TOTAL DESIGN

+ STEALTH SUSTAINABILITY

to•tal • de•sign (totˈl, di zinˈ), adj., n., v., v.t., 1. To plan or fashion artistically or skillfully; involving all aspects, elements, trades, scales, resources, etc... 2. constituting or comprising the whole; the entire plans for the work to be executed at every scale.

“Total design has two meanings: first, what might be called the implosion of design, the focusing of design inward on a single intense point; second, what might be called the explosion of design, the expansion of design out to touch every possible point in the world. In either case, the architect is in control, centralizing, orchestrating, dominating.”

-Mark Wigley, 1998

First and foremost, the thesis year is all about YOU. This is the first time ever (academically), and probably the last time in awhile (professionally) that you will be able to research and design a project of your own making. That said, pedagogically, there are two threads that run through the year:

1. We will endeavor to undergo a process of total design with an emphasis on cross-disciplinary interaction involving all media and scales. We will explore other creative pursuits such as drawing, painting, designing and building furniture, sculpture, the design and construction of analogues and writing both poetry and prose. For inspiration, we

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will look to music, film, fashion, fine art, furniture and product design, landscape art and landscape architecture, urban planning and other creative pursuits germane to your thesis project.

2. We will explore the notion of Stealth Sustainability. Please read the section on Symbiosis below that further explains the realms of the possible. I developed the term “Stealth Sustainability” when a colleague noted that, “my students’ work did not strongly convey my interest in sustainability in the built environment”. I took this criticism as a compliment because that sentiment underscores the very essence of what I strive to achieve in the formation of the future designers of our built environment. When I first started at Cal Poly, I presented a paper at ACSA entitled “Removing the Green”, which was a rallying call for ALL architecture to be Green Architecture in large or small ways. In so doing, we could remove the label in the same way we remove the label for architecture that stands up structurally. In other words, I look forward to the day that the Vitruvian triad of “firmness, commodity and delight” may also include the fourth ideal of “environmental sensitivity”. The Federal Building in San Francisco by Morphosis is a good example of this sentiment.

When one experiences that project for the first time, they do not comment to themselves that it looks like the “Prius” of the architecture world, yet upon closer inspection, it’s sustainable features slowly reveal themselves. I ask the students to achieve the same level of stealth sustainability while attaining “design” with a capital “D”.

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SYMBIOSIS
AN ARCHITECTURE OF ENVIRONMENT

sym•bi•o•sis (sim’be o’sis, -bi-), n., pl. -ses (-sez). 1. Biol. a. the living together of two dissimilar organisms, as in mutualism, commensalisms, or amensalism….4. any interdependent or mutually beneficial relationship between two persons or groups, etc..

“What is the use of a house if you have not got a tolerable planet to put it on?”
-Thoreau, 1860

In his 1966 classic, Un Homme et Une Femme, French new-wave filmmaker, Claude Lelouch gives us an impressionistic take on the expectations of romance. Just about the moment the lovers, Jean-Louis Trintignant and Anouk Aimee, begin to read each other intuitively, Lelouch inserts a tender discussion about Alberto Giacometti. While we watch a black and white vision of a limping old man walking his young puppy—just learning to walk—along the Deauville boardwalk on the North Atlantic coast of France, we encounter this dialogue:
“dream your dreams with open eyes and make them come true.” – t.e. Lawrence

Anouk: C’est beau, cet homme avec son chien (that’s beautiful, that man with his dog)
Anouk: Regardez...ils ont la meme demarche. (Look, they walk the same)
Jean-Louis: C’est vrai (It’s true)
Jean-Louis: Vous connaissez Giacometti, le sculpteur? (Do you know the sculptor, Giacometti?)
Anouk: Oui. J’ai trouve tres beau. (Oui, I find {his work} handsome)
Jean-Louis: Il a dit un phrase extraordinaire: il a dit, “dans un incendie, entre un Rembrandt et une chat...je sauverais le chat.” (He once said something extraordinary: He said “[if caught] in a fire, [and I had to choose] between a Rembrandt and a cat, I’d choose the cat.”
Anouk: Je laisserais partir le chat apres (and then he said he would let the cat go free afterward)
Jean-Louis: C’est vrai? (really?)
Anouk: Oui, c’est ca qui est merveilleur, justemente no? (yes, that is what is so wonderful, no?)
Jean-Louis: Oui, c’est tres beau....il a dit, "entre l’art et la vie, je choisis la vie." (yes, that’s beautiful...he {is basically} saying that between art and life, he chooses life.
Anouk: C’est formidable (That’s amazing)
Jean-Louis: Oui (Yes)

