

**ARCH-499**

**ARCHITECTURAL DRAWING and SKETCHING**

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### ***PREFACE***

Drawing/Sketching is only a precursor to Architectural design, but is, on the other hand the invaluable time-tested tool to visually conceive and describe the physical world and the “place of Architecture” within. Drawing as “Drafting” is a means to convey technical relationships and interface between, materials, networks, etc, To enable All critical information to instruct the place and assembly of “building”. ie, detailed drawing. The sophistication of “CAD” and “BIM”, with amazing detail and accuracy, ironically now takes the distinction between drawing and sketching to a new realm, with detail drawing being further relegated as a technical skill,

Architectural Sketching evokes an emotional and psychological excursion of visual discovery. The premise of this precept argues for the value and distinction of the sketch as a moment in the journey of visual discovery, a vital stepping stone in the provocative search for architectural design ideas. In order to embark on this expedition, the aspiring architect, armed with a sketchbook and pen, becomes a purveyor of visual ideas, equipped with all the many graphic skills and tools essential to investigate and share visual possibilities. To this end this course proposal attempts to inspire students of design with examples of sketches that articulate existing and new places, light, shade and shadow, the harmony of proportioning systems, details, colors and reflections, all the unsung variables in the visual world, that bring life to the everyday, and make the ordinary extraordinary. Introductory notes discuss rudimentary skills, graphic strategies and fundamental techniques to overcome graphic apprehensions and build confidence between the acts of seeing, dreaming, and sharing visual ideas through sketches.

### ***INTRODUCTION***

#### ***1. HOW TO VISUALLY DESCRIBE THE PHYSICAL WORLD AROUND YOU!***

The intention of this course is to enable students to develop a passion for sketching and the essential graphic skills to fulfill their aspirations. The curiosity, ***“to understand what you see”***, The ability to, ***“graphically describe what you see”***, and the passion to, ***“visually share what you sketched”***, underscores the fascination and beauty of sketching and the visual enthusiasm of it's author.

It is the sketch that enters directly into the soul of the viewer, enabling them to see everyday things, hitherto never revealed before! Sketching will enrich your ability to envision your surroundings quickly, and let you share your discovery with others. Sketching is very personal and you will develop your own visual vocabulary as an expression of your interest and skills. In addition to the preliminary list of principles described, each class will have one overriding rule for sketching.

#### ***SEE, UNDERSTAND, ANALYZE & DRAW !!***

The hope is that you will develop a love for sketching, and quickly discover the pleasure and satisfaction that this reveals. You will be introduced to the basic skills, but the single biggest factor

in your success will be continual practice until your sketching ability becomes instinctive. Everywhere you go, everything you see will become a candidate for your sketchbook. Your ability to sketch what you see, in place, or in your mind's eye, will be your personal passport and quickest way to communicate and share with others. This is not a class for artistic rendering or "flamboyant" illustration, although it is hoped that the class might serve as a foundation for further ambitious development. The class will focus on introducing you to a disciplined approach to visually recording and sharing your world and the basic steps essential to achieving this! With the prolific use of digital computing and the abundance of sophisticated visual aid tools available, the fundamentals of sketching is not anticipated as a substitute, but as a parallel and highly personalized tool in your ability to develop and share your vision with others. This course of study is imperative for all students who are frustrated in their efforts to graphically describe the world around them and the visual ideas that can be developed from within. A required pre-requisite for this course is enthusiasm and the joy of Graphic "Doodling". The course will introduce you to rules and techniques to organize your latent graphic skills and help you to develop them as a provocative design record of your visual ideas and investigations.

**Architectural Drawing & sketching** is an introductory class to enable spontaneous observation and documentation of the built environment around us. It is also a means of describing your personal interpretation of what you see and why it is important. It will enable you to develop a personal "visual vocabulary" with which you can share your discovery and interpretation with others. The sketch is not a finished drawing, but, is anticipated as a quick visual analysis of your surroundings. This can be developed later, at will, as a finished study, or remain as the provocative diagram, asking as many questions as it provides answers. The techniques and basic skills to construct a sketch are fundamental and intrinsic to the architect. It is in the first sketches from which design "ideas" are spawned and the ability to visually describe what you see and communicate with others is further developed. You will be introduced to the basic tools essential to "building" a sketchbook record of design and you will exercise these techniques by practice and demonstration on a regular weekly basis.

The prolific sketcher will record and document the world around them at every opportunity. When you sit down at a café or bar, you will be given a "beautiful" white paper napkin, meant to be sketched on, this is an opportunity never to be lost. Of course, Napkin sketches only demonstrate your ability to sketch instantly as the opportunity arises! It is not a substitute for the "sketchpad" which should always be in your possession! There are so many "things" around you to sketch and visually analyze. Reflections on a Wine glass, the structure of an Onion, etc., etc.! This is a kind of visual awareness & obsession that we want you to cultivate.

