

DES 320 Drafting & Sketching for Design

Pino Trogu

Professor, Information Design

www.trogu.com

Syllabus – Spring 2023

CLASS HOURS: Hybrid Asynchronous
Section 1: WED. 9–11:45 AM Rm FA119
Section 2: WED. 1–3:45 PM Rm FA 119

OFFICE HOURS: THU: 9–12 (ZOOM)
email: trogu@sfsu.edu
web: faculty.sfsu.edu/~trogu

San Francisco State University
College of Liberal and Creative Arts
School of Design

Note: individual items in this syllabus are subject to change.

Last revision: January 31, 2023

CATALOG DESCRIPTION

Mechanical and freehand drawing, the reproduction of drawings, and interpretation of graphic projections. Perspective drawing and the common elements of technical illustration. Signs and symbols of design and drafting.

Prerequisites: Restricted to upper-division Design majors and minors. Required for BSID majors. Activity. Extra fee required. [Formerly DAI 320]

Note that in addition to plus or minus letter grade, this course can also include the CR/NC option for which the deadline is Tue. March 28, 2023.

FEES

\$10 instructional materials fee.

MISSION STATEMENT

The School of Design serves a diverse body of students in the areas of Product Design and Visual Communication Design at both the undergraduate and graduate levels. Our curricula emphasize design process as a means of problem solving, and our classes help students to build the technical, conceptual, critical, and collaborative skills required in design professions.

COURSE MODALITY:

HYBRID: IN-PERSON & ASYNCHRONOUS

The class is Hybrid (Combination of in-person and online asynchronous). In-person meetings are: Wednesdays: Section 1 (AM) from 9 to 11:45 am; and Section 2 (PM) from 1 to 3:45 pm. In the event that course zoom meetings be required, see the link to the Online Education Policy, which lists the rights and responsibilities of faculty and students during video meetings:

[S21-264 Revision to #F20-264 Online Education Policy](#)

COURSE COMMUNICATIONS

Class materials are also available on Canvas: links to pre-recorded videos, PDFs, and other resources. Email is the preferred mode of communication out-

side of class times. Students are required to check their SF State email address as all messages, either directly, or via Canvas Announcements, will be sent only to those addresses. If your preferred address is not your SFSU address, you must add forwarding to your account or you will miss the instructor's communications.

COURSE DESCRIPTION & GOALS

This course will introduce you to the practice of drawing and its relationship to design:

Basic vocabulary of drawing: line, volume, light, shadow, depth, contours.

Hand, eye, and body coordination when drawing.

Basic still life drawing of simple objects: boxes, bottles, balls (cube, cylinder/ cone, sphere).

Free-hand sketching as well as technical drawing of physical objects.

Integration of drawing and sketching with written annotations.

The three main types of projective representation: (1) parallel projections; (2) orthographic projections; and (3) perspective.

Drawing as a continuous feedback loop – between hand, eye, and brain – that generates new drawings and ideas.

Drawing by hand will also enhance your computer drawing skills and will help you to understand the processes of 2D and 3D representation. These techniques will help you to prepare professional presentations in your design classes and help you build your design portfolio.

By learning how to draw and sketch, you will gain confidence in your design abilities and you will be able to clearly communicate your ideas and concepts to others.

LEARNING OUTCOMES

After completing this course you should be able to:

1. Use different line weights in a drawing to communicate different aspects of the drawing.
2. Understand and use drawing techniques deeply rooted in a long tradition of draftsmanship going back to the Renaissance.
3. Sketch models, environments, and other objects.
4. Produce crisp and clean drawings as part of professional presentations.
5. Use sketching as a prototyping environment that permits faster drawings than with digital tools.
6. Use your hand to not only depict existing objects, but also to imagine, and depict objects that do not yet exist.
7. Produce professional-looking drawings that will build your confidence in your drawing ability, regardless of your initial skill level.
8. Through hand-drawing, enhance your computer drawing skills and understand 2D and 3D representation processes, which are mostly hidden when a drawing is made on the computer.
9. Demonstrate the use of drawing tools to produce technical line drawings.
10. Demonstrate the use of drawing methods including tracing, making revisions, and scaling.
11. Visualize a sectioned cube using progressive sections and transformations from 2D to 3D space.
12. Draw the sectioned cube in orthographic, isometric, and perspective projections.
13. Construct the sectioned cube using drafting tools, cutter, paper and glue/tape.
14. Interpret a technical drawing for the purpose of constructing the object depicted in the drawing.