In my opinion, Claude Lelouch is not critically de-emphasizing art. The scene is beautifully shot in black and white, with the old man and his dog embedded as dark silhouettes far on the left side of the screen. Ancient Deauville becomes a chiaroscuro backdrop for the endless waves lapping the beach stage right. Cathedrale light pours in from the left while the subjects, who clearly recall the awkward beauty of a Giacometti sculpture, alternate between soft and precise focus with a shallow depth of field.
No, he is saying that art is everything, and yet it is still not as important as life. The goal of this studio echoes that sentiment: art is everything, but what can be more important than the environment with which and in which we live? What can be more important than the symbiotic relationship between humans and their environment through the medium of architecture.

I am not alone if I offer the opinion that nothing is more important. Ed Mazria of Riskin Odoms, Inc and the University of New Mexico, and author of *The Passive Solar Energy Book* indicates in his paper,

**WHO REALLY HOLDS THE KEY TO THE GLOBAL THERMOSTAT?:**

We have overlooked the biggest source of emissions and energy consumption both in this country and around the globe: *Architecture*.

Residential, commercial, institutional and industrial buildings and their construction account for nearly half of all the greenhouse gas emissions and energy consumed in this country each year. Globally, the percentage is even greater. And the architects hold the key to turning down the global thermostat.
The reason for this is quite simple. U.S. Industrial Sector emissions are not increasing much annually. If a recent Swedish study is correct and global oil reserves are significantly overestimated, then the existing efficient technologies, the Transportation Sector, can transform quite rapidly as the entire fleet of automobiles and light duty trucks in this country turn over about every twelve years. That leaves the Architecture Sector, and once built, buildings have a lifetime (and energy consumption pattern) that lasts 50 to 100 years. And this sector’s consumption of energy is mainly in the form of burning oil, natural gas and coal. And therein lies the problem.

There is no short-term or long-term greenhouse gas solution possible without addressing the Architecture Sector...even if Kyoto is ratified, and if the Architecture Sector is not PROPERLY addressed, we will fail to make significant global gains.

-Edward Mazria, architect

As a consequence, the students will be required to direct the attention of their thesis toward a SYMBIOSIS with the environment in addition to addressing the pressing concern for Beauty in Architecture.
There are four major areas of emphasis within which the students may direct their studies to accomplish Symbiosis:

I. Creation in the Created

“Creating in the Created” allows for the recycling of architecture. Students in this emphasis will choose an existing structure in which to create an intervention, conversion, addition and/or renovation. The only facet of rehabilitation work that is not possible within this emphasis is preservation work. Stress is placed on the word “Creation”. The conversion from old to new should be a transcendent experience. As William Morris stated:

“I love art, and I love history; but it is a living art and living history that I love. If we have no hope for the future, I do not see how we can look on the past with pleasure.”

II. Smart Growth

Students working within this emphasis will have the opportunity to develop under the guidelines for Smart Growth and Urban Renewal in an effort to reduce our reliance on Sprawl. The project may take on the form of an infill project, a mixed-use project, an awkwardly shaped lot with which no one else would want to work, a densely designed development or a project that increases density in an existing context, etc. The important common denominator in these projects will be their introspective focus away from the periphery of the City Limit.
III. Sustainability in the Built Environment

Buildings currently constitute the single largest energy consuming human creation, with the simple consequence that the sustainability of the built environment has a major impact on the global ecosystem.”

Catherine Slessor, Physics and Phenomenology, 2001

This emphasis will push a paradigm shift—moving architecture from the realm of the static energy consumer into the realm of the dynamic energy producer.

