

DES INV 213 MDes Studio Syllabus • Fall 2022

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M+W 9 AM – Noon
210/220 Jacobs Hall

COURSE DESCRIPTION

In this final studio course of the MDes program, students encounter, deconstruct, detangle, and develop novel designs using emerging technologies to impact humans, culture, ethics, the environment, and/or society at large. Collectively, students engage deeply with themes within small clusters of students who have shared visions. Individually, students engage in semester-long iterative development of a focused, design exploration with intellectual depth, technical rigor, ethical and social justice lens, and visual polish. Through a series of progressive milestones of thinking and making, studio work culminates in a final studio exhibition of projects.

OVERVIEW OF COURSE

Through the MDes Studio, you will sharpen your design focus, explore a domain deeply, iterate thoughtfully, and celebrate your final innovative designs and polished craft through exhibition and critique.

Our focus is on deep design exploration with intellectual depth, technical rigor, iterative development, ethical and social justice lenses, and visual polish. MDes Studio is designed to be in direct conversation with DES INV 219: Capstone Portfolio. Throughout the syllabus and course there are explicit moments of direct intersection of the two courses. During these times the two courses will come together with overlapping, though distinct, learning objectives and evaluation criteria for each assessment.

Learning Objectives

This course holds a single objective: the development and completion of a design project that mobilizes knowledge, methods, and skills acquired across a student's experience in the MDes

program (both in core courses and electives) in service of a tangible contribution to domains of the student's choosing.

Methods of Instruction

As a studio course, the class is structured primarily around *critique*. This may include formal juries with invited guests, formal presentations to your instructors and peers, informal discussions in groups, or individual "desk crits." The overall arc of the course is punctuated by a number of major critiques – we refer to these as "**milestone reviews**" in the schedule below, since they often involve external juries and require more formal presentations on your part. Similarly, the day-to-day instruction is marked by minor internal critiques and smaller-scale conversations within assigned working groups, or "**clusters**". More on both these instructional formats below. First, some thoughts on what we mean by "critique" in the context of this course.

The term "critique" in a design context has historically referred to the process of exercising a critical examination on a proposed work, and making a systematic judgment of it. In design school, this format has long been an important mechanism for evaluating student work, for offering constructive feedback, and for celebrating the hard-won successes of design education. In our day-to-day instruction, and in some aspects of the "milestone reviews" discussed below, this is precisely the sort of critique we aim to provide, as we see it as the way to best support the development of your project.

We also understand that the design critique holds more than this instructional utility; it is also one of the primary sites in design for the production of new knowledge and value. The event of a design critique brings together a range of disciplinary stakeholders: students and instructors, designers and specialists, academics and practitioners, and faculty from across subject areas. Often, the concluding critique of a semester offers an opportunity to engage with luminaries from other institutions, who always bring a different perspective and/or lens through which to look at each project. Indeed, the critique is the dynamic center of design culture within the MDes program – a contested and pluralistic space where ideas are continually challenged, where new approaches are tested, and values are advocated for.

In short, the studio critique is a site in which design culture is continually made, un-made, and re-made.

It is remarkable to see your studio project right there at the center of this process – remarkable, and sometimes jarring. It may be counter-intuitive that, even as your project may be the subject, what is happening in that moment is not always or entirely about your project. A critique offers more than one type of learning opportunity: we are just as likely to depart having gleaned some specific feedback about a design proposal as we are to have learned something about an active cultural fracture in the world.

Clusters & Projects

The course offers a unique model of collaboration that supports the excellence of individual student work, while providing a shared experience within a domain. This collaboration operates at two levels: the "cluster" and the "project".

All students in the course work within a thematic "cluster" alongside a small collection of peers with aligned interest. Typically between 3-6 students are so grouped. Clusters accelerate the collective work of the individuals by balancing intellectual exploration, critique, historical depth and framing,

and domain expertise within a given theme. Even insofar as students work individually, clusters are designed to avoid student detachment and isolation in their studio work, and be an intentional pushback against the flawed cultural value of the “solo design hero” mythos.

