ARCH 131  Beginning Design
[Architecture and Architectural Engineering]

Fall 2015
California Polytechnic State University, San Luis Obispo
College of Architecture and Environmental Design

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Image: Gathering of the Tribes
Catalog Description
ARCH 131 An introduction to design as research based activity and inquiry process based on awareness, observation, speculation, iteration and communication within existing and proposed abstract and scalar situations. Course provides demonstration of acquired skills within project based learning by placing design as an intervention in the world where ideas, nature of materiality, act of making, employment of technologies, the nature of the environment, and time intersect and mutually influence each other. Course and projects introduce issues, concepts, materials, processes and skills pertaining to two and three-dimensional design and realization. Lab, shop, and field/site based projects utilize freehand and constructed 2D and 3D representation, analogue and digital modeling, full scale realization/materialization, and visual communication of ideas, designs, objects and environments. 4 Laboratories. Concurrent [architecture students]: ARCH 101

Several Quotes for your Consideration

...You are so young, so before all beginnings, and I want to beg you, as much as I can, to **be patient toward all that is unsolved in your heart** and try to love the questions themselves like locked rooms and like books that are written in a very foreign tongue. Do not now seek the answers, which cannot be given you because you **would not be able to live them**.

**And the point is, to live everything.**

**Live the question now.**

Perhaps you will then gradually, without noticing it, **live along some distant day into the answer.**

Resolve to be always beginning to be a beginner!

- Rainer Maria Rilke, *Love and Other Difficulties*

**There is no content of knowledge that is not pertinent to the work you will want to do...**

work at something for a while. Do anything.

Get a job in a potato field; or work as a grease-monkey in an auto repair shop.

But if you do work in a field do not fail to observe the look and the feel of earth and of all things that you handle—yes, even *potatoes*!

Or, in the auto shop, the smell of oil and grease and burning rubber.

Paint of course, but if you have to lay aside painting for a time, continue to draw.

Listen well to all conversations and be instructed by them and take all seriousness seriously.

**Never look down upon anything or anyone as not worthy of notice.**

In college or out of college, read.

And form opinions!

Read Sophocles and Euripides and Dante and Proust. Read everything that you can find about art except the reviews.

Read the Bible; read Hume; read Pogo. Read all kinds of poetry and know many poets and many artists.

Go to an art school, or two, or three, or take art courses at night if necessary.

**And paint and paint and draw and draw.**

**Know all that you can**, both curricular and non-curricular—mathematics and physics and economics, logic, and particularly history.

Know at least two languages besides your own, but anyway, know French.

**Look** at pictures and more pictures.

Look at every kind of visual symbol, every kind of emblem; do not spurn signboards or furniture drawings or this style of art or that style of art.

Do not be afraid to like paintings honestly or to dislike them honestly, but if you do dislike them retain an open mind.

Do not dismiss any school of art, not the Pre-Raphaelites nor the Hudson River School nor the German Genre painters.

**Talk and talk** and sit at cafes, and listen to everything, to Brahms, to Brubeck, to the Italian hour on the radio.

Listen to preachers in small town churches and in big city churches. Listen to politicians in New England town meetings and to rabble-rousers in Alabama. Even draw them. And **remember that you are trying to learn to think what you want to think, that you are trying to co-ordinate mind and hand and eye.**

**Go** to all sorts of museums and galleries and to the studios of artists. Go to Paris and Madrid and Rome and Ravenna and Padua.

Stand alone in Sainte Chapelle, in the Sistine Chapel, in the Church of the Carmine in Florence.

Draw and draw and paint and learn to work in many media; try lithography and aquatint and silk-screen.

Know all that you can about art, and by all means have opinions.

**Never be afraid to become embroiled in art or life or politics; never be afraid to learn to draw or paint better than you already do; and never be afraid to undertake any kind of art at all, however exalted or however common, but do it with distinction.**

Ben Shann, *The Shape of Content*, 113-114
Contact and Access to Professors

You are encouraged to use your instructor's office hours or advising center hours for project clarifications and any private concerns.

Jim Bagnall: Dexter [34] 206 Office Hours: M+W+F 11:00am-12:00pm
Email: jbagnall@calpoly.edu

JoAnn Moore: Dexter [34] 243 Office Hours: M 11:00-12:00pm, 6:00-7:00pm, W 6:00-7:00pm, Th 12:00-1:00pm, 6:00-7:00pm
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Emily White: Engineering West [21] 215 Office Hours: M 3:00-4:30pm and F 9:30-11:30am, 3:00-4:30pm
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Ryan Brockett: Dexter [34] 242 Office Hours: M+W 6:00-7:00pm
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Brent Freeby: Engineering West [21] 125 Office Hours: M+W+F 8:30-9:00am, 12:00-1:00pm and Th 8:30-9:00
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Humberto Norman: Dexter [34] 242 Office Hours: M+W+F 12:00-1:15pm
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Ed Saliklis: Engineering West [21] 220A Office Hours: T 10:00-11:00am, W 1:00-3:00pm and Th 12:00-2:00pm
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Jen Shields: Engineering West [21] 215 Office Hours: T 9:00-11:00am and W+Th 3:00-4:30pm
Email: jeshield@calpoly.edu

Keith Wiley: Engineering West [21] 125 Office Hours: T 9:00-12:00pm, 2:00-4:00pm
Email: kwiley@calpoly.edu

Greg Wynn: Dexter [34] 248 Office Hours: M+W+Th+F 12:00-1:00pm, T 9:00-10:00am
Email: gwynn@calpoly.edu

Michael Lucas: Architecture [05] 214B Office Hours: M+W 10:00-12:00pm and W 3:00-4:00pm
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Note:
1. Students with a University certified disability are asked to self-identify to their instructor privately during office hours.
2. Cal Poly recognizes e-mail as official means of notification and communication, supplanting and in many cases rendering unnecessary written/hard copy communication- you are required to check your Cal Poly e-mail daily for messages about the lab and activities. You may have your Cal Poly e-mail address forward mail to another e-mail account. While faculty may choose to deliver messages to another account you provide, that does not relinquish you from daily viewing your Cal Poly account.

Summary of Objectives and Goals for Fall Quarter 2015

National Architectural Accreditation Board [NAAB] Objectives
The National Architectural Accreditation Board [NAAB] has established outcomes for a professional program to meet. The faculty of the department have chosen these outcomes for ARCH 101/131/132/133, as demonstrated in your project evidence, to be met.

Critical Thinking and Representation:
Architects must have the ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural and environmental contexts. This ability includes facility with the wider range of media used to think about architecture including writing, investigative skills, speaking, drawing and model making. Students’ learning aspirations include:
- Being broadly educated.
- Valuing lifelong inquisitiveness.
- Communicating graphically in a range of media.
- Recognizing the assessment of evidence.
- Comprehending people, place, and context.
- Recognizing the disparate needs of client, community, and society.

Design Thinking Skills: Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.

Fundamental Design Skills: Ability to effectively use basic architectural and environmental principles in design.

Ordering Systems Skills: Understanding of the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

Investigative Skills: Ability to gather, assess, record, apply, and comparatively evaluate relevant information within architectural
coursework and design processes.

**Applied Research:** Understanding the role of applied research in determining function, form, and systems and their impact on human conditions and behavior.

**Historical Traditions and Global Culture:** Understanding of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors.

**Cultural Diversity:** Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity on the societal roles and responsibilities of architects.

**Technical Documentation:** Ability to make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

**Use of Precedents:** Ability to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.

**Communication Skills:** Ability to read, write, speak and listen effectively.

**Visual Communication Skills:** Ability to use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.

### Additional Goals and Objectives as Identified by the Department Faculty

#### Objectives of Observation and Experience

[NAAB Outcomes at Application/Ability: Critical Thinking; Graphic Skill; Precedent; Site Conditions; Outcomes at Understanding: National and Regional Traditions; Human Behavior]

- Engage a space or location as a reflective participant through spatial sequences and experience of light, shade, textures, surfaces.
- Observe and represent through journaling, sketching, diagrams, photography and measurement existing locations, occupation, spaces, structures, details and materials.
- Analyze places experienced through diagrammatic and graphic communication.

