UCONN
UNIVERSITY OF CONNECTICUT

UNIV 1820.011

Intro to Making

Fall 2024

[Wednesdays: 11:15am-1:10pm; UConn Innovation Zone, Werth Tower 014]

Instructor: Cody D. Ryan
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Office Hours: By Appointment

Assistants:

"The future cannot be predicted, but futures can be invented."
– Dennis Gabor, *Inventing the Future*, 1963

COURSE DESCRIPTION

Guided research or reading, discussion, and writing on topics of professional interest to the instructor. Course materials promote independent learning and active engagement in the academic life of the university.

The purpose of this course is to become familiar with the basic tools, techniques, processes and mindset of the Maker Movement, and to identify and begin developing a solution to a real, personally relevant problem in an area of interest. Experts in specific tools may assist with tool instruction/practice.

COURSE LEARNING GOALS

LO1: Apply basic maker skills to develop ideas into prototypes, including: using hand tools, soldering wire, basic CAD modeling, printing CAD models, and programming a simple function to an Arduino.
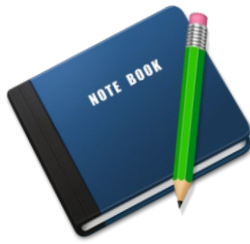**LO2:** Identify personal interests and a personally relevant real problem.
LO3: Apply basic research and reporting skills to gather background knowledge and identify audiences for solutions in the form of products, performances, or services
LO4: Apply strategies and knowledge from the field of creativity research to idea development.

COURSE RECOMMENDED MATERIALS

One paper notebook small enough to carry with you. Bring this and something to write with to each class. It will also be helpful to bring a laptop and mouse most days.

CLOTHING AND BEHAVIORALEXPECTATIONS

This class will be held in the Learning Community Innovation Zone, and most classes will involve working with tools. Students are expected to wear long pants, closed-toe shoes, and safety glasses, to tie back long hair, and not to wear dangling jewelry while in the IZone. Safety glasses are available to borrow in the IZone. Additional personal protective equipment may be worn if desired. Students are expected to attend to the safety of self and others, to use tools with care, and to leave workspaces, tools, and materials neat when finished.

ASSIGNMENTS

Assignments in this course will be graded based on timely completion of all required elements. Guidelines for completing each assignment – which include the required elements and point values assigned to those elements -- will be made available (prior to the assignment due date) on HuskyCT. Students are expected to be aware of the required elements and adhere to those elements when completing assignments. Also, to help ensure successful completion of assignments, students should clarify any questions they may have regarding the requirements of an assignment PRIOR TO completing the assignment for grading.

Interest-A-Lyzer/Intake Form: Complete and turn in the Interest-A-Lyzer. This will help the instructor get to know you and help you to clarify your own interests.

Due August 28th – Complete in Class

Makerspace Safety Training: You will be enrolled in the Safety Training Module on HuskyCT and will need to complete the *Green Level* Training. This is required before beginning your independent project work in the IZone and before working with tools in class.

Due September 11th – Complete online

2D Project: Almost every new design or project begins with a basic 2 Dimensional (2D) sketch or drawing that can then be translated into a digital mock-up. Your assignment is to create a basic hand-drawn sketch of your design, then utilize the Laser Engraver and Vinyl Cutter to create two separate objects.

- Vinyl Cut Decal: Create a vinyl decal representing UConn that fits within a 4" x 4" square
- Laser Cut Item: Using the laser cutter, create a 4" x 4" square from wood and engrave a quote of your choice onto the square

Due October 9th – Present in Class

3D Project: Having a 3 Dimensional (3D)model during the design process helps improve the understanding of a project. It is also cost-effective, improves product visualization, and increases productivity during the design process. Your assignment is to render a custom 3D model of an object and print it. Your physical print should fit within a 4" x 4" x 4" cube.

Due October 23rd – Present in Class

Group Project: A **Rube Goldberg machine** is a machine intentionally designed to perform a simple task in an indirect and overcomplicated fashion. Often, these machines consist of a series of simple devices that are linked together to produce a domino effect, in which each device triggers the next one, and the original goal is achieved only after many steps. You and your teammates will design and build your own Rube Goldberg machine. Your final presentation should include:

1. Name of your machine.
2. A description of the inspiration behind your machine.
3. Documentation of your design process (drawings, sketches and/or screenshots of CAD work) including a materials list.
4. Explanation of functions within the machine.
5. Working machine

In addition to the presentation, you will submit a written reflection on HuskyCT addressing your group dynamic and lessons learned from completing the project.