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SIGNIFICANCE

In addition to creating quick ideation sketches, design professionals also need to accurately describe the size and shape of an object or environment, so that it can be physically produced. They produce these drawings with standardized line work, notation and measuring conventions. The foundation of their drawing techniques is rooted in the tradition of pen and ink drawing with mechanical instruments used by architects and engineers since the Renaissance.

These drawings are sometimes called mechanical drawings, engineering drawings, construction documents, or shop drawings.

Knowledge of the traditional techniques taught in this class will strengthen your drawing skills and help you to think more analytically about how to solve design and manufacturing problems.

INSTRUCTION

Demos, videos, and other materials presented in-person are also available in Canvas. During the in-person meetings, the instructor will review the assignments, provide additional instruction, and clarify issues that students might bring. As time allows, individual feedback will be given that benefits the whole class. Although there will not be individual, public critiques of anyone's specific work in progress, students are encouraged to share their work and receive feedback not only from the instructor but also from fellow students.

PROJECTS & GRADES

Final grades will be based on:

1. Comprehension and understanding of concepts covered in the course.
2. Quality of work during semester.
3. Complete assignments by the due dates.
4. Attendance

DRAWING INFORMATION

All assignments must be identified with

the following information written in the title block. Unless otherwise noted, any drawing missing the title block with this information (and the border) will automatically receive a "D" grade, before other criteria are examined. Please check Canvas for any possible change to these instructions.

1. Assignment number – **VERY IMPORTANT** – and title, abbreviated when necessary
2. Roster number & your name
3. Course # and teacher's last name
4. Assignment due date

Example (all in a single line). See image below and the [title block video](#) and [Canvas title block page](#) for more details:

#7 Sketch Ellipses
22 Jane Doe
SFSU DES 320–01 Trogu
Feb. 22, 2023

LETTER GRADES & POINTS

A	96–100
A–	92
B+	88
B	84
B–	80
C+	76
C	72
C–	68
D+	64
D	60
F	59–0

- A. Performance of the student has been of the highest level, showing sustained excellence in meeting course responsibilities and personal potential.
- B. Performance of the student has been good, though not of the highest level.
- C. Performance of the student has been adequate, satisfactorily meeting the course requirements.
- D. Performance of the student has been less than adequate.
- F. Performance of the student has been

such that course requirements have not been met.

SFSU grading policy

<http://bulletin.sfsu.edu/policies-procedures/grading/#gradingpolicy>

PASSING GRADE

With the default letter grade option, a grade of "C" or higher is required to pass the class. In alternative to plus or minus letter grade, in this course you can also request a CR/NC grade.

ASSIGNMENT (DRAWING) FORMAT

All drawings will be physical drawings on paper and be turned in typically on Wednesdays during the class time.

GRADING AND CATEGORIES

The course has five categories with varying weights. Assignments are worth from 10 to 50 points.

1. Line Plane Volume	25%
2. Cube Section	25%
3. Perspective	25%
4. Portfolio	5%
5. Attendance	20%
TOTAL	100%

GRADING AND CATEGORIES

Individual assignments are graded at just 10 points each and are graded mainly on completion and submission by the deadline. In addition, categories 1, 2, and 3 have a general assignment consisting of the collected drawings at the end of each category. So there are no additional drawings for this "assignment", only the drawings that you have already submitted. They are "category summaries: Line Plane Volume Set, Cube Section Set, and Perspective Set. Each of these is graded at 200 points. In short, these will be evaluated for all the drawings as whole for a particular category and will be assigned a grade for "set". The benchmark for evaluation will be the drawing examples provided in class and on Canvas. Of course I will also take into account initial skill level, effort, improvement, general attention to detail, and organization.