Students working within this emphasis will design using available techniques and technologies to create energy efficient architecture with an appropriate climate response. They will incorporate the ideals of passive heating and cooling, natural daylighting, thermal mass, photovoltaic use, trombe walls, cooling towers, alternative energy systems such as wind generation and micro-turbine generators, etc. They will explore and incorporate the use of low-VOC “healthy” materials that do not off-gas or use formaldehydes in their production.

IV. 1:1 Scale

The Design Build emphasis will be available to students who wish to design and construct a full-scale realization in brick and mortar. They will be encouraged to limit the scope, program and size of their project to something they can realize financially and within the time-frame of two quarters. Beyond that, the sky [and their own imagination] is the limit: disaster relief, sophisticated installations, temporary/movable architecture, Poly canyon projects, Community enrichment projects for San Luis Obispo, etc... will all be supported. Students willing to devote their fifth year toward the implementation of the next Solar Decathlon (subject to the approval of the Solar Decathlon steering committee) will be encouraged and guided. Students will not be able to build in the studio. Off-campus sites are strongly encouraged.

“believe nothing, no matter where you read it or who has said it, not even if I have said it, unless it agrees with your own reason and your own common sense.” - buddha

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Of course, there may be multiple layers of overlap within the above categories. Students may work in one area alone, or they may choose to overlap. For example, doing a full-scale realization “Design Build” project with appropriate climate response and passive heating techniques would be preferred over standard construction. A “Smart Growth” project or a “Creation within the Created” may also deal with issues of sustainability.

“life shrinks or expands in proportion to one’s courage” –anais nin

V. Extra-Curricular Activities

Regardless of the emphasis, all students will be required to accomplish the following:

- Thesis Book
- A four week Furniture Project to in-form their Thesis projects (due in the Fall)
- A Series of built Form/Analog Tectonic Studies, introspection paintings, landscape interventions, site analogues and happenings to in-form their Thesis projects.
- An effort To blur the distinction, and find the overlap between art + architecture
- Work that does not appeal to the spirit, will not be encouraged
- To Create an Architecture of Experience, creating work that reads on a phenomenological level and appeals to all of the senses.
- Large Scale Sections and Perspective Drawings (in addition to large scales models) to understand the said experiential qualities of their work
- A healthy balance of analog work to complement digital studies
- Field Trips in California and the West Coast, and one trip further afield. Past field trips have been to Paris, Barcelona, Switzerland, New York City, Seattle, San Francisco, Los Angeles, San Diego, Guanajuato and San Miguel de Allende in Colonial Mexico, to the Venice Biennale—a Biannual International Art, Architecture and Installation exhibit in Venice, Italy, and the last year’s trips have been to Japan. Those trips included visits to the work of Tadao Ando, The Tezukas, Klein + Dytham, Toyo Ito, Shigeru Ban, SANNA (Sejima), Rafael Vignoly, Foreign Office Architects, and etc...We visited the cities of Tokyo, Yokohama, Kobe, Kyoto, Osaka, Matsudai as well as the islands of Awiji and Naoshima. The economy has taken a drastic turn for the worse this year, so costs will be a major consideration this year. Other potential trips could be more domestic or continental in nature: the Boston Tour, Chicago, Mexico City, Marfa, Texas—wherever we decide to go that meets our desires and pocketbook constraints.
- Students who consider themselves on the “professional” track may opt to design a thesis of smaller scope such as a restaurant or house, if they agree to complete full interior design services or construction documents as well.

Credits: projects from top to bottom: page one to page ten: katsunori shigemi furniture by: brandin roat, katsunori shigemi + emily woods; danny thai; nathan smith; ben handy; katsu shigem; jason pignolo; rick joymark; madc; garcia; architecture + design (ga+d); photograph by josef kasperovicenzo pianoglen; muriel albino; giacometti; photograph by henri carter-bresson ga+d, rendering by arthur chang steven holl; rebecca l. binder faia; M+OME ga+d lamp by laung chang; andy goldsworthy

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“dwell in possibility” –emily Dickinson