Due November 6th – Group Presentation in Class; Written Reflection on HuskyCT

Month of Discovery: October is the *Month of Discovery* at UConn. You are invited to engage with a variety of UConn programs at any number of exciting events. October will connect you to the opportunities you seek in enrichment, research, innovation, and creativity at events designed to offer the most impactful and informative experiences. By participating in the *Month of Discovery*, you will find out how you can enhance your college journey in a research opportunity, passion project, classes, at additional events, through a grant, with a professor, and more!

Your assignment is to attend 1 of the 4 flagship events of the *Month of Discovery* and write a brief reflection (1-2pages) about your experience and how "making" can be a contribution to the various initiatives here at UConn.

Events (Dates TBA):

1. Makerspace Bounce
2. Experience Innovation Expo
3. Research Connections
4. Fall Frontiers Poster Exhibition

Due November 7th- Submit on HuskyCT

Additional Equipment Training: Throughout the course, you will receive training on 3D Printers, Vinyl Cutter & Laser Cutter which are all identified as *Yellow-level* equipment. Throughout the semester, you are expected to visit the Innovation Zone during Open Hours to complete 4 additional equipment training sessions, two yellow-level trainings and two red-level trainings.

Due November 20th

Storytelling through Making: Everyone has a story to tell, and often, having a physical token can help enhance the experience of the listener by providing a visual representation of our messaging. For this assignment, you will tell your own story while integrating a physical item to enhance it. Your physical item must incorporate the following:

1: Vinyl-cut Decal
2: Laser-cut/etched portion
3: 3D Printed portion
4: Use of one piece of Red Level Equipment

Your individual story will be based on the topic(s) of your choice and can include, but are not limited to, the following:

Passions and/or hobbies   Traditions   Timelines/Journeys   Inspirations   Awards/Accolades earned
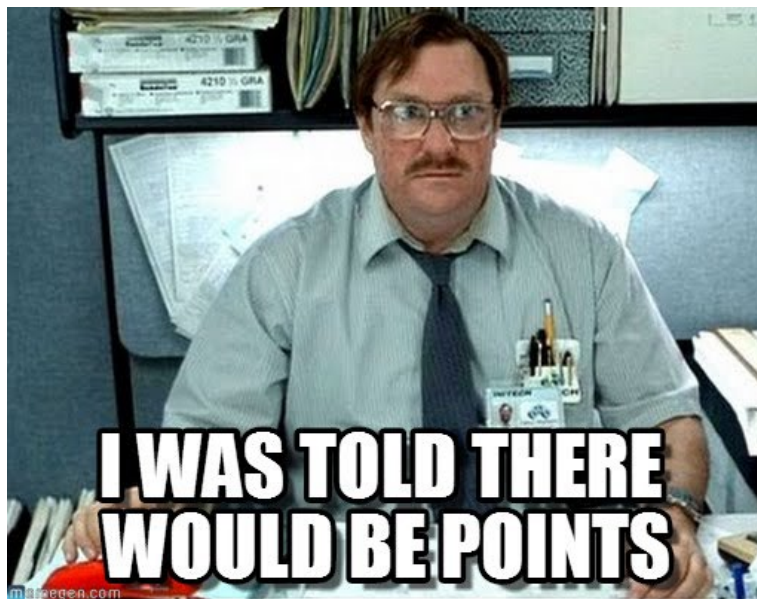
Due December 4th –Present in Class

GRADING

Grade Components	Total Number of Points	Due	Grade Percentage
In-Class Participation	14 points	2 pts x 7 weeks	14%
Interest-A-Lyzer	5 points	Complete in Class Week 1	5%
IZone Safety Training	10 points	Complete on HuskyCT by September 11th	10%
2D Project	5 points	Due October 9th	5%
3D Project	5 points	Due October 23rd	5%
Group Project	15 points	Due November 6th	15%
Month of Discovery	10 points	Due November 7th	10%
Additional Equipment Training	16 points	Due November 20th	16%
Storytelling through Making Project	20 points	Due December 4th	20%
Maximum Total Points	100 points		100%

Grade Scale			
A = 94 – 100% Points = (94 – 100)	**B** = 84 – 87% Points = (84 – 87.9)	**C** = 74 – 77% Points = (74 – 77.9)	**D** = 64 – 67% Points = (64 – 67.9)
A- = 91 – 93% Points = (910– 93.9)	**B-** = 81 – 83% Points = (80 – 83.9)	**C-** = 71 – 73% Points = (71 – 73.9)	**D-** = 61 – 63% Points = (61 – 63.9)
B+ = 88 – 90% Points = (880= – 90.9)	**C+** = 78 – 80% Points = (78 – 79.9)	**D+** = 68 – 70% Points = (68 – 70.9)	**F** = 0 – 60% Points = (0 – 60.9)

DOCUMENTATION

The instructor intends to document the activities of the course for the following purposes: 1) Internal evaluation of course strengths and needs and 2) Presentations to educators at professional events. Student names will not be shared. If you do not want your image or images of your products to be used for this purpose, let the instructor know as soon as possible.