Clusters might bring individuals together along different axes of interest, with a particular group sharing a common *subject matter* (e.g. “future mobility”), *audience* (e.g. “universal design”), *technology* (e.g. “augmented reality”), or *design method* (e.g. “generative design”). While cluster assignment is at the discretion of the instructor, a process is established prior to the start of the semester to solicit student interests on specific topics and clusters. Our intention is to allow students to align themselves organically with other students into clusters. However, students who do not meet cluster selection milestones may be placed into clusters by instructors. Students are encouraged to be proactive and align themselves with a desired cluster in a timely fashion to avoid instructor placement.

Within each cluster, a number of focused design “projects” are developed. Clusters can collectively choose how they work together – working together on larger scale projects or individually. The degree to which a cluster collectively pulls its overall designs together will vary from cluster to cluster. The individual studio work within a cluster can, but does not have to, operate together. The work can be entirely individual, or might form a larger vocabulary of designerly work.

The work of students within a cluster requires students to outline a collaborative strategy and a set of intended projects.

OUR STUDIO LIFE

STUDIO SYNC (5-15 min)

Apart from deviations (described below) from our typical day-to-day, each class will begin with a short whole-group “stand up” discussion to help synchronize clusters and individuals alignment on short- and long-term course objectives, communicate any announcements, and convey any high-level thoughts about the overall direction of the group. This time is also used by student working groups, or “clusters”, to offer short reports on their progress, share any discoveries that may be relevant to others, and to identify any obstacles to their work. At times, individuals may be asked to offer an informal presentation on a specific topic. Everyone participates in these discussions, and the instructors facilitate and identify themes, connections between clusters, and potential synergies across the class.

DESK CRITIQUES (150 min)

During the studio time, students work independently or together, while the instructors meet with individuals and clusters following a schedule facilitated by the GSI. Clusters are encouraged to be proactive in signing up for desk critiques at the start of each studio class. A visual signup will be available in the front of the studio each day. While some clusters may want to use the time to work without direct instructor engagement, we are expecting that each cluster engages in a desk critique every three studio class meetings (or more frequently when required by instructors). This initial critique time will be used to focus on clusters rather than individual projects. We will always reserve time near the end of this studio block for individual students to meet with instructors. Students should ensure they signup to get this individual 1:1 time with instructors.

While these smaller conversations are open to all, dialog focuses on the work of a single cluster or on a single project within that cluster. We refer to these meetings as “desk crits”, since they take place in the space where the work is produced, and adopt forms of criticism focused on feedback, direction, and recommendations intended to further the development of the design. At times, instructors will articulate a specific assignment geared to help a certain group of students through a pressing problem. While these recommendations and assignments are specific to a particular project or cluster, because the nature of a studio course includes opportunities to learn from others, we encourage eavesdropping and cross-pollination between projects and working groups.

Please note that during class time, all students are expected to be physically in studio, making, listening, discussing. We believe that studio is a place of both formal and informal learning—there is much to be gained from merely sharing space with others.

WRAP-UP (5 min)

At the end of each class, we will come back together for a second whole-group “stand up” discussion. This will often be shorter than the first, and offers us a chance to report out any important discoveries made in conversation over the course of the day and to remind students of important next steps or upcoming deadlines.

MILESTONE REVIEWS

Individual design projects will vary in their aims, their methods, and the path of their realization. Even so, certain landmarks are required for any significant design project. As such, this course requires that students prepare work for presentation at a number of “milestone reviews” at several points across the semester.

The requirements and aims of each of these reviews are different. Some offer direction, recommendations, and actionable feedback. Others are more reflective, and seek to situate work in a broader disciplinary context. Some will be “internal” to our course. Others will be “juried” by reviewers drawn from across the MDes program, across campus, and by external guests. All of these reviews are regarded as major events, and represent a deviation from our typical day-to-day. Most reviews will take place during regular class time, while others may share time with related MDes courses. Students are expected to attend and participate fully for the entirety of each review.

