

Dear incoming architecture and architectural engineering students,

Welcome to the College of Architecture and Environmental Design! You are beginning a new adventure in thinking and making. And you are beginning a life-long learning process for two rewarding and demanding professions. This letter will orient you to some of the principles, tools and logistics of your first year as an Architect or Architectural Engineer.

Over the coming year, you will transition from traditional forms of verbal-linguistic and logical-mathematical learning into visual-spatial and project-based work critical to success for engineers and architects. ARCH 131 (and 132 and 133) will be a major component of this experience, and will typically be referred to as “studio.” Studio refers to both a place- a big, open room with tables for creative work- and a way of learning that is exploratory and experimental. The hours dedicated to studio are a time to develop ideas through thinking, making, and discussion, and an opportunity to grow as an individual creator and as a contributor to the studio collective. The three mutually dependent principles of studio culture at Cal Poly are the cultivation of ideas, the cultivation of community, and the cultivation of respect.

Cultivation of Ideas

Ideas are cultivated through observation, experimentation, questioning, and dialogue. We’ll move across seeing, making, drawing, and other foundational design topics using hand, digital, and shop equipment. All will depend on your willingness to think both abstractly and concretely. Ideas may develop fitfully. Learning will come from success as well as mistakes, which are both productive aspects of the studio experience.

Reflection on your work is essential to developing your ideas. Reflection in studio takes the form of critique, during which your projects will be reviewed publicly and you will discuss your work with peers, instructors or invited guests with expertise in design and professional practice. These conversations will help you understand your work in relationship to ideas circulating within the studio and ideas in the world beyond the studio. Critique is always meant to be constructive.

Cultivation of Community

The experiences of studying and practicing architecture are fundamentally collaborative. Architectural design is not an individual act, but a process in which many experts contribute ideas. You are expected to be thoughtful, skillful collaborators whose shared experiences in design studio parallel professional practice. Learning how to make positive contributions to teams and build productive relationships is essential. These shared experiences also foster a sense of camaraderie amongst students that continues throughout your education. You will find the studio a communal and social form of learning, and you will learn as much from each other as you do from your faculty.

Cultivation of Respect

Each individual is responsible for unique contributions to the studio. We value and support diverse ideas and promote a culture of respect. You are expected to understand the value of ideas divergent from your own.

We expect each of you to take responsibility for your own well-being, which means eating well, getting enough sleep, and managing time efficiently. Have patience with yourself and your peers. Learning often happens at an erratic pace.





You will likely find studio simultaneously exhilarating, exhausting, and meaningful. A year from now you will be the same person, but a person seeing and engaging the world very differently.

Other Courses

Studio will be complemented by EDES 123 and ARCH 101 (for architecture students), as well as your various physics, math and humanities courses. Even though studio will be the most time intensive, these courses are related, and your work will benefit from reflection on their relationships.

EDES 123 - Principles of Environmental Design is an introduction to design and the constructed environment through transdisciplinary, project-based learning, surveying the myriad factors that are considered in the design and construction of all scales of the built environment. You will look at ways that design and construction disciplines communicate graphically and verbally, and investigate the impact of our design decisions on individual self-development, society, health, and natural systems.

ARCH 101- Survey of Architectural Education and Practice is a large lecture taught by our colleague, the Associate Dean, Michael Lucas. You will explore a series of contemporary foundational topics in design and practice meant to complement the studio. The class builds on you continuing your writing skills through descriptive, comparative, creative and illustrated means, but now within the discipline of design.

Faculty

Our faculty comes from varied backgrounds in architecture, architectural engineering, landscape architecture, and urban design. We teach as a coordinated group, share a common syllabus, and model the collegiality we expect you to have with each other. While you will have a primary faculty member assigned to your studio, we are all your professors and you are free to speak to any of us. We try to make the faculty-student relationship open for informal communication to accompany the open-endedness, intensity and complexity of the projects and process. We are here for you in class, and out of class through office hours, and via e-mail. Faculty will have office phone numbers, office hours, and office locations published in the syllabus. You may share any concerns on your progress, your success, or challenges with Academic Associate Dean Michael Lucas as well.

Calendar

We will begin on Thursday, September 22. There is much to accomplish in the 11-week fall term. Generally, we do not recommend trips home on weekends or taking a weekend away except for Thanksgiving. In ARCH 131 we will frequently span project assignments over the weekends, including the November 11 holiday. As designers you will find that studio projects are best explored when you have large undisturbed time blocks- the weekends are perfect for that 'in the zone' kind of thinking.

Mustang Family Weekend

The university has planned Family Weekend from Thursday, October 20 through Sunday, October 23. We will install an exhibit of our work for your friends and families to see. Please encourage your families, as they are able, to come and see evidence of your growth in design.

Thanksgiving

The week of Thanksgiving, November 21-27, is an academic holiday. You may have an assignment for ARCH 101 that can be completed remotely.