#### Objectives of Design and Lab Based Making

[Including NAAB Outcomes at Application/Ability: Critical Thinking; Fundamental Design Skills; Formal Ordering Systems; Collaborative Skills]

- Understand design as search and discovery where process is related to final project qualities.
- Understand the iterative lateral thinking nature of design inquiry and the role different media and modes of representation play in design inquiry.
- Use graphic representation as a tool of initiation, inquiry and speculation as well as precision and communication.
- Apply inquiry into the process of design, discovering, through experiment, methods of working that allow and develop aesthetic judgment and means of self-evaluation.
- Apply inquiry to precedents of recognized designers and architect’s works and recognize conceptual and/or philosophic positions evidenced in their work.
- Plan, carry out, and reflect on a process for creating a beginning 2D and 3D design solution.
- Generate alternatives and develop solutions across simply defined as well as highly speculative design problems.
- Design things and communications that employ concepts of size, shape, surface, texture, material, context, number, variety (pattern, hierarchy, contrast and balance) to explore and create relationships between elements exhibiting an appropriate level of complexity.
- Design abstract compositions and spaces that range from implied to explicit.
- Design spaces that support sequences of approach, entry, and arrival.
- Initiate and develop a spatial design concept using sketch and refined precision drafted paraline drawings.
- Design and execute 2D and 3D presentations composed of drawings, images, text, and models that support the intended communication.
- Utilize a range of media, tools, techniques and systems to represent existing and imagined materials, spaces, objects and environments on two-dimensional surfaces.
- Draw proportionally accurate one- and two-point eye-level perspectives that communicate the experience of being near things or within spaces.
- Create the illusion of three-dimensional form and space on two-dimensional surfaces.
- Draw both freehand gesture and carefully constructed representations of existing and imagined objects and environments on two-dimensional surfaces.
- Incorporate people and commonplace things into representations to animate, give scale and enhance the illusion of form and depth.
- Produce hand lettering that exhibits good form, consistency and alignment.
- Plan and provide a clear and concise oral presentation and argument for their work.
- Provide description, comparison, and constructive criticism of peer’s work.
- Work individually, collaboratively, and collegially, becoming familiar with and understanding the benefits of each.

#### Objectives of Materiality and Shop Based Making

[Including NAAB Outcomes at Application/Ability: Critical Thinking; Fundamental Design Skills, Sustainable Design]

- Explore the nature of basic construction materials through manipulation and transformation and assemble.
- Understand the opportunities and limitations of the materials use and effect on design.
- Identify basic materials and connecting methods.
- Identify attributes of materials through their direct manipulation and transformation.
- Utilize attributes of materials in combination with each other as assemblages to increase capabilities and compliment each other.
- Understand that all architectural designs and materials have implications for sustainability from their origins, through their transformation into use, and into disuse or reuse.
OBJECTIVES OF WRITING

[Including NAAB Outcomes at Application/Ability: Speaking/Writing; Critical Thinking]:

Understand the role of journaling and description to compliment sketching when in a setting.

Write concise statements of intent, description of process thinking, and reflections on their work.

Write clear analytical descriptive captions and annotations that compliment images and models.

Write clear summaries and understand and state implications of readings appropriate to the content and projects.

LAB/STUDIO AND ‘STUDIO CULTURE’

Design is engaged in the lab setting, and is different from a traditional classroom. We will typically use the term studio in lieu of lab, as in design we tend to discover and investigate via qualitative research, vs quantitative research implied by ‘lab’. The studio is a physical facility where, similar to a laboratory, experimentation and iteration lead to acquisition of knowledge and development of skills. Because you share this environment with others, the studio develops a studio culture, where the learning and work within the group exceeds what one could accomplish alone.

In the studio you will:

- Develop and embody a manner of work (as verb - work ethic) which reflects generation, iteration and modification of work
- As noun - evidence, graphic and virtual and/or analogue models in addition to dialogue
- Develop and manifest a sense of collegiality through neighborly cooperation on common and common sense aspects of research, working and dwelling within the studio
- Develop and articulate an active culture of productive criticism, mutual encouragement and support especially within our studios, but also with all other college labs and settings.

The studio is a learning environment that uses a hands-on, intuitive, problem solving approach to discovering and sharing knowledge, learning, and more importantly, learning how to learn as a designer. The studio develops what Gardner calls your ‘visual-spatial intelligence’ as well as utilizing logical-mathematical and verbal-linguistic modes you are more familiar with. The quality of this studio as a learning environment is directly affected by your active participation—the ideas and work you share verbally and visually. Interaction between you, your peers and the teacher is fundamental to the quality and richness of the studio as a learning environment. We will learn from and help each other generate, develop and evaluate ideas. The interaction will expand the range of ideas available to all of us and thereby enrich each person’s unique solutions and learning experience.

THE QUALITY OF THE INTERACTION WILL DEPEND ON THE STUDIO BEING A SAFE ENVIRONMENT. There must be a level of trust for us to feel free to speak and expose values, beliefs, ideas and questions. Trust will develop as we get to know each other and will be supported if we treat each other with care and respect and are attentive when ideas are being expressed. A part of showing respect is your being present, prepared, and punctual so that you can contribute to the life of the class.

Evidence in our work and presentations and the ideas they contain are the focus of a studio course. Discussions and the professor’s comments will be largely generated from your work. Therefore, the thought and effort you put into each exercise will enrich the class and enhance the quality of your learning experience. Furthermore, the quality of the comments and suggestions that you receive are directly related to the quality of what you present.

Each of us brings to this class unique experiences, skills, knowledge, and learning styles. The class will be richer if we take advantage of these differences. Share what you know and help each other to develop and present ideas. You may be able to explain something to a classmate in a way that they can more clearly understand and you get the benefit of learning it more deeply by having verbalized it to someone else.

DISCUSSING, DOING, AND MAKING

The studio will contain a mix of readings, lectures, discussions and assignments; some passive but almost all exclusively active learning. Lectures present fundamental concepts, demonstrate skills, define issues and clarify ideas.

Workshops will focus on a particular skill in an interactive mode that needs to be mastered for implementation directly in the concurrent project. Discussions and Critiques provide opportunities to exchange ideas and occur in both small and large groups. Any topic related to environmental design, drawing and the studio environment and process may be addressed.

Communicate and ask questions when something is not clear to you, and contribute your ideas and knowledge to your puzzled peers.

Assignments provide the vehicles for doing and making and learning through the doing and making.

Work is something made- and making will be a key word stressed throughout the year.

Making involves an active component that stresses process, attitude, discipline, and care as well as an artifact-in-evidence that manifests the care and intelligence. Assignments provide an opportunity to experience and demonstrate design, acquire and develop skills, and opportunities to share insights as well as problems.

Design is a form of inquiry, a thinking-through-the-work, as opposed to preformed or rote ideas just being executed. Each assignment frames a problem whose solution requires the understanding and application of principles, concepts and skills. They also provide an opportunity for you to exercise problem solving, judgment, and creativity. The projects are evidence of your attaining the outcomes.

CREATIVITY AND FEAR

Studios are environments for creativity. What inhibits us from being as creative we would like to be? It seems that the most powerful reason is fear. Fear of appearing “silly” to our friends. Fear of appearing “strange.” Fear of being wrong; fear of failure. Fear that your ideas will be criticized or made fun of. Fear that it will not be the answer that the teacher wants. What every professor wants is to see how you have the problem solved- the constraints met- and be surprised by your unique solution and the possibilities it brings into being.
The basic strengths needed for creative problem solving (Koberg and Bagnall—yes, our professor Jim Bagnall, 1991) are:

**Awareness:** a curiosity and appreciation of life in both sensing (body centered) and knowing (mind centered) modes.

**Passion:** an enthusiasm and sense of purpose that focuses your energies on solving a problem or reaching a goal.

**Self-Control:** the ability to manage one’s habits.

Exactly how you explore the issue is your opportunity to make the project interesting and meaningful to you. It is the component of the assignment within which you can address your own personal agenda. Take control of this opportunity and approach it with enthusiasm and creativity. It will involve taking some risks—confronting your fears. It is not possible to stop being afraid. It is only possible to start being brave. If you focus on exploring, creating and following your interests you will produce imaginative and interesting things.

