 5, 12, 19, 26, Oct. 3, 10, 17 + 1 additional hour TBA

Image A: Blur Building by Diller+Scofidio from **Diller+Scofidio, BLUR** (Harry N. Abrams, Inc., New York: 2002).

Image B: High density integrated backplane assembly from <http://v3.espacenet.com/textdoc?DB=EPODOC&IDX=US5348482&F=9>

Image C: Space suit glove with embedded robotic controls developed by NASA, ILC Dover Inc and Softswitch Ltd, USA 2001 from McQuaid, Matilda, **Extreme Textiles: Designing for High Performance** (Princeton Architectural Press, New York: 2005).

Image D: moonship designed by Wernher Von Braun. This one having appeared in various places, most notably **Colliers** magazine and the book **The Conquest of the Moon**. Both of these illustrations are copyright © 1999 by Jon C. Rogers, All rights reserved.

[http://www.hour25online.com/Hour25\\_Previous\\_Shows\\_2003-06.html](http://www.hour25online.com/Hour25_Previous_Shows_2003-06.html)

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### Seminar 2: Mahmoud Gharachedaghi, FAIA

#### *Current Applications of Sustainable Design*

This seminar will suggest the priorities we can set to implement a new environmentally focused approach to planning and design. We will discuss how to approach the application of sustainable design from a comprehensive viewpoint. This program will examine lessons in sustainable design from both traditional cultures and new technologies. The goal of sustainable design programs in city planning, site development and building design is to reduce energy consumption, water consumption, air, water, and soil pollution and solid waste production. We will demonstrate how these principals were successfully incorporated in few recent City projects. The presentation will also dispel the misconception that “Green Architecture” means red ink. The participants will learn how to:

- Provide proper layout of streets and access routes, open spaces, building density, setbacks and heights in larger-scale developments
- Utilize sun, shade and prevailing winds; day-lighting and energy-efficient lighting design; local winds and internal stack effects for natural cooling and ventilation; and water features for cooling devices and to increase humidity
- Provide access to daylight, views and natural air in the workplace
- Create a wind tunnel and direct air to intended locations naturally
- Use well-adopted vegetation in landscaping to provide shade, block undesirable winds and reduce sun reflection

Thursdays, 6:30 – 8:30 pm: Sept. 6, 13, 20, 27, Oct. 4, 11 and required field trip on Saturday, Sept. 29

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### **Seminar 3: Professor Ray Kappe, FAIA and the LivingHomes Team**

#### *Prefabricated Residential Design*

In 2006 LivingHomes produced its first modular prefab residence designed by Ray Kappe which was also awarded the first platinum LEED designation for a residence in the United States. This house has been published in over 100 publications throughout the world. The seminar will demonstrate the process by which both modular prefabs are designed and produced as well as how to obtain LEED maximum ratings. This will be accomplished through a series of lectures, field trips to two completed structures and the fabrication plant, and familiarizing the class with sustainable products and energy-saving techniques. Students will be asked to do research on international prefabrication processes and make a presentation at the last session.

Ray Kappe has practiced architecture for 54 years and has incorporated a variety of prefabrication techniques over the last 40 years. He is the founding Director of SCI-Arc and also founded the architectural program at Cal Poly, Pomona in 1968.

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Mondays, 7 pm – 10 pm: Sept. 10, 17, 24, Oct. 1 and required field trip on Saturday, Sept. 22 (some of the classes will be held off campus)

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### **Seminar 4: Bryant Yeh and Marcello Sgambelluri**

#### *Digital Tools: Design, Analysis, and Fabrication*

Have you ever wondered how the complex components of the Walt Disney Concert Hall were designed and fabricated? This seminar will examine one method and process of coordination and construction using the digital environment presented by the same architect and engineer team that assisted in the design and construction of the Disney Concert Hall.

The seminar will expose students to the inner workings and coordination between the structural engineering and architectural team during design and construction. A study project will be developed with seminar students input and interaction that will include design concepts that integrate the use of BIM technologies. These concepts will include architectural design, structural considerations, and automated fabrication. The course will conclude with a tour of an automated steel fabrication shop.

Tuesdays, 6:30 – 8:30 pm: Sept. 11, 18, 25, Oct. 2, 9 and **two** required field trips on Saturday, Sept. 15 and Saturday, Oct. 6

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**Seminar 5: Tomlinson Holman**

USC, Schools of Cinematic Arts and Engineering

*Acoustics, Sound Systems, and Auditorium Design*

“What did you say?” is heard all too frequently in the din of restaurants today. Why? This seminar will examine the built environment from the standpoint of how it sounds as well as how it looks. Emphasis will not be on engineering so much as on the impact that sound has on our experience of living in buildings. In particular, given the professor’s experience, while we will start with generalized spaces for work and living, we will move on to specialized ones for performance of theater, live music, and cinema where the problems are more complex. The course will take the format of discussions led by the professor, where students should be prepared to interact as they would in professional meetings with clients. There will be at least one Saturday visit to one of the spaces on which Prof. Holman has consulted, where the issues involved will be examined through demonstrations.

Professor Holman has consulted for Lucasfilm, the Sony DVD Center, Ascent Media, Post Logic, Complete Post, and others on such projects.

Pre-requisite Architecture 315.

Tuesdays, 6:30 – 8:30 pm: Oct. 16, 23, 30, Nov. 6, 13, 20 and required field trip on Saturday, Nov. 17

**Meets in RTH 217.**

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**Seminar 6: Jon Mills, AIA, LEED AP + Team**

LPA, Inc., <http://www.lpainc.com/>

*Sustainable Case Studies: A Primer for LEED Professional Accreditation*

Join the LPA team in an exploration of sustainable design projects by a firm which has integrated an holistic approach to green design. Recent LEED Case studies from LPA’s publication, Mainstream Green, will be presented with a focus on “affordable” design solutions. These projects will provide the basis for an in depth study of the LEED certification process, and a thorough review of the LEED for New Construction Version 2.2 exam content. Students will learn the basic LEED Prerequisites and Credits, and their appropriate application in the documentation and submittal process. The course goal for students is to gain a comprehensive understanding of the LEED process; this will also help them prepare for the exam as young professionals. Additionally, students will learn to embrace the basic sustainable values of reducing building operational costs, creating healthier environments, and conserving our natural resources. We hope to inspire the next generation of LEED Accredited Professionals.

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Students will be required to buy the LEED for New Construction book for \$99 BEFORE the class begins. See <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=174&> for directions on purchasing.

Thursdays, 6:30 – 8:30 pm: Oct. 25, Nov. 1, 8, 15, 29 and required field trip on Saturday, Nov. 10

Please read.

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## **REHABILITATION ACT (LAB 504) AND THE AMERICANS WITH DISABILITIES ACT (ADA)**

The University of Southern California is committed to full compliance with the Rehabilitation Act (Lab 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 student 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 list 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**

#### **Physical Accommodations**

Students with physical disabilities should contact Disability Services and Programs (DSP) prior to or during the first week of class attendance or as early in the semester as possible. The office 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 should require that a student present verification of documentation when academic accommodations are being requested. For assistance in how to provide reasonable accommodations for a particular disability, course instructors are encouraged to consult with Disability Services and Programs (DSP). Students requesting academic accommodations who do not have DSP documentation should be referred to that office.

**Disability Services & Programs contact: (213) 740-0776**

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## **RELIGIOUS HOLIDAYS**

The University of Southern California 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.