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On Canvas you can check your grade for individual assignments in each category and for the overall course grade. Empty grades in any listed assignment do not affect your overall grade.

WORK REVISIONS

Initial grades on all assignments *turned in on time* can be improved later for a better grade, up to a maximum of an additional full letter grade from the initial grade. Make corrections on the original sheet or submit revisions along with the original work, or both. You must alert me to any revised work. Late work cannot be revised for a better grade on a specific assignment, although you are welcome to revise it for personal improvement and for the final portfolio.

LATE WORK

Unless otherwise noted, assignments will be due every week on Wednesdays. Bring the drawings to class on Wednesday. If an assignment is late, the grade will automatically drop by 15% in the week in which it is due, and an additional 15% for each week missed thereafter, calculated after all the other criteria have been taken into account. If you have questions about how you are doing in the class or disagree with a given grade, email me or schedule an appointment with me to discuss your progress.

ATTENDANCE & PARTICIPATION

Attendance in the Wednesday in-person meetings is required. This category is worth 20% of the total class grade.

Attendance points: 60 pts
Each absence = 4 pts
Each tardy or leave-early = 1 pt

Failing the attendance category means missing more than five meetings (20 points) or missing a combination of absences / tardies / leave-early, resulting in a grade of D+ (39/60) or lower for the category and, critically, an automatic maximum grade of D+ for the course.

Attendance is taken at start of class. If you arrive after roll is taken, it's your

Table 1. Possible grades for each assignment. Points and corresponding letter grades, rounded to the nearest decimal.

Letter/points	5.0	10.0	50	200
A	4.8	9.6	48	192
A-	4.6	9.2	46	184
B+	4.4	8.8	44	176
B	4.2	8.4	42	168
B-	4.0	8.0	40	160
C+	3.8	7.6	38	152
C	3.6	7.2	36	144
C-	3.4	6.8	34	136
D+	3.2	6.4	32	128
D	3.0	6.0	30	120
F	<3.0	<6.0	<30	<120

Late points (15%)

0.8

1.5

(Portfolio)

(Cat. Set)

responsibility to alert me so that you are only marked late and not absent.

Visit URL below for a table of attendance points and corresponding letter grades.

Attendance points & letter grades

Tardy means arriving after roll has been taken. Leave-early means leaving class before the scheduled end of the class. If you need to leave early for any compelling reason please ask in advance. If you arrive to class 1/2 hour after roll is taken, then 2 points will be deducted. If you leave class 1/2 hour before the end of class, 2 points will also be deducted.

Excused absences include being sick or other major events that prevent you from coming to class. You must email me in advance if you know you can't come to class or email me as soon as possible if you can't come because you feel sick that day. This category also includes collaboration and effort. Design is a team enterprise. You should be flexible when working with others and be willing to help them and share your skills when necessary.

NO CELLPHONE USE IN CLASS

Cellphone use is not permitted in the

classroom during the in-person class sessions on Tuesdays. At the beginning of class, you will be asked to place your phone in your assigned space in the provided cabinet next to the desks. During class, you can use your phone only during break, but only outside of the classroom, during the regular 15-minute break which is typically from 10:15 to 10:30. If you need to consult online class materials during the regular class time, use your laptop instead, however other, non-course related activities such as texting, internet surfing, and other social media personal activities are also not permitted on the laptop. Improper phone or laptop usage during the class time will affect your attendance grade as follows: I will subtract 1 point from the attendance category for each instance of phone and/or laptop usage not directly related to classroom work.