COURSE POLICIES

A key objective of this course is to encourage open, critical discussion. This is a credit-bearing course, and as such there are obligations to the University which must be upheld.

Therefore, the following policies will be observed:

Attendance
Participation is vital to learning in this course, and attendance is vital to participation. As a course designed with a capacity of 19 students, it is the intention of the University to create an environment in which students can interact, learn from each other, and be heard. Thus, we expect that all students will be prepared and willing to participate in class discussion on a regular basis. This can be directly in class or through HuskyCT discussion posts. Please contact me ahead of time if you need to miss class to participate in a university event or for a major personal reason. If you know in advance that you will need to miss class we can work together to find a way to catch you up. If you miss class due to a genuine emergency or medical problem, please request documentation from Student Health Services after you visit, or contact the Office of Student Services and Advocacy (860) 486-3426. They will look into the issue and send all of your instructors formal notification (an excuse) if appropriate.

Late Work Policy
I do not accept late daily participation work unless you make arrangements with me before the class, or in extreme cases such as medical emergencies. All major assignments must be in on the listed due dates, unless you are granted an extension ahead of time. Please contact me in advance if you are having a problem with an assignment so that I can help. You can see me after class, during my listed office hours, or by appointment.

Technology: Cell Phones, Tablets, Laptops, Etc.
In our course you are encouraged to bring smart phones, laptops, tablets, etc. to occasionally help you fact check and engage with online course content during our classes. However, it is important that your use of technology in the classroom is limited to these purposes. And please remember to turn them on silent before you enter the classroom. If technology becomes a distraction points may be deducted from your participation grade.

Email and HuskyCT
I will frequently post important information and course materials online. You will need to check your email and HuskyCT, http://lms.uconn.edu, regularly in order to keep up.

Students with Disabilities & Reasonable Accommodation
Students who think that they may need special accommodations because of a disability are encouraged to meet with me privately early in the semester. If you have a documented disability for which you wish to request academic accommodations and have not contacted the CSD, please do so as soon as possible. The CSD is located in Wilbur Cross, Room 204 and can be reached at (860) 486-2020 or at csd@uconn.edu. Detailed information regarding the accommodations process is also available on their website at www.csd.uconn.edu.

Individual Conferencing
You can always talk to me after class or e-mail me to set up an appointment at another time. I especially encourage you to come to see me before work is due (for this or any other class) if you are feeling stressed or confused about an assignment.

Weather Closure
Although weather closures are rare in the fall semester, but you should be prepared just in case. Be sure to check online for information concerning possible school closures and rescheduling of classes. If class is canceled on campus, we may move our discussions for the day online. If necessary, I will post an updated course calendar on HuskyCT as soon as possible.

Religious Observance
After reviewing the syllabus carefully, if, due to your religious observance, you foresee an absence from a class meeting or a conflict with a due date for an assignment or an exam, please inform the instructor in writing within the first three weeks of the semester.

Prior to the anticipated absence, take the initiative to work out with the instructor a schedule for making up missed work. For conflicts with final examinations, students should contact the Office of Student Services and Advocacy.

Civil Discourse, Rights, and Responsibilities
In our class discussions, in our readings, and in our writing throughout the semester, we will examine ideas from diverse perspectives. At this university, students and faculty are afforded an academic environment that allows for intellectual expression. Challenging issues and ideas may arise, but none of these should be expressed in an inappropriate manner either verbally or in writing. One of the goals of a university is to challenge us to think again about what we know (and all that we don't know). This demands that we all share responsibility for creating and maintaining a civil learning environment in our classrooms and in the larger university community. We will be conscious of and accept responsibility for what we say and do, how we act, how our words and actions have consequences, and how our words and actions affect others. As part of this awareness, we will avoid sexist, racist, and heterosexist language.