The dates for each review are outlined on the course schedule. The details and deliverables expected at each are described in the relevant assignment page. Expect more details as we approach each review, and as we progress through different stages of the course.

CLUSTER ADVISORS

Just as the design critique brings together a range of disciplinary stakeholders, so too our course invites others into the space of our studio and the intellectual space of student projects. This happens not only at some of the “milestone reviews” described nearby, but also in less formal ways.

Working with the instructors, each “cluster” identifies a number of external advisors to assist and facilitate the development of projects. This advisor may be a domain expert – such as a consultant on a particular technology or design method – or may be a person able to speak to the needs of an important constituency – such as a representative from a community group or a demographic of

interest; they may be chosen from across the Berkeley campus or beyond. The selection of the right advisor is critical, and we are mindful of not only the depth of domain expertise, but also availability and willingness to engage. We hope to identify at least one advisor for each cluster who can get to know the projects well, and who is able to engage at several points across the semester. Each cluster is required to identify at least one such advisor in collaboration with the instructors that could serve as an immediate (preferred) or remote advisor.

At certain moments across the semester, we set aside class time to engage with an advisor related to one of the student clusters. This “visit” represents another deviation from our typical day-to-day, and will center on offering the relevant cluster an opportunity to present and receive thoughtful feedback from our expert guest. Other clusters will also be able to engage with this visitor, but for a more constrained portion of the day. At times, these visits may include a short presentation or workshop offered by the advisor.

REQUIREMENTS

The primary objective of the course is the development of a design project, which may be completed in collaboration with others or independently, and in the context of a thematic “cluster”. In service of this objective, a series of staged requirements are outlined. While some requirements are the shared work of a “cluster”, most are produced within the bounds of a design “project”.

While some reviews focus on a specific set of requirements, the work of the studio is iterative: we expect work presented in any single context or conversation to be continually refined, distilled, and re-presented in subsequent contexts.

The following requirements described in overview here are detailed in separate documents distributed throughout the semester. In summary, each design project consists of:

- An **artifact** consisting of a physical design, product, service, environment, curio, interface, and/or process that engages with an emerging technology. In representing and communicating this proposal, projects may adopt multiple appropriate media – verbal, visual, time-based – and must include a functional embodiment of the artifact. The degree of fidelity and functionality will be negotiated with the instructors. The artifact is the product of the collective effort of those working together on a project as well as the individual.
- A series of succinct and informative oral **presentations** offered at milestone reviews. These presentations include both verbal and visual information, and may represent the work of a single project or a larger cluster. Some presentations are developed in partnership with DESINV 219 (Capstone Portfolio) and DESINV 201 (Debates in Design).
- A **project diary**, understood as a collection of discursive material that situates the prototype in terms of tangible contributions to domains of the student’s choosing, and includes both visual and written material. While certain portions of this material are authored collectively by all participants in a cluster, most is the product of those working together on a single project. The project diary is developed in partnership with DESINV 219 (Capstone Portfolio). The project diary is a living rough document that captures your process, ideas, inspirations, plans, materials, reflections, successes, and missteps throughout your studio process. It serves as your (and our) guide to your studio work. It should evolve at the very least, daily (hopefully more). It does not need to be rigorously formatted or visually polished (but must

be legible) and will live in a shared across our studio class directory as a google doc. Later, as we move towards formal presentations and your written theiss, portions of your project diary will be extracted and given design care, craft, and polish when submitted at milestones.

Required Texts

As a part of the project diary, each student develops a bibliography to inform their understanding of the landscape of literature relevant to their topics and/or areas of inquiry. Under faculty guidance, each student selects key readings from the bibliography appropriate to your work to guide the development of your project.