**2.1 THE RUDIMENTS OF SKETCHING, DESCRIBING THE WORLD AROUND YOU.** Initially the quest is to understand your placement or position in relation to the object/subject, you are observing and describing. This is the landscape that surrounds you; your position in the larger context is critical as a pre-cursor to any developed sketch/drawing, Thumbnail sketches should be cultivated to establish visual parameters for the forthcoming study.

### **VISION, LARGE TO SMALL**

Always look to the largest visual framework to describe your observation (see later discussion on limits of vision)! Never start from a detail and work outward, otherwise the drawing will never close. Layout the larger frame of reference with attention to "Datums" horizontal and vertical, and

sub-dividing proportions, with this diagrammatic start and constant frame of reference, you can work inward, further sub-dividing and sub-dividing until you finally select the finished view you wish to develop in more detail. Now you can build the sketch with confidence that the larger “frame of reference” is visually anticipated.

## **2.2 IMPORTANCE OF DATUMS**

Presumes that everything you sketch is being observed and viewed from “eye-level;” i.e., the primary horizontal datum in any sketch. Eye Level or Horizon line is critically important as the observer can immediately relate to this datum. It is along this datum that familiar objects appear, large or small, human figures, trees, etc. the size of which provides your first understanding of “depth of field”, that is, Foreground, -- Middle ground, -- Distant ground. The size of these objects, all the same in fundamental shape and proportion provides the first clue as to how far or near they are. The constant eye level (horizon) datum is what enables the 3<sup>rd</sup> party observer to relate to your sketch to enter your drawing, to see what you see!

To understand your viewpoint, for example, a bird’s eye view or worm’s eye view of the context is unnatural and disturbing, unless you can explain the circumstance of this extraordinary high or low viewpoint! This is not to deny the relevance of these viewpoints, which are often used in analytical drawings where the sole purpose is to describe objects from above or below to dramatize their anatomy or disposition from a hitherto unforeseeable aspect. See diagrams of “dancing heads” trees, shrubs, & familiar objects that let you describe “here to there” dimensions relative to the “horizon line” and distance from position of viewer.

## **2.3 SHAPE AND PROPORTIONS.**

Shape, Form & fundamental proportions of familiar objects.

- A. People, The human figure, the frame, the head.
- B. The Shape & Structure of Trees leaves. Shrubs. Plants.
- C. Platonic Forms, fundamentals of descriptive geometry, squares, cubes, triangles, prisms, Conic form, etc.
- D. The “*Golden Section*”, Numbers, the Fibonacci series, rules of order, Palladio, etc.

## **2.4 PERSPECTIVE VISION.**

**One point or parallel perspective.** Where all lines on the same axis as the horizon line is parallel to each other. This only works when view is restrained within prescribed “Cone of Vision”, otherwise lines begin to bend” toward horizon. (See rules of cone of vision and limits of view). One point perspective enables you to accurately measure depth from “here to there.” See details of how to establish measuring tools within a one-point perspective.

**Two point perspective and multiple point perspective construction.**

Bending the picture plane! Concave and convex images, “fish-eye” vision, constructing “dioramas” or “cycloramas”, continuous perspective drawings.

## **2.5 SCIAGRAPHY. “The art of shadow casting.”**

Using shade & shadow to describe shape and form. Shadow as surface shape and form, determined by an intervening object denying the passage of light. light! Renaissance drawing, light from within, where light was always understood to be at the source of the picture! or, light from outside, beyond the picture frame, behind the viewer. (Michaelangelo). Impact of shadow and

shading on variable Materials and Surfaces, Brick, Stone, Marble, Glass, etc. Opaque, transparent or translucent. Smooth, polished, textured or contoured surfaces and reflections, Surface water, etc.

## **2.6 VISUAL MEMORY.**

Instant Imaging. Single line, continuous drawing, (pen does not leave paper).

Determination of critical shape and form, (see P3). Animation of shape! Thumbnail sketching! 10 minute, one minute, 30 second trees, single line portrait images, Shape of shadow as primary determinant of shape/form of object.

Symbols and Icons. "Ink blots" Pools of color, leftover light, gaps within, "sparkle of light within shadow"

## **2.7. COLLAGING or LAYERING.**

Multiple sketch views of same of same or similar objects, overlaid from varying viewpoints.

Superimposed drawings to describe 3-D form of object simultaneously implying movement of object or viewer to describe shape, form and detail. Subtle changes in shape and form may be

Introduced to imply viewed object in motion.