Another way of thinking about constraints and creativity is to see each design problem as having both a pragmatic (quantitative) and a poetic (qualitative) side. The pragmatic side consists of all the things that must be accomplished or met, many times involving a skill or technique. The poetic side is the opportunity to explore and communicate something else. The pragmatic often provides the soil from which poetic expression can grow. The two sides are not in opposition. They are necessary for the other to exist. Your goal is to develop holistic solutions to problems—solutions that are quantitatively and qualitatively meaningful. All projects add to and develop previous work and knowledge.

**Critique and Feedback**

Essential to the design process is the open discussion of the work. Because this is a critical review (as in critical thinking, not because it is meant to be negative), it is termed critique. It is a form of feedback and occurs across every level of design studio and major in the CAED. Unlike Business or English majors (for example), passing forward stacks of paper at the end of class, every one of your projects will be viewed (and sometimes reviewed) by the entire studio.

For most of you, this will be the first time in such a ‘critical’ environment and it should be understood that a criticism of one’s project is not a criticism of one’s self.

It is important in such situations that one not become personally defensive (which is different than defending your project). What matters is that after the critique, you are able to reflect on what has been discussed, and use it to propel your work forward, regardless of whether you accept or reject what was said. In many cases, discussion will not be just about what the final work you have, but just as important, your process of getting there.

Critiques will come from your studio professor and the Beginning Design team of instructors, but also guest professors, upper year students, professional critics and studio peers. One of the most valuable things that the professor or critic can do for you is to carefully examine your work and clearly communicate their observations. It provides an indication of how your work is encountered, how it is progressing and how it can be improved. Observations and feedback will be provided both individually and to the class as a whole. The goals of this feedback are to improve your understanding of the concepts, their development, and application.

Critiques are also intended to illustrate points that are applicable to everyone’s work. Its value also depends on your understanding of how the comments apply to your specific solution. Additional individual feedback and assistance is up to you. If you do not understand something, need help or want to discuss your work in more detail, please ask. This may be able to occur during class or at the instructor’s office hours.

Part of the feedback is the ability to listen as well as contribute. It means giving our attention to each other in a real effort to understand what is being said. By listening we are giving value to what is being said and who is saying it. If we all contribute and listen, the studio will be a much richer learning experience.

Part of collaboration is peer discussion. Even if you consider yourself a ‘quiet’ reflective person, in the collaborative setting it is requisite for you to actively participate in discussion and reviews of others work.

**The Studio Environment**

Obtaining a positive studio culture requires that we pay attention to the interpersonal atmosphere and processes of the studio environment. The fundamental position of this studio is that we should behave and interact based on the belief that everyone deserves our respect and can teach us something. A diversity of backgrounds and student experiences brought to the deliberations of the studio allows for more permutations and opportunities for learning.

**Competition and Collaboration**

Historically the studio has been a competitive environment with an orientation towards power and control rather than principles and sharing. A different type of professional workplace exists today: one that depends upon cooperation and collaboration to enhance human connection and potential. This is productive, ethical and pragmatic. The studio must be such a workplace—a cooperative and democratic world. Your assignments and projects will include work done as individuals, small groups, and as a “beginner” cohort. This does not mean that competition disappears. The ultimate competition is with what you arrive with and what you can develop into—competition with yourself. Competition with others in studio is competition in which winning and community do not have to be separated; the Latin root of the word competition is “to strive together.”

**Ethics I: General Ethical Guidelines**

The following guidelines for students’ ethical behavior in architecture design studios were developed by Reed and Hallock [The Teaching Professor, January 1996]. You will be expected to abide by these standards of ethical behavior.

1. Engage in the free pursuit of learning by:
   - Seeking help and clarification when needed.
   - Respecting fellow students’, professor’s, and guests’ opinions without disparaging or dismissing them.
2. Model ethical scholarly standards by:
   - Avoiding plagiarizing and all other breaches of academic honesty [see below].
   - Avoiding any seeming approval, acceptance, or encouragement of fellow students' academic dishonesty and bringing any such instances to the attention of the professors and/or university officials.
   - Engaging in discussions with other students and professors about ethical issues in academics.
   - Understanding the professor’s methods and rationale for your assessment and asking for clarification if you don’t understand.
   - Engaging in accurate, just, reflective self-assessments of your own work.
   - Engaging in constructive, value-neutral discussion with the professor about discrepancies between your self-assessment and the professor’s assessment of your work.
   - Refraining from comparing assessments and grades with classmates’ so as not to diminish classmates’ self-esteem.

3. Acknowledge, accept, and expect a just assessment of your learning by:
   - Getting to know classmates and the professor as individuals rather than applying prejudices and stereotypes.
   - Contributing your full effort in team and collaborative projects and activities.
   - Respectfully voicing your expectations of full participation in team and collaborative projects and activities to fellow students.

   - Not discouraging, in any way, a member’s full participation in a collaborative project or activity.
   - Being careful not to make racist, sexist, and other types of discriminatory remarks during or outside of class.
   - Being careful not to monopolize class discussion time so that others do not have a chance to participate or are intimidated about participating.

[See the Cal Poly Statement on Commitment to Community:
http://www.academicprograms.calpoly.edu/academicpolicies/community_commitment_statement.html]

Ethics 2: Cheating and Plagiarism

Cal Poly has a policy on cheating and plagiarism that you should become familiar with. Cheating is rewarded with failure and possible dismissal. Plagiarism may also result in failure and/or dismissal as well as expose you to civil damages. As young adults you are held to high standards:
http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1722&context=senateresolutions

excerpts from the Academic Senate resolution:

684 Academic Dishonesty: Cheating and Plagiarism The University does not condone academic cheating or plagiarism in any form. The faculty is expected to uphold and support the highest academic standards in this matter. Instructors should be diligent in reducing potential opportunities for academic cheating and plagiarism to occur. Students’ rights shall be ensured through attention to due process, as detailed below.

684.1 Definition of Cheating: Cheating is defined as obtaining or attempting to obtain, or aiding another to obtain credit for work, or any improvement in evaluation of performance, by any dishonest or deceptive means. Cheating includes, but is not limited to: lying; copying from another's test or examination; discussion at any time of questions or answers on an examination or test, unless such discussion is specifically authorized by the instructor; taking or receiving copies of an exam without the permission of the instructor; using or displaying notes, "cheat sheets," or other information devices inappropriate to the prescribed test conditions; allowing someone other than the officially enrolled student to represent same.

684.3 Definition of Plagiarism: Plagiarism is defined as the act of using the ideas or work of another person or persons as if they were one's own without giving proper credit to the source. Such an act is not plagiarism if it is ascertained that the ideas were arrived at through independent reasoning or logic or where the thought or idea is common knowledge. Acknowledgement of an original author or source must be made through appropriate references; e.g., quotation marks, footnotes, or commentary. Examples of plagiarism include but are not limited to the following: the submission of a work, either in part or in whole completed by another; failure to give credit for ideas, statements, facts or conclusions which rightfully belong to another; failure to use quotation marks (or other means of setting apart, such as the use of indentation or a different font size) when quoting directly from another, whether it be a paragraph, a sentence, or even a part thereof; close and lengthy paraphrasing of another's writing without credit or originality; use of another's project or programs or part there of without giving credit.