Important Dates

W04	19, 21 Sept	Milestone 01 – Cluster Research and Project Plan Presentations
W09	24, 26 Oct	Milestone 02 – Mid-Review Project Presentations
W12	14, 16 Nov	Milestone 03 – Full Dress Rehearsal
W16	13-15 Dec	Milestone 04 – Final Review of Studio Work (9AM - 5PM)
W16	15 Dec	T-0: Showcase Public Opening @ 3PM

Tentative Semester Calendar [subject to change throughout semester]

W00	W 24 Aug	Syllabus Overview and Welcome
W01	M 29 Aug W 31 Aug	Individual Project Presentations Cluster Work-day; Final description uploaded @ 11:59 PM
W02	M 05 Sept W 07 Sept	No Class, Labor Day Desk Crits
W03	M 12 Sept W 14 Sept	Desk Crits Desk Crits
W04	M 19 Sept W 21 Sept	Milestone 01 – Cluster Research and Project Plan Presentations
W05	M 26 Sept W 28 Sept	Desk Crits Desk Crits
W06	M 03 Oct W 05 Oct	Desk Crits Desk Crits
W07	M 10 Oct W 12 Oct	No Class, Indigenous Peoples' Day Desk Crits
W08	M 17 Oct W 19 Oct	Desk Crits Desk Crits
W09	M 24 Oct W 26 Oct	Milestone 02 – Mid-Project Review Presentations
W10	M 31 Oct W 02 Nov	Desk Crits Desk Crits
W11	M 07 Nov W 09 Nov	Desk Crits Desk Crits
W12	M 14 Nov W 16 Nov	Milestone 03 – Full Dress Rehearsal
W13	M 21 Nov W 23 Nov	No Class, Written Thesis Document Due No Class, Fall Break
W14	M 28 Nov W 30 Nov	Desk Crits Last Day of Class
W16	13-15 Dec 16 Dec	Milestone 04 – Final Presentations and Showcase Public Opening MDes Graduation

Assessment

In this project-based course, there are no exams, quizzes, or tests. Rather, student work is assessed as presented as each of the milestone reviews, and are weighted as follows:

10%	Studio Participation
10%	Milestone Review 1 [MR01]
10%	Milestone Review 2 [MR02]
10%	Milestone Review 3 [MR03]
10%	Milestone Review 4 [MR04]
50%	Final Review

Late and/or Missed Assignments

The process of exploration is as important as the final product, so it is important that students manage time well and devote time to working in the studio during the course each week. *Work that is late will not be accepted or evaluated.* An overall participation grade will capture the performance of each individual within the studio. This is a design class. Unlike most other technical classes there is not always a single “correct” design solution. Usually there are many possible designs with different advantages and disadvantages. In this class you will learn to both design artifacts and evaluate the pros and cons of the resulting interactive experience. Design is typically evaluated in a qualitative manner. As a result a significant portion of the grading in this class will be qualitative, including assessments of the end user experience of the system and the quality of your designs, evaluations, and prototypes. Overall how you engage with technologies as a creative material will be critical to the overall evaluation of the work.

CLIMATE STATEMENT

In this course, we are committed to an equitable and inclusive educational environment for all. As students, staff, and faculty, we strive to foster a community in which we celebrate our diversity and affirm the dignity of each person by respecting the identities, perspectives, and experiences of those with whom we work. We intend to support a diversity of perspectives and experiences and respect each others’ identities and backgrounds (including race/ethnicity, nationality, gender identity, socioeconomic class, sexual orientation, language, religion, ability, etc.).

As a member of the UC Berkeley community, we are committed to a safe work environment for all. To help accomplish this: If you feel like your performance in the class is being impacted by lack of inclusion, please contact the instructors, your advisor, or the departmental Faculty Equity Advisor.

If you feel like your performance in the class is being impacted by our experiences outside of class (e.g. family matters, current events), please don’t hesitate to come and talk with the instructor(s). We want to be resources for you.

