Course General Information
Course Name: Design Foundations
Course Number: ATLS 1100

Course description:
Introduces foundational principles, practices and methods of design. Emphasizes design as creative problem solving tool. This engages with "design" from a very broad perspective including visual, physical and auditory design practices. Through lectures, discussion and creative projects, students will gain a familiarity with diverse applications and practices related to creative technology and design.

The goal of this course is to teach students how to use fundamental design concepts effectively and compellingly in their work. Through lectures, class discussions, in-class exercises, projects and critiques, this course will cover the critical, theoretical, and technical skill sets necessary to become a more engaging, thoughtful, and articulate designer.

Requisites:
Requires prerequisite course of ATLS 2000 (minimum grade C). Restricted to students with major or minor in Technology, Arts, and Media (MTAM).

Course objectives:
Students who successfully complete this course will:

- Gain vocabulary to discuss and analyze design fundamentals
- Build knowledge on the history of design thinking and techniques
- Develop analog and digital tools for design prototyping
- Improve communication skills through 2D and 3D design principles

Credit Hours:
3 hours

Required Reading:
    Design Elements, Timothy Samara
    The Design of Everyday Things, Don Norman
    The Shape of Design, Frank Chimrero

Suggested Reading:
    The Elements of Typographic Style, Robert Bringhurst
    The Elements of Graphic Design, Alex W. White

Materials:

Notebook

Portable storage device: usb jump drive or portable external hard drive.

You are responsible for backing up work on a removable storage device.

Lost or corrupted work will not be accepted as an excuse for late/missing work.

Due Dates:

Late assignments will not be accepted without a physician or counselor's note.

Design Assignments:

This course will be an organic mix of lecture and practice with the professor working to explain the concepts, give examples, and also oversee how well students grasp the concepts discussed as they work on assigned projects. There will be ten design exercises, and two major projects with corresponding design statements, presentations and critiques which will be spread over the course of the allotted 15 weeks.

Assignment	Description	Points
Participation/ Clicker Points	Being an active part of the class is crucial to your success. Each week during our lecture period, we will explore a foundational topic in design. Using your i<clicker we will launch discussions, brainstorm ideas, test our understanding, and challenge certain established notions.	5 each (50 total)
Design Exercises	Each week we will cover a fundamental topic of design principles. These discussions will be supplemented by a series of 12 in-class design exercises, helping to explain the concepts and challenge you to use these principles for tangible results. **Note:** As these are in-class assignments there will be absolutely no opportunity for make-up or late work. It is your responsibility to be in class each week to participate.	25 each (250 total)
Design Projects	There will be 2 major projects during the semester that will tie together the design elements that we will be discussing. Each of these will be a multi-week project and will build on all of the knowledge from the class discussions and readings.	100 each
Total		**500**

Notes on the grading criteria:

Work will be evaluated according to the following criteria:

- Conceptual proficiency
- Design proficiency / Creativity
- Technical mastery of the skills and tools

Assignments that satisfy all of the requirements given will earn you a B. This is good work. To earn an A you will present *extraordinary* work that is creative, thought-provoking, interesting, and, most importantly, work that goes above and beyond the requirements of the assignment.

Grades:
94-100 A
90-93 A-
87-89 B+
84-86 B
80-83 B-
77-79 C+
74-76 C
70-73 C-
60-69 D
0-50   F

Course schedule:
Each week will include a lecture on Monday and corresponding Design Exercise on Wednesday

Week	Topic	Assignment Due	Material for this Week
1	Introductions / What is Design?		**Read:** The Perfection of the Paper Clip from Slate **Watch:** What is Design from The Design Council
2	How We Design?	E1	**Read:** Development Cycle from Universal Principles of Design **Watch**: Iteration from Universal Principles of Design on Lynda.com
3	Space	E2	**Read:** Design Elements - Chapter 1 **Watch:** The Power of Empty Space from Lynda.com
4	Color	E3	**Read:** Design Elements - Chapter 2 **Watch:** Red Effects, Black Effects, and White Effects from Universal Principles of Design on Lynda.com
5	Type	E4	**Read:** Design Elements - Chapter 3

			Watch: The Left Digit Effect from Universal Principles of Design on Lynda.com
6	Material	E5	**Read:** Materiality Matters **Watch:** Gloss Bias from Universal Principles of Design on Lynda.com
7	Unity / Gestalt	E6	**Read:** Design Elements - Chapter 5 **Watch:** Figure-Ground from Universal Principles of Design on Lynda.com
8	Interaction Design	E7	**Read:** Interaction Design: Beyond Human-Computer Interaction, Chapter 5 **Watch:** Aesthetic-Usability Effect from Universal Principles of Design on Lynda.com **Watch:** Project Basics and Interactive Prototypes from Invision
9	User-Centered Design / Design Thinking	E8	**Read:** The Design of Everyday Things, Chapter 1 **Watch:** MAYA from Universal Principles of Design on Lynda.com
10	Project 1 Presentations	P1	
11	Design Interventions / Unpleasant Design	E9	**Read:** dSchool Design Project Guide **Watch:** The Social Life of Small Urban Spaces
12	Auditory Design	E10	**Read:** Auditory Interfaces, a Design Platform, by Dan Gärdenfors **Watch:** The Sound of Last of Us (violent!) OR The Sound of Angry Birds (Fun!) from Soundworks Collection **Listen:** The Sound of the Artificial World from 99% Invisible
13	Game Design	E11	**Read:** It All Starts with Pen, Papers, and Scissors, from Gamasutra **Watch:** What is a Game Designer?, from Brenda Romero on Lynda.com
14	Documentation / Project 2 Meetings		

| 15 | Why Design? | P3 | The Shape of Design, Frank Chimero |

Readings and supplemental media must be completed before each class. Not all assigned texts will be discussed in class or covered in the class lectures.