Things

Studio and project-based learning requires gear. You will need a computer and software, tools, and assorted materials to execute the projects. A tools & supplies list is



attached to this letter. Please obtain the items listed prior to the start of classes. Most of the supplies are available as a kit from the University store. Their cost is competitive with online suppliers. We have made an effort to pare down this list each year to minimize the initial expense, but we realize that the upfront cost may be sizable. As you assemble your gear, please remember you now have access to student discounts, especially on computers and software. Students that have severe financial limitations should contact their SAS, EOP, or Financial Aid Advisors and may contact one of us privately.

Books (no books)

As much as we love books, we are not requiring you to purchase any for your first year design courses. All required readings and texts will be available online. We estimate this saves you around \$200.

Additional Expenses

You should anticipate the following costs each quarter for model making supplies, printing and other fees.

Supplies: \$100-\$200/quarter

Replacement costs for tool blades, inks, pencils: \$25/quarter

Field Trip Transit/Fees: \$25/quarter

Printing costs: \$150/quarter

Design Village (Spring Quarter): \$90 entry fee

In Closing, some words from Associate Dean Michael Lucas:

so is all this daunting?

haven't worked with tools?

not a computer person?

fear of sketching?

(maybe all the above)

don't worry...really.

it's normal to feel that way,

and we don't expect these skills before you arrive-

that's why you are here

to learn.

we learn within a cooperative and friendly community.

we have a bright group like you come in every year and we move along together.

we will move forward day one.

it is intense,

but would you expect a top ranked school to do any less with you?

On behalf of the first year architecture faculty, welcome. We look forward to meeting you in September.

Emily White

Assistant Professor in Architecture, ARCH 131 coordinator

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TOOLS & SUPPLIES

All supplies are included in the ARCH 131 Class Kit, available from the University Store, unless otherwise noted

Drafting	<ul style="list-style-type: none">Alvin 295 Parallel Glider (10" minimum)12" ARCHITECTURAL Triangular Scale30°/60° Drafting Triangle, 12", with ink edge45°/90° Drafting Triangle, 12", with ink edgeErasing ShieldMetal Pencil Sharpener (Staedtler 510 or equivalent)Circle Compass and Bow Set w/ removable pencil and inking headsDrafting BrushWhite vinyl eraserKneaded eraserDrafting Tape or Drafting Dots 24"Roll Drafting Vellum, 24", 10 yard roll (min), 1000H, plain18"x24" Bristol Board, 15+ sheet pad, vellum finishTracing Paper Roll (12" min, white)Circle Template
Drawing	<ul style="list-style-type: none">Pigma Micron Pens (black): 01 & 05 widthsPrismacolor Marker: BlackPrismacolor Pencils: White, Black, Warm Gray 50%, SepiaDrafting Pencils: 4H, 2H, H, HB, 3B, 6B hardnesses2 Charcoal sticks, softDry cleaning pad12-color Portable Watercolor Set (Windsor & Newton or equivalent – not Crayola)Round watercolor brushWaterbrush Pen (Kuretake or equivalent)
Model-making	<ul style="list-style-type: none">Metal Straight Edge, 24" with cork backing and cutting edgePrecision Knife #1 (Xacto or Excel)Xacto or Excel #11 blades (15 pk minimum, 100 pk recommended)Olfa L-2 snap-off knifeOlfa L-2 replacement bladesScissors18"x24" Self-Healing Cutting MatHot Glue Gun (any size) & Glue SticksNeedle-Nose PliersTacky Glue (Aileen's Quick-dry)Elmer's GlueUHU glustickRazor Saw & Miter Box set (Recommended; not in kit)6" combination square (Recommended; not in kit)
Miscellaneous	<ul style="list-style-type: none">36" Drawing Storage TubeZippered Pouch (to carry supplies in)25' (minimum) Tape MeasureShop Safety GlassesScrew Driver: Phillips and Flathead (not in kit)Sketchbook (sized to carry at all times; not in kit)Cordless Drill (Recommended; not in kit)

Software (not in kit) Adobe Creative Cloud (Photoshop, Illustrator, InDesign and Acrobat)
Rhinoceros 5
Word Processing (Microsoft Office or equivalent)
Presentation (Keynote or Powerpoint)
Video Editing (iMovie, Windows Movie Maker, or equivalent)
Anti-virus as required by university
Note: the CAED tech support team has links to free and student discounted software on their website <http://www.caed.calpoly.edu/techsupport>

Computer and Peripherals (not in kit) Laptop computer, Mac or PC (15" screen is recommended)
Mouse
USB flash drive, 4 GB (min)
All-In-One Color Inkjet Printer & Scanner (recommended, but you can print on campus)
Printer Paper, 24 lb (minimum) bright white premium inkjet paper
External Hard Drive, 1 TB (4TB is a plus; wireless back-up capability is a plus)
Digital Camera (DSLR; recommended)

FREQUENT QUESTIONS

Q: I have heard studio is time intensive- is that true?