It is very natural for designers to be inspired by and borrow from materials of others to advance or support facts, an argument, or design. In general, within a more closed internal academic situation [a lab or class] 'fair use' doctrine suggests that sources are simply acknowledged and noted. When placing materials on the web [your personal site or other open access site at Cal Poly], or having a private publisher produce your work [like your portfolio], or you make the work available to a larger public, you have a higher level of responsibility to credit your sources. Jesse Vestermark, our CAED librarian, has collected the following advice:
http://libguides.calpoly.edu/content.php?pid=26643&sid=195115

Ethics 3: Your Peers

Harassment of any kind or form is not acceptable in these or any studios at Cal Poly.

In fact, some forms of harassment may be criminal. When harassment towards students comes from other students, it is referred to as peer harassment. Such harassment rarely appears in an overt manner, but rather in subtle and accumulating actions. Many students have substantially different behaviors and languages and therefore, may do things without realizing their impact on others. Harassment in the studio could take many forms: gender, ethnicity, sexual identity or preference. Harassment could include graphic content, content in graffiti, or posters, innuendo, or offensive speech or lyrics – ANY content of denigration and or violence against men or women, or against another based on race, place of origin or residency, gender identity, age, or religion.

If you feel that you are being harassed in any way, please communicate your concerns with your professor, someone in the department administration and/or with someone that you feel comfortable. It is only by identifying and discussing the situation that understanding can be achieved and behavior changed. The professor would welcome the opportunity to listen and discuss any issue or situation with you at any time.
Ethics 4: Your Environment and Studio Care

This is your home base for this quarter and will serve the same function for those that come in the future. We share studios across several sections of design, so it is critical that morning sections of design do not leave materials on/in work areas that impact the afternoon session(s) of design. It is critical those who use the labs at night do not leave materials on/in work areas that impact the morning session. This includes use of the common drawing boards in each lab- you may not claim them as yours unless you are active in the lab. Studios in morning or afternoon sessions have priority on the drawing boards in the individual labs. Under NO circumstances may drawing boards leave the lab spaces. Leave the physical facility in as good or better shape than when you started. Do not mark on the walls or desks. Take care with cutting implements so as to not hurt yourself or damage desks. Always mask off the area or provide protection for tables etc. anytime that you are doing something that could destroy or deface them.

In particular, care must be taken with any of the following categories of activities and materials:
- Aerosols [for example, spray paint and spray adhesives]: You must take any of these materials outside the studio. There are spray booths located in the corridor system. You may not use any aerosol materials near the building 05 air intakes near the north end of the lower level corridor system as this compromises spaces that rely on ducted outside air such as the photo lab and spaces used by the CAED computer team.
- Adhesives: Many of your materials are non-toxic, but some are very toxic. Be sure to read caution on the labels and do not expose yourself or peers to toxic substances. Many of these cautions speak to eye or skin contact, so take care!
- Sanding and particulate producing activities [plaster or wood]: You must take these outside the studio to avoid air quality issues inside the studios.
- Devices with rotating blades [portable saw, etc]: You may not use these devices except in the shop area.
- Devices that produce significant amounts of noise: We share our building with University lecture rooms as well the Media Resource Center, so during occupancy of those spaces sound should be kept to a minimum.

The department will require you sign electronically a separate ‘Studio Use’ agreement that attests to your need for care for the facilities. Additional charges may be assessed to individuals or class based on loss of equipment [for example, drawing boards] or damage [for example, studio tables or walls].

See the Cal Poly Architecture Studio Use Policy: [http://www.arch.calpoly.edu/current/studio-use.html](http://www.arch.calpoly.edu/current/studio-use.html)

ALL STUDENTS IN EACH LAB SECTION MUST COMPLETE THE STUDIO USE AGREEMENT

Studio Security

This is your space to create a safe and trusting environment for the quarter. While traditionally our college is free from theft and incidents, please watch out for your belongings and those of others. In order to make this studio a safe place to work, please follow the following recommendations.

- **Make sure that the door is locked at all times when you leave.** Do not leave the room unlocked and unattended at any time, this includes even a short trip such as to the bathroom. Do not block the door open at any time while leaving the studio unattended.

- **Be protective of each other** and each other’s things. This means keeping an eye on strangers or students from other classes that may come into the room for whatever reason. If you see anyone that you do not recognize in the studio, please address them.

- **Keep track of your lab key.** When all the students have signed the studio use policy agreement, you will be given the opportunity to obtain a key to your lab for 24 hour access from the key shop. You must retain the key and return it at the end of the quarter to the key shop, or there will be a charge against your account.

**Studio Cleanliness**

You are responsible for cleaning your work area(s) at the end of each class period and at the end of each evening session before you leave. Litter will be placed in trash receptacles in the studio or hallways. Items for recycling will be placed in appropriate containers marked as such. Store your materials on lab shelving or in CAED student lockers in building 05 hallway. If you leave your drawing board in class, it must be stored away from the desk and sink or tack-up wall areas. You will also be expected to clean the lab at the end of the quarter, such that no materials or models are left in the labs.

**Personal Safety and Health**

You will be making a variety of projects in your assignments that require use of tools and equipment in the studio, in the shop, and at your dorm/apt room that require your focused attention. The sharps of your desk set- especially the mat and ‘xacto’ knives require you to be aware of hand and finger position. The studios have small first aid kits. Injuries may require a visit to the health center and perhaps emergency room- so please be cautious. We will also be using the CAED shop in assignments beginning this quarter. We will have special sessions you must attend on shop safety, and a series of small assignments to ease you into the use of the shop. It is especially critical to be aware of personal safety at the shop- protective eye wear, hand and body positions, and remember material and device relations/actions/forces have implications to others in that setting. When working in the studio or outside studio make every attempt to work within a group. Do not work in the studio alone at night.

Your attentiveness is partially a result of your health- especially the amount of sleep you allow and possibly your diet. Make every attempt to develop a disciplined work habit that includes 7-8 hours of sleep and efficient use of your time. Please avoid long periods without having something to eat as you ability to focus and act is also affected by diet.

**Time**

Cal Poly administration suggests 3 hours per class unit average outside of class. If you are carrying 16 units that is 16 hours in class + 48 hours outside = 64 hours/week on average. Studio work may frequently exceed that. Being a full time Cal Poly student, and especially a design student, is a full time job, and perhaps far more work than you encountered in your high school studies. This means that you must use your time here efficiently. Assignments are designed and scheduled with the goal of requiring hours of outside work between classes, including weekends. You may anticipate additional hours of work required preceding project due dates.

The specific quantity of time required to complete a project will depend partly on the effort and thought that you have put into the preliminaries leading up to the final presentation. Each of you must decide when and how much time to put into a project.
Consistent and steady daily work will improve your ability to develop presentations that satisfy you and can be completed without other components of your life suffering.

**Your Work Space Away from Studio**

The studios for Beginning Design are 'hot labs', so two sessions of students will use each of the four lab spaces. During the studio times the labs are for the use of the class in session. You will be issued studio keys, and after class hours, you are welcome to use the studios on a first-come-first-served basis. You may need an alternate place to work outside of class that is supportive of accurate drawing and making. The important thing is to create a comfortable and functional place to do your work. The following items would constitute desirable components of that work space: Work Table: A surface larger than your drawing board to provide layout surface. Light: Adjustable counterpoise light (with incandescent bulb) with arms that permit it to be positioned over the specific area of work. Comfortable chair or stool: Do not underestimate the value of a chair that properly supports your back. Push pins and tack surface: This allows you to pin up your work for display, reference or examination. Computer Station: Be sure that there is no glare on the computer screen. This can be best accomplished by facing the screen toward a dimly lit and/or darker surface. The screen should be placed at arms length with its angle and height set so that your head is at a comfortable angle. Working at the computer requires a comfortable chair that provides good lower back support.

**Evaluation/Grading**

Evaluation and grading will be holistic, but also based on a combination of attendance, participation in processes, demonstration of skills, project craft, and design in weighted individual lab assignments and sequences. In general, the assignments are weighted with increasing value as the quarter proceeds, with a suggested upside weighting of:
- project sequence 1: 15%,
- project sequence 2: 25%,
- project sequence 3: 35%,
- attendance/participation 10%,
- portfolio/archive: 7%,
- weekly drawings: 8%.