## **2.8 DRAWING, SKETCHING TECHNIQUES.**

Ink drawing, single line/ continuous "figure". Shape, form & proportion or iconic symbol and meaning. Light and shade drawing, ink sketching, density of collective lines, line direction, synonymous with source of light and direction of shadow, in correspondence with, or opposing directional forces of perspective, "dynamic drg, visual drama! Drawings without visible line edges, watercolor wash techniques, depth of field. Sparkle of "light" from the paper untouched. The space in between.

**Composite studies.** Combination of principles, techniques and various media.

## **3. LIST OF MATERIAL REQUIREMENTS**

**Variable Media and Materials.** These are the tools for your portable laboratory

**3.1 The Sketchbook:** 9" X 12" CANSON hardcover with tear out pages, white 60 lb.paper, (spiral bound). This is the equivalent of your diary or Journal. Everything you see of interest is documented in sketch, diagram and notation, either for future reference and further examination, or, as an imaged record of a moment in time. **Paper clasps** to hold edges are essential.

**Masking tape and Push pins** for presentation reviews should also be available at all times.

**Flimsy Tracing rolls, 10"** for quick overlay sketches should be available.

**3.2 Ink Pens:** Black ink cartridge pens are desirable and encouraged. "**Schaeffer**" or "**Lamy**" "**Pelican**" and "**Pentel**", all make relatively inexpensive fountain pens. (not oblique calligraphy nibs). Expensive Fountain pens like "**Mont Blanc**" are not required. Black, waterproof, ink will be the prevalent medium for sketching, simply because it is unforgiving and cannot easily be. erased, see notes on "doodling" below. Construction lines are part of the finished sketch, not erased as with pencil drawing. Visible construction lines, whilst not as visible as the final determined sketch lines, are, intriguing and provide a fascinating clue to the priority and construct of the sketch. Medium size, flexible nibs are preferred, this permits a variation in line weights and densities, simply by adjusting the pressure on the paper. (This is an asset not available when using roller ball pens) Ink

cartridges can be easily refilled using a syringe and a bottle of black, waterproof, fountain pen ink, "Waterman" or equivalent. Like handwriting, ink sketching has a very unique personality, which should be encouraged. An ink sketch conveys the author's identity, this is important, and is made more difficult by pens with roller ball, fixed nibs, which have less weight variation than Fountain pens. Alternative pens will be discussed, of which the "Pilot", roller ball, "Precise" V5 & V7 pens are readily available, in varying nib sizes. Ex Fine, Fine, Medium, Large. Also, the **Uni-ball, deluxe, Micro, fine & extra fine** provides a consistent nib.

**3.3 Pencils: Black Graphite pencils, range, B, 2B. 4B.** Do not use a mechanical pencil as your sketching pencil.

**Eraser & pocket sharpener.**

**Colored "Prismacolor" pencils (thick lead) extra blacks.**

**Windsor & Newton. Water colors, pocket box, 12 pans.** Variable brushes, Sable hair, fine line,#3. medium #7,broad #11.

#### **4. CLASS STRUCTURE & ORGANIZATION**

**4.1 Arch 499. Architectural Drawing & Sketching.** Is a 3-hour lab/lecture class, which meets from 11.00.am until 1.50, each TUESDAY. Time will be spent reviewing, discussing and applying class notes. This is a "one on one" class with weekly assignments, which will be reviewed each week. It is imperative that all assignments are completed each week. Out of classroom studies will take place within the USC campus and Exposition Park, with further off-campus field trips to selected exceptional architectural sites within greater Los Angeles. **Class attendance is imperative and in accordance with USC requirements, more than 3 absences will automatically jeopardize a passing grade.**

#### **4.2 GRADING.**

Class participation, attendance, and enthusiasm. ----- 35%.  
Review of in-class work, out of class, field sketch assignments----- 35%  
Final and Final Sketchbook Portfolio review and presentation. -----30%.

#### **4.3 STUDY EXERCISES.**

The following is a broad list of studies and sketch sites to be selected from, (to be further developed) In addition to the syllabus above. Students will be asked on a weekly basis to visit various sites of Architectural interest to sketch and document details and places. In preparation for the above students will be introduced to fundamental strategies and techniques for drawing, sketching and recording images and ideas. Students should not be intimidated by any current lack of confidence or skill, as this course does not essentially demand an inherent "artistic" skill, but introduces the means to "see, understand and document" the physical world around us.

**General studies,** Nature, Landscape, Manmade world, Figure Drawing, Human form. Architecture.

**Potential sites and places of interest for sketch analysis and visual documentation.**

USC Campus, Rose Garden & People, individual & groups. Trees, Foliage, Sky/ Clouds.  
Museum buildings, Landscape, Arches, Colonnades, Fountains, Flowers, Shrubs. Streets, Walks, Promenades, etc.

Harris /Fisher & Watt Courtyards. Tables /swivel chairs, colonnades, gallery, stairs.  
Fisher gallery / Museum. Sculpture and Statuary, private collection.  
Topping Library. Wedge skylight and light monitors, repetitive form,  
Mudd Hall / Doheny library, Courtyards, doorways, windows, chimneys,  
Frieze & Frescoe details, .etc.