NO CELLPHONE USE IN CLASS

Cellphone use is not permitted in the classroom during the in-person class sessions on Wednesdays. At the start of class or upon arrival if late, you are to place your phone in your assigned space in the provided cabinet next to the desks.

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Please login to Canvas prior to the start of class if you are using the DUO authentication app. I recommend you also get a "token" as an alternative authentication method. You can request one here:

<https://its.sfsu.edu/service/twofactorauthentication2fa>

This is great because you don't need your phone and it will also work if you are traveling abroad with no access to your cellphone number.

During class, you can use your phone only during break, but only outside the classroom, during the regular 15-minute break which is typically from 10:15 to 10:30 AM (Sec. 1) or from 2:15 to 2:30 PM (Sec. 2). If you need to consult online class materials during the regular class time, use your laptop instead or a tablet if you have one. However other, non-course related activities such as texting, internet surfing, and other social media personal activities are also not permitted on the laptop or other electronic devices. Improper phone or laptop usage during the class time as described above will affect your attendance grade as follows: I will subtract 1 point from the attendance category for each instance of phone usage and/or laptop usage not directly related to classroom work.

NO EATING OR DRINKING IN CLASS (WATER OK)

No food or drinks of any kind, besides water, are to be consumed in the classroom. If anyone eats or drinks during class, they will be asked to leave the classroom. Please be respectful of your fellow students and the teacher to ensure that we keep a clean and welcoming environment. As with the phone policy, I will subtract 1 point from the attendance category for each instance of eating or drinking in class as described above.

WINDOWS & SWEATERS

Please bring an extra sweater or other

warm clothing that will keep you warm during class. Masks are only recommended and not required at the time of this writing, but to minimize the risk of covid transmission I will keep the windows open for the duration of the class. Please plan accordingly. I will still be wearing a mask, however as I use a wireless mic and speakers, this will not affect my ability to communicate clearly with the class at all times.

CANVAS SUPPORT

<https://canvas.sfsu.edu/>

Email: at@sfsu.edu

Telephone: (415) 405-5555

Location: LIB 80, J. Paul Leonard Library

Office Hours: 8am to 8pm Monday through Thursday; 8am-5pm Friday

REQUIRED TOOLS & SUPPLIES

Drawing instruments, materials, and tools will cost approximately \$100.

Additional tools, recommended but not required, are shown and listed in video and PDF linked below.

See this [tools and supplies video](#) and this [tools and supplies PDF](#) for details.

1. Mechanical Lead Holder
2. 2H Leads 2mm.
3. Staedtler Mars Plastic Eraser.
4. Alternative to #1,2,3 above: Set of Staedtler mechanical lead holder, leads, and eraser.
5. Dahle 301 Precision Sharpener for 2mm Leads.
6. Coopay Triangle Set 30/60° (9") & 45/45° (6")
7. Kern Jointed Bow Drafting Compass — For drawing circles and geometric constructions.
8. Alternative to #7: Alvin Introductory Bow Drafting Compass
9. AluMicolor Aluminum Straight Edge 12-Inch Silver

10. Optional 1: AluMicolor Aluminum Straight Edge 15-Inch
11. Optional 2: Officemate Steel Ruler 15 inches
12. OLFA 180 Multi-Purpose Knife
13. Strathmore 9x12 inch 300 Series Bristol Pad Smooth Surface
14. Strathmore Tracing Paper Pad 9x12
15. Canson Sketching Pad Fine Grain 9x12.
16. Lumograph Pencil B for sketching.
17. 1Staedtler Double Hole Pencil Sharpener.
18. Multi-Surface Adhesive Tape, 0.94 Inches x 60 Yards, 1 Roll
19. 3M Magic Tape with Dispenser 3/4" x 800" — For cube construction.

Art supply stores in the Bay Area:

1. **Flax** Fort Mason Center, SF (local)
2. **Arch** 10 Carolina St, SF
3. **Artist & Craftsman** 2573 Shattuck Avenue, Berkeley
4. **Blick Art Materials** 1930 Van Ness, SF

RECOMMENDED BOOKS

Links are to online stores, but the school library will have most of them.