However, this is not simply additive: failure to execute ANY individual project or complete any sequence, and/or lack of attendance and/or effort may also entail a larger possible larger downside component to grading: possible reduction by letter grade[s] or failure.

**Attendance**

For a 4-unit course, you may not miss more than the equivalent of 4 unexcused class-hours (one full day of class) without receiving a substantially lowered or even failing grade. Additionally, falling asleep in class, disruptive or apathetic behavior, or giving the impression that you failed to adequately prepare for the day’s class will be counted against you as an absence: to attend denotes presence - listening or paying close attention to something - if you’re absent in mind, you might as well be absent in body.

Attendance at reviews is a crucial aspect of the design education. Missing a review means that you are missing valuable criticism of your work that cannot be made up. An unexcused absence from a review will result in an incomplete grade for that project and will adversely affect the grade for the course.

Given below are the University’s suggestions for “Excusable” reasons (Campus Administrative Policies, Section 485.2).

To maintain uniformity, it is suggested that the instructors consider the following “Excusable” reasons for allowing students to make up missed work:
- Illness with a doctor’s statement.
- Serious illness or death of close relatives.
- Active participation in university events.
  - A statement from the adviser involved, certifying the student was actively participating in a recognized required university event.
- Field Trips.
- Religious Holidays.
- Selective Service and Military reasons.

**Active Participation**

This list of expectations outlines the necessities of successfully engaging in the studio environment as an active participant. These criteria can affect your final grade up to a full letter.

process - ideas and concepts of in-progress work will be communicated through sketches and preliminary drawings and models. Development through revision of the schemes is a necessity.

commitment - you will work during and show up to class on time, or alert your instructor if you cannot do either.

self-motivation - you will consistently work without hesitation and without being told to do so.

openness - you will be ready to participate by exchanging information, ideas and discoveries with the class.

curiosity - you will draw, sketch, write and ask questions during class meetings and reviews.

risk taking - you will push yourself and experiment with ideas.

involvement - you will discuss your work with your studio mates, especially after hours.

respect - you will respect the work, property and beliefs (be they architectural, musical, or religious) of your studio mates.

**Completion**

Project Completion recognizes that time is an important element in the design process and reflects your skill at managing it to meet deadlines.

High quality work is on time and complete. Projects are due as specified on individual assignments or as modified as noticed by the professor.

Projects completed late will have their project grade reduced by one letter grade (e.g. an “A” will become a “A-“).

Projects later than 48 hours, or more than one class meeting, will have their grade reduced by two grades (e.g. an “A” will...
become a "B".

Project Quality
The quality level of your response to the assigned projects will determine your basic grade for the quarter. Projects address a number of issues and provide an opportunity for you to demonstrate your understanding of the course content, mastery of skills, problem solving/thinking capability and creativity. The projects will be a week or more in length and have multiple assignments associated with them.

Craft
Craft evaluates both the skill and understanding that are required to communicate ideas and is concerned with the quality of the visual communication and construction in its use of materials, details of components, and overall impression.

The early stages of the design process are executed in a sketch form (both study drawings and study models). The objects you make during this period will be tentative and revisable. Lines will be loose and planes of chipboard will be pulled apart. As you clarify your ideas, your drawings and models should reflect this by becoming more precise to communicate your intentions. This is not to say there is a distinction between “study” models and drawings and “presentation” work. Each revision / iteration of your work should reflect advancements and refinements of the design.

The closer you come to completing the project, the more carefully crafted your design documents should be. Exploration of ideas will not be halted in order to create presentation quality objects. Any presentation of objects will be considered a snapshot in time, a frozen moment in which we can look at your design process. [Note: you should photographically archive each generation / iteration in the development of your work- see below] Work with the assumption that everything you make may be displayed in public at any point in its development as well as at the end of the quarter.

Although careful craft is important, the quality of your ideas (or lack thereof) will be apparent in the objects you create. Poor craft is analogous to inarticulate speech: one may be saying something interesting, but no one can get past the poor use of language to really understand it.

It is not expected that all drawings and models executed in this studio should be of museum quality. Gaps, smudges and other inaccuracies are inevitable, and in the short time frame of the quarter system, it is necessary to maintain forward momentum in order to advance ideas and meet deadlines. However, when craft is so poor that it detracts from the project (pieces falling off, Plexiglas badly stained, forms not square that are meant to be, etc.) the grade for that project will be adversely affected.

Everything you do is a reflection of design research. Care (or lack of care) will be in evidence and rewarded accordingly.

Examples of Craft (Skill)
Quality Craft:
- adds value to the presentation— it supports perceived and intended quality.
- shows no unintended dirt, glue, marks
- exhibits no ragged edges—cuts are smooth
- will not deform, discolor or come apart

Quality Hand Technical drawing:
- are consistent and articulate in line style, width and density throughout their length
- strokes meet precisely and consistently
- techniques and scale appropriate and exhibit control of the media
- proportions and perspective look correct.
- values range from very light to very dark
- value changes have meaning; communicate sun, shade and shadow conditions or communicate surface change and orientation

colors composed of a rich mixture of many colors, beyond the supplied marker/watercolor/pencil 'basic' set.
- create a clear and strong illusion of three-dimensional form, space and/or depth on two-dimensional surfaces.

Examples of Craft (Skill- continued)
Quality Hand Lettering:
- verticals are vertical and horizontals are horizontal or consistent
- letters are the same height and consistently spaced; letter strokes are consistent in weight and have strong ends

Digital Craft:
- efficiently and correctly employs the capabilities of the programs being used and exhibits an understanding of their implications.
- files and folders provided as specified and logically and systematically named and organized to support recognition by others
- files saved in appropriate format, resolution and dimensions
- output is of high quality and construction
- layers created as specified and logically and systematically named and organized to support recognition by others
- layers contain corresponding content and qualities appropriately set with unused layers removed

Digital Precision Elements:
- constructed as specified
- faces, edges and points align or coincide as intended
- spacing and dimensions are consistent
- guides employed to support precision
- elements kept within page and/or margins and extraneous elements removed
- in-process and completed work contained files may be opened on the studio or faculty computers for review.
Design
The demonstration of your understanding and creativity is part of the evaluation of every assignment. Design recognizes the effort required to generate and develop ideas and is concerned with conceptual understanding and the generation of appropriate, inclusive, thoughtful, aesthetic and creative responses to the project. It is concerned with both the overall ideas and their development and extension into the details.

- exhibits an understanding and employment of previously learned concepts.
- addresses all problem issues and requirements (constraints), and goals.
- exhibits an understanding and synthesis of problem issues, goals, facts and requirements.
- creates new and meaningful relationships between problem elements.
- creates clear and appropriate patterns, hierarchies and contrasts that support intentions.
- exhibits a clear organizational concept that affects the relationships between and development of all elements.
- exhibits a strong expressive mood or feeling.
- exhibits a clear experientially pleasing quality that communicates on a poetic level.

Letter Grading
In the design studio, while there is often no objective right or wrong answer, criteria must be used to assess the work. Curiosity, your use of time and process, rigor (of ideas or actions), and critical thought are important along with the completed assigned projects. Project statements outline minimum requirements and work above and beyond is expected. It is the experience of the department that the majority of assignments typically receive B or C grades. Grading of work for the quarter will be formatted with the standard collegiate grading system as follows:

A  Excelling in design and representation and greatly exceeds minimums.
    Provides insight into and development of the project’s issues and concepts as initiated in project statements and prompts.
    Creative and imaginative, showing development in lateral thinking
    It adds to our understanding of the possibilities framed by the project’s issues and constraints
    Exhibits a clear and appropriate concept that synthesizes all project issues and requirements
    It is a concept that has been developed at all levels from initial sketches or diagrams to the final work itself.
    Exhibits exemplary craft and care- craft that adds perceived value to the ideas being presented
    A positive intuitive response to the whole, going beyond the expected.