We are all in the process of learning how to respect and include diverse perspectives and identities. Please take care of yourself and those around you as we work through the challenging but important learning process.

As a participant in this class, recognize that you can be proactive about making other students feel included and respected.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

As a part of ensuring an equitable and inclusive educational environment, we are committed to ensuring equal access to those students with disabilities. If you need particular accommodations, please contact the Disabled Students' Program (DSP) as soon as possible to request accommodations in your courses and then speak with your instructors. We will take every possible step to work out the necessary arrangements. Additional information, including on how to request accommodations for your courses, can be found on the DSP website.

ACADEMIC INTEGRITY

Everyone in this class is expected to adhere to the Berkeley Honor Code: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others."

You are a member of an academic community at one of the world's leading research universities. Universities like Berkeley create knowledge that has a lasting impact in the world of ideas and on the lives of others; such knowledge can come from a student paper as well as the lab of an internationally known professor. One of the most important values of an academic community is the balance between the free flow of ideas and the respect for the intellectual property of others. Researchers don't use one another's research without permission and scholars and students always use proper citations in papers.

Any material in this course that is submitted by you, and that bears your name, is presumed to be your own original work that has not previously been submitted for credit in another course, unless you obtain prior written approval to do so from your instructor. In all of your assignments, you may use words or ideas written by other individuals in publications, web sites, or other sources, but only with proper attribution. If you are not clear about the expectations for completing an assignment, be sure to seek clarification from your instructor or GSI beforehand. Finally, you should keep in mind that as a member of the campus community, you are expected to demonstrate integrity in all of your academic endeavors and will be evaluated on your own merits. The consequences of cheating and academic dishonesty – including a formal discipline file, possible loss of future internship, scholarship, or employment opportunities – are simply not worth it.

You are encouraged to form studio groups and work together to understand studio material, but all work as well as responses to in-class questions should be your own. There are ways to make your work personal and unique even when it seems that there is only one way to correctly answer a question, and the instructors will support you in learning these methods.

STUDENT CONDUCT

Ethical conduct is of utmost importance in your education and career. The instructors, the College of Engineering, the College of Environmental Design, and UC Berkeley are responsible for supporting you by enforcing all students' compliance with the Code of Student Conduct and the policies listed in the MDes Student Handbook.

The Center for Student Conduct is set up to support you when you have been affected by actions that may violate these community rules. This includes an organized and transparent process, student participation in the process, mechanisms for appeals, and other mechanisms to protect fairness. More details [here](#).

ACCOMMODATIONS & SCHEDULING CONFLICTS

We honor and respect the different learning needs of our students, and are committed to ensuring you have the resources you need to succeed in our class. If you need accommodations for any reason (e.g. religious observance, health concerns, insufficient resources, etc.) please discuss with your instructor or academic advisor how to best support you. We will respect your privacy under state and federal laws, and you will not be asked to share more than you are comfortable sharing. The disabled student program is a related resource, listed above.

Please notify us in writing by the second week of the term about any known or potential schedule conflicts (such as religious observances, graduate or medical school interviews, or team activities). We will try our best to help you with making such accommodations, but cannot promise them in all cases.

SUPPORT DURING REMOTE LEARNING

We understand that your specific situation may present challenges to class participation. Please contact the instructors if you would like to discuss these and co-develop strategies for engaging with the course.

(STEP) is available to help access a laptop, Wi-Fi hotspot, and other peripherals. You will be alerted as to when synchronous sessions are about to be recorded. If you prefer not to be recorded, you may turn your video and microphone off.

Please set your Zoom name to be the name you would like the instructors to call you. You may optionally include your personal pronouns.

Please set your Zoom picture to an appropriate profile picture of you to foster a sense of community and enhance interactions. If you are not comfortable using an image of yourself, you may use an appropriate picture of an avatar.

We encourage participating with your video to foster a sense of community and enhance interactions. However, we understand that some students are not comfortable with video or may not be able to participate by video.