A: Yes. You may find you have less 'free time' than many of your peers in other majors. Design involves new ways of thinking, something like learning a language or a musical instrument- time on task leads to proficiency and confidence. You will find the design projects are very open ended with multiple paths to discovery and success. This kind of lateral and creative thinking is critical for both architects and architectural engineers.

Q: Will I have time for intramurals or sports?

A: Time management is a skill you must master to do well in studio. You have to be even more disciplined here due to all your freedom as a collegiate scholar vs. your high school days! Note: If you are an athlete and have meets or tournaments in fall, please notify your instructor on day 1.

Q: Do we need special clothes?

A: In studio you should dress comfortably and know that you may get dirty from pencil, pen, adhesives, etc. When working in the shop, closed toed shoes and safety glasses are required. If you have long hair, you need a way to gather itso the machines don't. Our studios generally do not get especially hot (Mediterranean climate), but can get chilly in our rainy winter (but no snow). We can have 40+ degree temperature swings during any season. Think layers.

Q: Are we expected to bring all these tools and things to class each day?

A: Count on having your sketchbook and pencils to draw with everyday- beyond that we'll tend to tell you what we need in advance. Inevitably you will be working on drawings of various scales, larger photo collages and models, and you will have to figure out how to transport them. We suggest a storage tube for transporting large work and a zipped pouch or tackle box to carry the bulk of your equipment. We'll do some computer work very early on, so having a way to safely transport your computer is critical too. There is limited locker space available.

Q: Does sketchbook need to be hardbound or can it be a pad?

A: Sketchbook may be a pad or spiral bound, but the paper quality is more critical- it should NOT be newsprint. We will also ask you to scan some of your sketching for individual assignments and you end-of-quarter portfolio, so the ability to get them scanned or out of the sketch book (cut or via perforations) is something to consider.

Q: I already have some triangles and scales that are metric- will they be satisfactory?

A: All hand drafting and modeling will be in Imperial Units (aka US Customary Units aka feet and inches) across architectural scales, so having an Imperial units based architectural scale is essential. As a side note: you don't have to have any drafting background for day one- we will cross that bridge (among many) later this fall.

Q: Some tools are 'recommended', like the dslr camera, what if we don't have them?

A: The CAED Support Shop has a certain number of tools for use- in winter you may find students exceed the capacity they have available. The university has two 'take-out' windows for short duration loans of digital equipment (see below). Sometimes your peers will loan their cameras or other tools for the assignments, or you can share a 'take-out'. Some of the early projects will focus on images, and the quality of the image is important. Cameras are only as good as the lens, and a dslr is usually a great base line for quality. A phone camera has many uses, and has been getting more sophisticated optics, but will not meet our level of expectation.

Media distribution services: <http://classtech.calpoly.edu/equipment-checkout>

Q: Will we use Sketch-Up or Autocad?

A: Although Sketch-Up is not a bad learning tool, it has limited capability when it comes to formal expression. Software tends to fall into types for 1) design and 2) development and production. We are using the design side first, specifically the software Rhinoceros, as it has a flexibility and capability the latter do not. Autocad and its companion Revit are invaluable to precision construction documentation, and you will likely encounter them in future studios.

Q: Is a 17" laptop preferable to a 15" model? How about 13"? Is a desktop model ok?

A: You may choose a size that is comfortable for you. 13" is a little small for detailed models and images. 17" is heavy and doesn't always fit comfortably on lecture desks. Get something that you are able/willing to always carry. Desktop computers are not allowed in first-year; however, many students choose to have a desktop and/or additional monitors in later years, when each student has a dedicated desk.

Q: What if I have an older version of the Adobe products?

A: Each new version has more capacities and may work better with current operating systems. We will tend to teach to the capacities in the newer version and we can't always troubleshoot issues with older software. Adobe Cloud's student subscription is cost effective and includes automatic updates.

Q: I'm an ARCE student, do I really need all of the tools?

A: ARCE students do very little required hand drafting after their first-year. Therefore, supplies may be purchased used or borrowed from past students. However, EVERY student must have ALL of the required supplies by the first week of class.

Q: Can we get the equipment and supplies in San Luis Obispo?

A: Note that San Luis Obispo is a small town with limited art supply vendors. Most materials come from Cal Poly's University Store or Beverly's, Art Central, Michaels, Aaron Brothers, Miner's Ace Hardware, or Home Depot. You may also find many supplies online at vendors such as Dick Blick, Utrecht, Mr Art, etc.

Q: What if I have other questions?

A: Contact Emily White (ewhite14@calpoly.edu and 805-756-2036) or the Architecture Department (architecture@calpoly.edu and 805-756-1316). We will be happy to answer any questions.