B  Good work; above average skills in design and representation including extra efforts
    Demonstrates a clear understanding of the many issues and concepts being addressed
    Exhibits a well-defined concept that addresses the more important project issues and constraints
    Manifests a high level of craft and care. It is a project response that exhibits a creative direction

C  Average work; work is completed, and satisfies all requirements of the project statement
    Demonstrates some understanding of the issues and concepts being addressed
    Exhibits an adequate level of craft and care

D  Poor; below average achievement; less than satisfactory; not meeting minimums; poor use of studio time and/or insubstantial process;
    poor craft, or lack of attainment of or demonstration of satisfactory level of skills.

F  Failure; unacceptable achievement in design and representation and/or blatant disregard for project requirements or studio policies

Work Documentation
For each project, you will be archiving the actual physical 2D and 3D work, photographing the models, and scanning the drawings for your archive. The burden of proof of your work is on your shoulders. This is a practice that should become habit for you throughout your years in school. Files should be kept for portfolio purposes as a way of showing your development, design process and skills. This documentation should also include your design process including sketches, models, and drawings. Images should be of high quality; scans should be a minimum of 200 dpi and the photographs should be high resolution. These images should be labeled as mentioned above, and organized in folders by project. Photographs of models should be taken in a setting with a neutral background. We would advise using a white, grey, or black sheet as a background, and using purposeful lighting to accentuate model characteristics. You may wish to reserve time in the CAED photo lab, or learn how to set up an appropriate place in the studio or dorm.

Archive and Portfolio
Students must digitally document and archive their process and solutions of the projects for the quarter, and produce a digital portfolio and print copy of the digital portfolio of the quarters work for the faculty. Each project/assignment will have a written Project Statement that will specify the requirements of the project and documentation. The student’s printed quarterly portfolio and digital archive [including digital copy of portfolio] will be submitted according to the Calendar. Failure to document your work as specified and submit the documentation by the date and time specified will result in your quarter grade being reduced by letter grade.

You must get in the habit of archiving your work for a variety of professional and personal reasons, from employment, graduate school, challenging a grade, or simply recalling your progress and growth. Your personal archive should have multiple back-ups such as residing on your personal computer hard drive and back-up hard drive[s] and/or remote servers.

CD’s should be named when burning with the course number and your Cal Poly alias (e.g., ARCH131_jdoe). On that CD, you should make folders to place files pertaining to the process and final materials submitted. For example, project 1 might have folders such as 01_scans01_photos01_process, etc. File and folder names not specified must be logical and facilitate recognition of their
content.
For example: [poor choice]: view_1 (not specific enough) [better]: jdoe_layout
Files and folders not named and organized as specified above and in the project statement will not be accepted and your project will be considered late. The CD may not contain files or folders that are not part of class assignments. No CDs will be returned to you.

Final CD Documentation
You will be archiving digital and photographic documentation for each project. Final archive CD’s are to be placed into a white paper CD sleeve and should have affixed on the cd a designed cd label printed with, at a minimum, student name, academic term, and professor’s name. Printable or lightscribe CDs are also acceptable. CDs turned in without these requirements met will not be accepted and the project will be considered late.

Portfolio and Digital Formatting: From your archive you will select and compose a summary portfolio demonstrating each project’s findings [we will go over this in more depth later]. The digital formatting design is as much a part of the presentation as any physical evidence. Just as you would organize a physical presentation you must organize the digital presentation. Similarly, the printed portfolio must take into account choices of paper, binding, page sequence, written description, and space on the page.

E-portfolios
The Architecture Department is moving toward a web based student portfolio. Details for this year are still incomplete as we begin the academic year. Your complete archive of your work is the basis of what you [at some point in time] will selectively draw from that new digital document. Your e-portfolio materials submitted as your Cal Poly e-portfolio will be used in future for a variety of situations such as NAAB Accreditation and accessible to the faculty as a whole.

Retention of Work
Selected student work and projects will be retained by the faculty as examples for future classes, displays, or accreditation indefinitely. The Department may use the work to publicize the program. The work may be used in developing materials needed for our accreditation reviews. The faculty member may use the work to document their teaching, including research on teaching.

Project Context and Content

Studio Based Projects
Projects will explore two- and three-dimensional design issues, concepts and processes through the design of things and visual communication.
Projects will introduce the concepts, methods and skills associated with freehand sketching, multiview, paraline, and perspective pictorial systems executed by hand, physical modeling, and digital origination and modification.

Shop Based Projects
Shop safety and equipment operation demonstrations and the construction of small-scale things that demonstrate understanding of safety and equipment usage, and development of visual, spatial, surface, and haptic, sense and concepts through direct engagement with materials and transformative processes. We will begin week three, and continue in winter and spring quarters to expand your design capabilities.

Field Trips
We will utilize local and regional opportunities to provide out of lab venues for observing, understanding and recording via journaling, sketching, scale and measurement, diagramming, and photography throughout the year, beginning locally in fall. This exposes you to historic and contemporary examples of urban, suburban and rural spaces, construction, materiality and commonplace occupation and use.

Group Projects
Some projects or aspects of projects will require your interaction with peers in assigned groups. When you work in a group you are responsible for the quality of the work of the entire group, and expected to give significant support to the team effort. Communication within the group on how and when work is explored and executed is critical. Exchange e-mail and phone contact information and work as a unit, as it frequently done in the professions. You may be asked to execute anonymous peer reviews at the end of group projects to reflect on your peer’s contributions.

Required Texts
The following four texts will be used all year and will constitute the only books we will ask you to purchase for ARCH 131/132/133.
You are free to obtain them online as you see fit. Additional books are required for architecture students in ARCH 101.

101 Things I Learned in Architecture School (Hardcover)
by Matthew Frederick
Publisher: The MIT Press (September 30, 2007)

Universal Traveler
by James Bagnall and Don Koberg
Publisher: AXZO Press; 3rd edition
**Recommended Text:**

*The Nature & Aesthetics of Design* (Paperback)
by David Pye
Publisher: A&C Black (June 1, 2008)

**Tools**

**Digital Tools**
A laptop and software are required for studio coursework. Please see the attached summary at:
http://www.arch.calpoly.edu/prospective/computer-requirements.html

All undergraduate students entering the architecture program must have a notebook computer. The Architecture Department facilities are Macintosh-oriented. However, all required software is available for both platforms and either a Mac or Windows machine will meet your needs. If you are very experienced on a platform, it is generally recommended that you stay on that platform. Also consider that both Mac and Windows operating systems can be run simultaneously on the new Intel based Macs. Please see the attached summary at: http://www.arch.calpoly.edu/prospective/computer-requirements.html

The Architecture Department expects that all entering students already have basic computing knowledge and skills. These include facility in the use of word-processing and spreadsheet applications and the ability to use the Internet for email and browsing purposes.

**Notebook Computer Specifications**

<table>
<thead>
<tr>
<th>Device</th>
<th>Apple</th>
<th>Windows-Based</th>
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</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel Core i7, 2.2 GHz (minimum)</td>
<td>Intel Core i7, 2.2 GHz (minimum)</td>
</tr>
<tr>
<td>Hard Drive</td>
<td>500 GB Internal (minimum)</td>
<td>500 GB Internal (minimum)</td>
</tr>
<tr>
<td>RAM</td>
<td>6 GB RAM (minimum)</td>
<td>6 GB RAM (minimum)</td>
</tr>
<tr>
<td>Display</td>
<td>15.4” display, 1440 x 900 resolution</td>
<td>~15” display, 1366 x 768 (minimum, higher is better)</td>
</tr>
<tr>
<td>Graphics Card</td>
<td>NVIDIA GeForce GT</td>
<td>NVIDIA or better</td>
</tr>
<tr>
<td>Operating System</td>
<td>OS X 7.4 or newer</td>
<td>Windows 7, 64 bit (Vista is not recommended)</td>
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</tbody>
</table>