Koos Eissen and Roselien Steur
[Sketching: The Basics](#)

Dora Miriam Norton
[Freehand Perspective and Sketching](#)

Manfred Maier
[Basic Principles of Design. The Foundation Program at the School of Design, Basel, Switzerland](#)

Koos Eissen and Roselien Steur
[Sketching: Drawing Techniques for Product Designers](#)

Francis D. K. Ching
[Architectural Graphics](#)

Francis D. K. Ching and Steven P. Juroszek, [Design Drawing](#)

Kevin Henry
[Drawing for Product Designers](#)

Alan Pipes, [Drawing for Designers](#)

Kurt Hanks, [Rapid Viz](#)

Mike Lin
[Drawing and Designing with Confidence](#)

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Kimon Nicolaïdes
The Natural Way to Draw

Betty Edwards
Drawing on the Right Side of the Brain

Mario Bollin, *Zeichnen* (in German)

DRAWING LINKS

Trogu: [drawing youtube playlist](#)
Trogu: [youtube rapid viz playlist](#)
[sketchingskills.com](#)
[sketch-a-day.com](#)
[beloose.com](#)
[michaelditullo.com](#)
[ryanchurch.com](#)
[carlliu.com](#)
[ralphmcquarrie.com](#)
[sydmead.com](#)
[drawthrough.com](#)

RECOMMENDED BOOKSTORE

William Stout Architectural Books
804 Montgomery, SF
[stoutbooks.com](#)

CHEATING & PLAGIARISM

Please read the Honor Pledge at the end of this syllabus. Sign and upload a copy of the last page at the beginning of the fourth week of instruction, to assignment 11a, due on Mon. Feb. 14, 2022, to acknowledge that you have read the pledge and confirm that you will abide by it throughout the course.

Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another to do so. Typically such acts occur in relation to examinations. However, it is the intent of this definition that the term "cheating" not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means.

Plagiarism is a specific form of cheating which consists of the misuse of the pub-

lished and/or unpublished works of others by misrepresenting the materials (i.e. their intellectual property) so used as one's own work. Penalties for cheating and plagiarism range from a zero or "F" on a particular assignment, through an "F" for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the University Catalog (Policies and Regulations).

Information about the College of Liberal & Creative Arts policy and procedures regarding plagiarism can be found at the following URL:

<http://lca.sfsu.edu/faculty/plagiarism-resources>

Code of Best Practices in Fair Use for the Visual Arts, Published by the College Art Association:

[best-practices-fair-use-visual-arts.pdf](#)

Other fair use links:

<http://fairuse.stanford.edu/overview>
https://en.wikipedia.org/wiki/Fair_use

DISABILITY POLICY

Students with disabilities who need reasonable accommodations are encouraged to contact the instructor. The Disability Programs and Resource Center (DPRC) is available to facilitate the reasonable accommodations process.

The DPRC is located in the Student Services Building and can be reached at:
By telephone: voice (415) 338-2472
By videophone: (415) 335-7210
By email: dprc@sfsu.edu
Website: sfsu.edu/~dprc

STUDENT DISCLOSURES OF SEXUAL VIOLENCE

SF State fosters a campus free of sexual violence, including sexual harassment, domestic violence, dating violence, stalking, and/or any form of sex or gender discrimination. If you disclose a per-

sonal experience as an SF State student, the course instructor is required to notify the Title IX Coordinator by completing the report form available at this website:

<http://titleix.sfsu.edu>
By email: vpsaem@sfsu.edu
By calling: 415-338-2032

To disclose any such violence confidentially, contact:

The SAFE Place: (415) 338-2208

http://www.sfsu.edu/~safe_plc/
Counseling and Psychological Services Center: (415) 338-2208