Participation:
This class requires students to be present in order to create, review, and discuss the work that is being produced. Therefore, individual attendance is essential to the dynamic of the class as a whole. I will drop a) the lowest 2 days of participation/clicker points and b) the lowest graded Design Exercise. This includes days missed due to absences. Note: TAM absence policy is as follows every absence after that will result in the lowering of the final letter grade by 10%. Tardiness (being late or skipping out early) counts as a .333 absence.
Individual projects that are turned in late will result in the grade being lowered for that project. Feedback through the form of critique is also essential; absence from any of the class critiques will result in a drop of one letter grade for that assignment.

Critiques:
Critiques are a *very* important part of the design process, and I take them seriously. Even if your project is not fully completed, it is required that you come to class to give feedback on your classmates' projects. It will affect your grade negatively (drop one letter grade) if you do not show up for critique (this includes both days if the critique runs longer than one class period). Work is expected to be completed prior to the critique, do not attempt to finish your project during critique, have everything you need uploaded, tested and ready. Student computers will be shut off and full participation is expected.

Freedom of Speech:
This class is held in an academic university setting and due to the inherent nature of the internet and broad range of topics that your project work will explore it is inevitable that we will come across issues dealing with politics and religion. My role during such discussions will be a facilitator, a mediator, and as impartial as humanly possible. All students are encouraged to participate in open discussion and academic discourse.

Course Content:
The instructor of this class reserves the right to show a broad range of course materials, some of which assume the audience to be adult in age and demeanor. should a student feel offended by something they have seen or heard, it would appreciated, but not required, to stay to be part of the dialogue to offer your perspective. however if the student feels that they cannot stay, they are welcome to leave the classroom as discretely as possible.

Computers, Laptops and Mobile Computing Devices Usage Policy:

Laptops and mobile computing devices can be a great asset to learning, but they can also be a source of distraction and actually impair the learning environment. Within ATLAS courses, computers, laptops and mobile computing devices should only be used for class related activities. Checking E-mail, "Facebooking," working on assignments or projects for other courses, Instant Messaging, gaming and web-surfing are examples of unacceptable classroom behaviors. If you are found to be engaging in these activities during course time, Instructors reserve the right to ask you to leave the classroom.

Additionally, the use of a cell-phones or texting devices during class is expressly verboten (forbidden).

Accommodation For Disabilities:

CU Boulder recently underwent an investigation from the US Department of Justice regarding campus-wide accessibility. All faculty assume responsibility for ensuring that their individual courses and content are accessible to all students. If possible, utilize principles of Universal Design when creating new courses; otherwise, make appropriate alterations to existing material to accommodate students who require assistance. You may contact our Universal Instructional Design Consultant on the Academic Technology Design Team in the Office of Information Technology for more information by calling 303-735-4357 (5-HELP).

The Boulder Provost's Disability Task Force Recommended Syllabus Statement:

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see Temporary Injuries guidelines under the Quick Links at the Disability Services website and discuss your needs with your professor.

Religious Holidays:

It is the responsibility of every instructor to explain clearly his or her procedures about absences due to religious observances in the course syllabus so that all students are fully informed, in writing, near the beginning of each semester's classes. Campus policy regarding religious observances states that faculty *must* make reasonable accommodation for them and in so doing, be careful not to inhibit or penalize those students who are exercising their rights to religious observance. Faculty should be aware that a given religious holiday may be observed with very different levels of attentiveness by different members of the same religious group and thus may require careful consideration to the particulars of each individual case.

A comprehensive calendar of the religious holidays most commonly observed by CU-Boulder students is available here.

Recommended Religious Observances Syllabus Statement:

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with

scheduled exams, assignments or required attendance. In this class, *{{insert your procedures here}}*

See [campus policy regarding religious observances](#) for full details.

Classroom Behavior:

Faculty and students should be aware of the campus [Classroom and Course-Related Behavior policy](#) which describes examples of unacceptable classroom behavior and provides information on how to handle such circumstances should they arise. Faculty are encouraged to address the issue of classroom behavior in the syllabus, and to understand their [professional rights and duties](#).

Recommended Classroom Behavior Syllabus Statement:

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the [policies on classroom behavior](#) and [the student code](#).

Discrimination And Harassment:

The Office Of Institutional Equity And Compliance (OIEC) Recommends The Following Syllabus Statement:

The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been discriminated against should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or the Office of Student Conduct and Conflict Resolution (OSC) at 303-492-5550. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be found at the [OIEC website](#). The [full policy on discrimination and harassment](#) contains additional information.

Honor Code:

The Boulder campus has an [Academic Integrity Policy](#) and a student Honor Code; individual faculty members are expected to familiarize themselves with its tenets and follow the approved procedures should violations be perceived. The campus has been working diligently to make

this process work better and to provide guidance on 'gray areas' to be helpful to both faculty and students at the Honor Code website.

The Honor Council Recommended Syllabus Statement:

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Additional information regarding the Honor Code policy can be found online and at the Honor Code Office.

What is design?
Design Vocabulary
Sketching, and why it is important (exercise based, not about representational drawing skills, but about visualizing and communicating and idea)
How to be Creative
Problem Finding (and Problem Solving)
Designing in 2D
The Grid (and other significant concepts in design)
Designing in 3D
Design and Time
Thinking in 3D (3d Rotation exercises)
Design Methodologies (Design Thinking, IDEO, etc.)
Some Historical Casestudies (not that the class is historical, but have enough of these to show students they aren't designing in a vacuum)