**Peripherals**

- **Mouse**
- **USB flash drive, 4 GB or larger**
- **All-In-One Color Inkjet Printer & Scanner (Canon or Epson recommended)**
- **Printer Paper: 24 lb (minimum) bright white premium inkjet paper, 500 sheets**
- **External Hard Drive, 1 TB (wireless back-up capability is a plus)**
- **Digital Camera (portable camera with 10 MP or greater – your cell phone is probably not good enough- see below)**

**Software**

Software is available at discount prices at the Cal Poly El Corral Bookstore:

| Graphics | Adobe CS 6 Standard (Illustrator, Photoshop, InDesign, Acrobat Pro) | $249 to $449 |
| 3D Modeling | Rhino | Varies |
| Word Processing | Microsoft Office (Word, Excel, PowerPoint) or Equivalent | $99 to $140 |
Presentation | Keynote or PowerPoint | Varies
Video | iMovie, Windows Movie Maker, or Better | Varies
Editing | Your choice | Varies
Anti-virus | Your choice | Varies
Cloud | Dropbox or Equivalent | Free
Storage | | |

**Analog Tools**

The architecture department web site has a number of items for studio use we are requiring you purchase. Many of these items will be used throughout your academic career here and are investments. The Cal Poly El Corral bookstore will have the listed materials in a kit, but you are free to bring similar from your own sources, including online. The department list below will be here: [http://www.arch.calpoly.edu/prospective/equipment-materials.html](http://www.arch.calpoly.edu/prospective/equipment-materials.html)

**Drawing Equipment & Materials**

The following drawing equipment and materials will be needed in first year design and drawing studios. The drawing equipment should last for years, and will be used in many architecture courses. Purchase ones that feel good to you and are of the best quality that you can reasonably afford. The brands are only provided as references.

The Cal Poly University Store has the listed materials in a kit, but you are free to bring similar from your own sources, including online.

**Drafting Tools & Supplies**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>24”x36” Portable Drafting Board with Parallel Bar</td>
<td>(Mayline)</td>
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<tr>
<td>12” ARCHITECTURAL Triangular Scale</td>
<td></td>
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<tr>
<td>Erasing Shield</td>
<td></td>
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<tr>
<td>Metal Pencil Sharpener (Staedtler 510 or equivalent)</td>
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<tr>
<td>Alvin 295 Parallel Glider (10” minimum)</td>
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<tr>
<td>Drafting Tape or Drafting Dots</td>
<td></td>
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<tr>
<td>19”x24” Bristol Board, 15 sheets (minimum) pad, smooth</td>
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<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>30°/60° Drafting Triangle, 6”, with ink edge</td>
<td></td>
</tr>
<tr>
<td>45°/45° Drafting Triangle, 6” &amp; 3”, with ink edge</td>
<td></td>
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<tr>
<td>Circle Compass</td>
<td></td>
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<tr>
<td>Erasers: white vinyl, and kneaded</td>
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<tr>
<td>24” Drafting Vellum, 100 yard roll, 1000H, plain Tracing Paper Roll (12” min, white)</td>
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**Model Making Tools & Supplies**

<table>
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<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Aluminum Straight Edge, 18” with cork backing</td>
<td></td>
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<tr>
<td>Precision Knife with #11 blades (Xacto or Excel)</td>
<td></td>
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<tr>
<td>Snap-off Knife (Olfa or Xacto)</td>
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<tr>
<td>Scissors</td>
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<tr>
<td>Needle-Nose Pliers</td>
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<tr>
<td>White Glue (Sobo, Tacky, or equivalent)</td>
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<tr>
<td>Bass Wood in various square and round profiles</td>
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<th>Item</th>
<th>Description</th>
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<tr>
<td>Razor Saw &amp; Mitre Box set (Excel or Xacto)</td>
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<tr>
<td>100 replacement #11 blades</td>
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<tr>
<td>12” Self-Healing Cutting Mat</td>
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<tr>
<td>Hot Glue Gun (any size) &amp; extra Glue Sticks</td>
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<tr>
<td>Rubber Cement</td>
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<tr>
<td>Screw Driver, Phillips and Flathead</td>
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<tr>
<td>Cordless Drill (recommended- NOT required- see below)</td>
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**Pens, Pencils & Drawing Supplies**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>Pigma Micron Pens (black): 005, 01, 03, 05, 08 widths</td>
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<tr>
<td>Pentel Sign Pen (black)</td>
<td></td>
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<tr>
<td>Drafting Pencils: 4H, 2H, F, H, HB, 3B, 6B hardnesses</td>
<td></td>
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<tr>
<td>Charcoal Stick, soft</td>
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<tr>
<td>Waterbrush Pen (Kuretake or equivalent), 2 min</td>
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<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>Prismacolor Marker (black, and warm gray 40%)</td>
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<tr>
<td>Prismacolor Pencils: White, Black, French Gray 50%, 90%, Warm Gray 50%, Sepia, Crimson, Goldenrod, Maize, Cream, Apple, Cerulean, Sketchbook (min. 5” x 8” to max. 9” x 12”- carry it at all times)</td>
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**Additional Tools**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>25’ (minimum) Tape Measure</td>
<td></td>
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<tr>
<td>Drawing Storage Tube OR Carry All Art Bag w/ zipper</td>
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</tr>
<tr>
<td>Large Art Bin or Fishing Tackle Box (to carry these tools)</td>
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</table>

Safety Glasses or Goggles

**Material and Supply Sources**

Most of the art materials come from either the University Store in the University Union or:

Art Central Art Supply & Gallery 1329 Monterey Street
[http://artcentralсло.wordpress.com/](http://artcentralсло.wordpress.com/)

Architect’s Corner (new)
Michaels, which is a craft chain, and south of town by the airport:
http://locations.michaels.com/CA/SAN-LUIS-OBISPO/

Aaron Brothers, on the west end of Higuera street downtown [on-line coupons if you sign up for them].
http://www.aaronbrothers.com/

Some online places you may find competitive pricing [no endorsement, just information]:
http://www.jerrysartarama.com/
http://www.dickblick.com/
http://www.utrechtart.com/