**Additional field trips of interest will be recommended, these might include.**

|                                |   |
|--------------------------------|---|
| Huntington Gardens,            | Natural and man made landscapes.  |
| Los Angeles, downtown CBD.     | Urban streets, thoroughfares, alleys, plazas, urban scenes.   |
| Historic LA buildings. 7th St. | Fine Arts Building, 1926. Walker & Eisen.   |
| Los Angeles St to Figueroa St. | Fine Arts Building, 1926. Walker & Eisen.<br>Roosevelt Bldg. (the Roosevelt) 1927. Curlett & Beelman. |

The proximity of the new Metro light rail system, to USC at Expo Blvd, now makes the extended location of urban field trips feasible on a regular weekly basis).

## **5. NOTES ON ART AND FORM.**

**Perspective**, is the Rudder and Sail of the Architectural sketch

**Sketching** is Design, Drawing is documenting

The importance of “**Center**”, The determination of place, Focus, Method of measurement, Center of perception. Concentric grid versus Cartesian grid.

“**Form**”. - Structural manifestation of shape, not just shape!

“**Art**”. - Form created by a human intellectual act, easily synoptic, to be visually comprehensive, visually understood. “**A work of art is a closely coherent and consistent whole**” - **Aristotle.**

“**A unit, like a living creature**”, - **Socrates.**

“**The sublime economy of art**”, **No redundancy, or obsolescence**” - **Henri James.**

“**Masterpieces are dumb**”! **So self centered**, so at peace with themselves that nothing can enter or leave. - **Flaubert.**

**Closed Form.** Complete and purposeful, Self fulfilling.

**Open Form.** Evocative. Symbolic quality and meaning, full of human curiosity and relevance. The balance between exceptional and universal.

**A "Dot"**, is only a short line.

**Design Drawing** “Like the ancient god “Janus”, has two faces, one looks to the past, whatever exist, the other looks to the future, what does not exist, except in our “Minds Eye”. This is what we do when we design, from **Frank Ching’s** introduction to “Freehand Drawing and Discovery”,

“**What is, to What can be**”. A Springboard to Vision! Freehand sketching is a designer’s “Secret Weapon” at the outset of the creative process, not a means to illustrate the end.

**DRAW PEOPLE FIRST.** Get the party started!!!

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## RECOMMENDED READING

| Title,  | Author,          | Publisher.           |
|---|------------------|----------------------|
| Voyage, Le Corbusier, Drawing on the road,    | Jacob Brillhart  | W.W. Norton. & CO.   |
| Travel Drawing, Engaging the spirit of Place, | Edward T, White. | Architectural Media. |
| Freehand Perspective and Sketching.           | Dora M.Norton.   | Dover Publications.  |

## BIBLIOGRAPHY

|  |                                 |   |
|--|---------------------------------|---|
| Gordon Cullen. Visions of Urban Design.                                      | David Gosling.                  | Academy Editions.                               |
| BASIC Perspective.   | Robert W.Gill.                  | Thames and Hudson.<br>ISBN 0-500-27043-0.       |
| The Geometry of Art & Life.  | Matia Ghyka.                    | Dover Publications.<br>ISBN 13-978-0-486235424. |
| The Divine Proportion.<br>A Study in Mathematical Beauty.                    | H.E. Huntley.                   | Dover Publications.<br>ISBN 13-978-0-486222547. |
| The Art of Drawing.  | Bernard Chaet                   | Holt. Rinehart Winston/<br>ISBN 0-03-062028-7.  |
| Anatomy, Perspective, Composition.   | Stan Smith.                     | Chartwell Books.<br>ISBN 1-55521-526-2.         |
| Pen and Ink.<br>The Urban Sketcher.  | Carl Glassford.<br>M7T. Holmes. | Walter Foster Publishing.<br>North light books. |
| Techniques for seeing and drawing on location.<br>The Architects Sketchbook. | G.M. Morland.                   | GEM. Publications.                              |

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## Statement on Academic Conduct and Support Systems

### Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

### Support Systems:

*Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

*National Suicide Prevention Lifeline – 1 (800) 273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

*Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call*  
Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: [sarc.usc.edu](http://sarc.usc.edu)

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. [equity.usc.edu](http://equity.usc.edu)

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. [studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. [dsp.usc.edu](http://dsp.usc.edu)

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. [studentaffairs.usc.edu/ssa](http://studentaffairs.usc.edu/ssa)

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. [diversity.usc.edu](http://diversity.usc.edu)

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [emergency.usc.edu](http://emergency.usc.edu)

*USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.*

Provides overall safety to USC community. [dps.usc.edu](http://dps.usc.edu)