<http://psyservs.sfsu.edu/>

For more information on Title IX, on your rights and for available resources:

<http://titleix.sfsu.edu>

OBSERVANCE OF RELIGIOUS HOLIDAYS

The Academic Senate Policy on the Observance of Religious Holidays (S09-212) indicates that: "The faculty of San Francisco State University shall accommodate students wishing to observe religious holidays when such observances require students to be absent from class activities..." The following is a link to an Interfaith Calendar, which lists "Primary sacred times for world religions":

interfaith-calendar.org

Complete details regarding this Policy, including implementation can be found on the Academic Senate website:

senate.sfsu.edu/content/policy-observance-religious-holidays

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DROPPING CLASS AND WITHDRAWING

Through the third week of classes, students may drop a class or faculty may drop students “who do not attend the first class meeting or do not meet the course criteria” as specified in the Bulletin. Afterwards, please be aware that a WU (unauthorized withdrawal) grade is counted as an F for GPA purposes. To avoid a WU grade, you are encouraged to drop before the end of the third week if you think you will not be able to “meet the course criteria.”

In Spring 2023, that deadline is Friday, February 17.

From the beginning of the fourth week through the twelfth week of instruction, withdrawal from a course will be permissible, for serious and compelling reasons, by consulting the faculty member teaching the course. The student must complete a “Petition for Withdrawal from Course or University” and submit the petition to the instructor for a decision. Such approved withdrawals will result in a “W” grade, which does not affect your GPA.

The full university rules regarding withdrawals can be found at:

<http://senate.sfsu.edu/policy/withdrawal-courses>

You, the student, are responsible for withdrawals and should be aware of relevant deadlines related to the withdrawal process. All important dates are listed in the Academic Calendar for the specific semester:

<https://webapps.sfsu.edu/public/webcal/acadcalendar>

See also this page on the university’s website on Dropping and Withdrawing:

<https://registrar.sfsu.edu/withdrawal>

COVID19 INFORMATION

See below regarding covid-19 safety:

Policy Resolution #SU20-292 Temporary Changes to #F10-257 Syllabus Policy to Enhance COVID-19 Communication

[policy_on_temporary_changes_to_syllabus](#)

RIGHTS AND RESPONSIBILITIES

We have placed a lot of emphasis in this country on the idea of people’s *rights*. That’s how it should be, but it makes no sense to talk about rights without also talking about responsibilities.

*from The Last Lecture
by Randy Pausch*

To paraphrase from Prof. Pausch’s book, this syllabus is an agreement between you, the student, and myself, the teacher.

You have the responsibility to be honest in your work and work constructively with the teacher and the other students. In return, you have the right to be in the course and receive constructive feedback from the teacher. This will be in the form of grading and comments on the assignments or communication via email, in addition to direct instructor feedback and support during the live in-person classes and/or the video meetings, or through other means allowed by the hybrid format.

I will read every email – the preferred mode of offline communication – and will try to respond promptly to the best of my ability.

HONOR PLEDGE

I pledge on my honor that I will complete all the assignments in this course in full honesty and without the improper help from others. In addition, I pledge to be honest with regards to the attendance policy, and request absences to be excused only if they are truly due to sickness or other serious circumstances, and I accept responsibility for any other unexcused absence and its resulting point deductions.

In regards to course work, I pledge that unless the assignment already includes some form of copying, tracing, or reproducing an existing pattern or drawing, I will not simply copy or trace the drawing examples found in Canvas’s images or PDFs and present them as my work. Also, I will not copy or trace drawings seen in the video tutorials and present them as my original work. I will consult with the instructor in advance for clarification that might be needed for a particular assignment with regards to this process.

I pledge to follow the above processes and be honest about my work in this course throughout the semester.

I have read and I agree to the syllabus and to the honor pledge above.

Signature _____

Print name: _____

Date: _____

A paper copy of just this last page will be available in class on the first day of instruction, for you to sign and date and give to the instructor.