Hardware and Lumber Sources

Miner’s Ace Hardware

Home Depot

Hayward Lumber

Mayan Lumber and Lowe’s in Paso Robles
**Fall 2015 Calendar**  
Project initiation/conclusion/exhibition dates are tentative and subject to change; additional workshops TBA. Additional important due dates are included on individual project descriptions; projects have sub-component deadlines TBA.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 M 9.21</td>
<td>Introduce syllabus and ourselves. <strong>Assign Project 1</strong></td>
</tr>
<tr>
<td>T 9.22</td>
<td>Common Hour: Gestalt and Diagrams</td>
</tr>
<tr>
<td>W 9.23</td>
<td>Project 1 Pinup and Discussion. <strong>Assign Project 1.2</strong></td>
</tr>
<tr>
<td>Th 9.24</td>
<td>Demonstration: Adobe InDesign</td>
</tr>
<tr>
<td>F 9.25</td>
<td>1.2 Pinup [concurrent shop safety rotations begin]</td>
</tr>
<tr>
<td>2 M 9.28</td>
<td>Pinup, Assign Project 2 [continuing shop safety rotations]</td>
</tr>
<tr>
<td>T 9.29</td>
<td>Common Hour: Language of Drawing</td>
</tr>
<tr>
<td>W 9.30</td>
<td>Discussion + Development [continuing shop safety rotations]</td>
</tr>
<tr>
<td>Th 10.01</td>
<td>Demonstration: Adobe InDesign</td>
</tr>
<tr>
<td>F 10.02</td>
<td>Project 2 Pinup <strong>Assign Project 3</strong> [continuing shop safety rotations]</td>
</tr>
<tr>
<td>3 M 10.05</td>
<td>Pinup [continuing shop safety rotations]</td>
</tr>
<tr>
<td>T 10.06</td>
<td>Common Hour: Language of Models</td>
</tr>
<tr>
<td>W 10.07</td>
<td>Discussion + Development [continuing shop safety rotations]</td>
</tr>
<tr>
<td>Th 10.08</td>
<td>Demonstration: Adobe InDesign</td>
</tr>
<tr>
<td>F 10.09</td>
<td><strong>Assign project 3.2</strong> [continuing shop safety rotations]</td>
</tr>
<tr>
<td>4 M 10.12</td>
<td>Jointery Project assigned</td>
</tr>
<tr>
<td>T 10.13</td>
<td>Common Hour: Ways of Seeing</td>
</tr>
<tr>
<td>W 10.14</td>
<td>Project 3 In-progress review</td>
</tr>
<tr>
<td>Th 10.15</td>
<td>Demonstration: Adobe Photoshop</td>
</tr>
<tr>
<td>F 10.16</td>
<td>Discussion + Development</td>
</tr>
<tr>
<td>5 M 10.19</td>
<td>Discussion + Development</td>
</tr>
<tr>
<td>T 10.20</td>
<td>Common Hour: Language of Drawing: Orthographics</td>
</tr>
<tr>
<td>W 10.21</td>
<td>Project 3 Final Due</td>
</tr>
<tr>
<td>Th 10.22</td>
<td>Demonstration: Watercolor</td>
</tr>
<tr>
<td>F 10.25</td>
<td><strong>First Show—Parent’s Weekend</strong></td>
</tr>
<tr>
<td>Su 10.25</td>
<td><strong>Project 4 Working Field Trip</strong> [details to follow]</td>
</tr>
<tr>
<td>6 M 10.26</td>
<td>Group Coordination</td>
</tr>
<tr>
<td>T 10.27</td>
<td>Common Hour: Measuring and Marking</td>
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<tr>
<td>W 10.28</td>
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<tr>
<td>Th 10.29</td>
<td>Demonstration: TBD</td>
</tr>
<tr>
<td>F 10.30</td>
<td><strong>Assign 4.1</strong></td>
</tr>
<tr>
<td>7 M 11.02</td>
<td>Preliminary model due</td>
</tr>
<tr>
<td>T 11.03</td>
<td>Common Hour: Mapping</td>
</tr>
<tr>
<td>W 11.04</td>
<td>Discussion + Development</td>
</tr>
<tr>
<td>Th 11.05</td>
<td>Demonstration: TBD</td>
</tr>
<tr>
<td>F 11.06</td>
<td>[evening: Vellum Competition Judging and Opening]</td>
</tr>
<tr>
<td>8 M 11.09</td>
<td>PInup</td>
</tr>
<tr>
<td>T 11.10</td>
<td>Common Hour: Mapping</td>
</tr>
<tr>
<td>W 11.11</td>
<td><strong>No Classes- Veteran’s Day Holiday</strong></td>
</tr>
<tr>
<td>Th 11.12</td>
<td>Project 4 final requirements</td>
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<tr>
<td>F 11.13</td>
<td></td>
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<tr>
<td>9 M 11.16</td>
<td></td>
</tr>
<tr>
<td>T 11.17</td>
<td>Common Hour: Portfolios</td>
</tr>
<tr>
<td>W 11.18</td>
<td>Common Hour: Portfolios</td>
</tr>
<tr>
<td>Th 11.19</td>
<td>Discussion + Development</td>
</tr>
<tr>
<td>F 11.20</td>
<td>Discussion + Development</td>
</tr>
<tr>
<td>10 M 11.23</td>
<td><strong>Project 4 Exhibition @ Architecture Bldg</strong></td>
</tr>
<tr>
<td>T 11.24</td>
<td>Common Hour: The Nature and Aesthetics of Gravy</td>
</tr>
<tr>
<td>W 11.25</td>
<td><strong>No Class Thanksgiving Holiday</strong></td>
</tr>
<tr>
<td>F 11.27</td>
<td><strong>No Classes Thanksgiving Holiday</strong></td>
</tr>
<tr>
<td>11 M 11.30</td>
<td>Portfolio Work</td>
</tr>
<tr>
<td>T 12.01</td>
<td>Common Hour: Quarter Wrap-up</td>
</tr>
<tr>
<td>W 12.02</td>
<td><strong>Project 0: Exhibition @ Architecture Bldg</strong></td>
</tr>
<tr>
<td>Th 12.03</td>
<td>Portfolio Work</td>
</tr>
<tr>
<td>F 11.30</td>
<td>Portfolio Work</td>
</tr>
</tbody>
</table>

**Finals Week** Submission of digital portfolio and archive with hardcopy Portfolio [exact due date and content vary with instructor].
Some Internet Places to Start

What's Up [it’s mind-boggling how much content is out there, but some reliable sources to return to]:

Bustler: competitions and more: http://www.bustler.net/

DeZeen: http://www.dezeen.com/

Arch Daily: http://www.archdaily.com/

Daily Tonic: http://www.dailytonic.com/

Archidose: http://www.archidose.org

Architecture Week: http://www.architectureweek.com/

Architect: http://architect.com/

Dwell On-line: http://www.dwell.com/

A great site for firm portfolios and profiles: http://www.american-architects.com/index.php?seite=usa_index_us

Issues and Provocation: http://www.ted.com/

Metropolis Magazine: http://www.metropolismag.com/


Pros [American Institute of Architects is layered: national, state and local/region; most have their own annual award online sites]:

AIA Central Coast Chapter: http://www.aiacentralcoast.org/index.html

AIA Los Angeles: http://www.aiakos.org/

AIA San Francisco: http://www.aiafant.org/

AIA San Diego: http://www.aiasandiego.org/

AIA California Council: http://www.aiacc.org/cgi-bin/htmlcgi/004118.2.1356593449259472

AIA National: http://www.aia.org/

Peers Lectures [you are welcome to form your own road trip!]:

California College of the Arts (CCA; SF) http://www.wattis.org/index.php


USC (LA): http://arch.usc.edu/Calendar/Lectures

On Energy and Architecture:

Transsolar, a climate consulting firm that applies advanced thinking to some of the worlds most progressive firms:

http://www.transsolar.com/

William McDonough, who coined the idea of buildings be considered ‘cradle to cradle’: http://www.mcdonough.com/full.htm

Local Sustainability Advocacy Group, SLO Green Build: http://www.slogreenbuild.org/cm/Home.html

One of our own regional experts, Marilyn Farmer’s GreenPages site: http://www.greenbuildingpages.com/

Austin Energy’s On-line Sourcebook:


Materials:

Transmaterial: http://transmaterial.net/


Architonic: http://www.architonic.com/

A Cross-Section of Architecture and Architects

Pritzker Prize (the ‘Nobel Prize’ for architects): http://www.pritzkerprize.com/

Mies van der Rohe Award (highest European honor): http://www.miesbcn.com/en/award.html

Royal Institute of British Architects James Stirling Prize (highest UK honor): http://ribastirlingprize.architecture.com/

Aga Khan Award (work in communities with significant Moslem presence): http://www.akdn.org/architecture/

David Baker (SF): http://www.dbarchitect.com/

Peter Pfau (SF): http://www.pfauarchitect.com/indexf.html

Greg Lynn (LA): http://www.glform.com/

Marmol-Radziner (LA): http://www.marmol-radziner.com/

Morphosis (LA): http://www.morphosis.net

Lorcan O’Herlihy (LA): http://www.loharchitects.com/

Pugh + Scarpa (LA): http://www.pugh-scarpa.com/

ROTO (LA): http://www.rotoark.com/

Steven Holl (NYC): http://www.stevenholl.com/

Studio Daniel Libeskind (NYC/ Zurich/Milan): http://daniel-libeskind.com/

Bernard Tschumi (NYC/Paris): http://tschumi.com/

BIG (NYC/Copenhagen): http://www.big.dk/#projects

Snøhetta (NYC/Oslo): http://www.snøhetta.no/

OMA/Rem Koolhaas (NYC/Amsterdam/Beijing): http://oma.eu/


Co-op Himmelblau/Wolf Prix (Los Angeles/ Vienna): http://www.coop-himmelblau.at/


Shigeru Ban (Tokyo/Paris): http://www.shigerubanarchitects.com/