Policy Against Discrimination, Harassment, and Inappropriate Relationships: Including Sexual and Gender-Based Harassment, Sexual Assault, Sexual Exploitation, Intimate Partner Violence, Stalking, Complicity, Retaliation and Inappropriate Amorous Relationships

http://policy.uconn.edu/2015/12/29/policy-against-discrimination-harassment-and-related-interpersonal-violence/

"The University of Connecticut (the "University") is committed to maintaining a safe and non-discriminatory learning, living and working environment for all members of the University community – students, employees, and visitors. Academic and professional excellence can exist only when each member of our community is assured an atmosphere of safety and mutual respect. All members of the University community are responsible for the maintenance of an environment in which people are free to learn and work without fear of discrimination, discriminatory harassment or interpersonal violence. Discrimination diminishes individual dignity and impedes equal employment and educational opportunities.

"The University does not unlawfully discriminate in any of its education or employment programs and activities on the basis of an individual's race, color, ethnicity, religious creed, age, sex, marital status, national origin, ancestry, sexual orientation, genetic information, physical or mental disability (including learning disabilities, intellectual disabilities, and past or present history of mental illness), veteran's status, prior conviction of a crime, workplace hazards to the reproductive system, gender identity or expression, or membership in any other protected classes as set forth in state or federal law. To that end, this Policy Against Discrimination, Harassment and Related Interpersonal Violence, Including Sexual and Gender-Based Harassment, Sexual Assault, Sexual Exploitation, Intimate Partner Violence, Stalking, Complicity, Retaliation and Inappropriate Amorous Relationships (the "Policy") prohibits specific forms of behavior that violate state and federal laws, including but not limited to Title VII of the Civil Rights Act of 1964 ("Title VII"), Title IX of the Education Amendments of 1972 ("Title IX"), the Violence Against Women Reauthorization Act of 2013 ("VAWA"), and related state and federal anti-discrimination laws. Such behavior may also require the University to fulfill certain reporting obligations under the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (the "Clery Act"), as amended by VAWA, and Connecticut state law regarding reporting suspected child abuse and neglect.

"The University prohibits discrimination, as well as discriminatory harassment, sexual assault, sexual exploitation, intimate partner violence, stalking, sexual or gender-based harassment, complicity in the commission of any act prohibited by this Policy, retaliation against a person for the good faith reporting of any of these forms of conduct or participation in any investigation or proceeding under this Policy (collectively, "Prohibited Conduct"[1]). These forms of Prohibited Conduct are unlawful and undermine the mission and values of our academic community. In addition, inappropriate amorous relationships with employees in positions of authority can undermine the University's mission when those in positions of authority abuse or appear to abuse their authority.

"The University adopts this Policy with a commitment to: (1) eliminating, preventing, and addressing the effects of Prohibited Conduct; (2) fostering a safe and respectful University community; (3) cultivating a climate where all individuals are well-informed and supported in reporting Prohibited Conduct; (4) providing a fair and impartial process for all parties in the investigation and resolution of such reports; and (5) identifying the standards by which violations of this Policy will be evaluated and disciplinary action may be imposed. In addition, the University conducts ongoing prevention, awareness, and training programs for employees and students to facilitate the goals of this Policy.

"A student or employee determined by the University to have committed an act of Prohibited Conduct is subject to disciplinary action, up to and including separation from the University. Third Parties who commit acts of Prohibited Conduct may have their relationships with the University terminated and/or their privileges of being on University premises withdrawn.

"It is the responsibility of every member of the University community to foster an environment free of Prohibited Conduct. All members of the University community are encouraged to take reasonable and prudent actions to prevent or stop an act of Prohibited Conduct. The University will support and assist community members who take such actions.

"Retaliation against any individual who, in good faith, reports or participates in the reporting, investigation, or adjudication of Prohibited Conduct is strictly forbidden.

"This Policy applies to all reports of Prohibited Conduct occurring on or after the effective date of this Policy. Where the date of the Prohibited Conduct precedes the effective date of this Policy, the definitions of misconduct in effect at the time of the alleged incident(s) will be used. The procedures under this Policy, however, will be used to investigate and resolve all reports made on or after the effective date of this Policy, regardless of when the incident(s) occurred."

For More Information, Contact Office of Institutional Equity (Storrs and Regional Campuses)

Contact Information: (860) 486-2943 & (860) 679-3563

Official Website: http://www.equity.uconn.edu; http://titleix.uconn.edu/ and http://diversity.uchc.edu

Finals
This class **does not** have a final exam. However, this information will help you to be successful in your other courses:
Finals week for Fall 2024 takes place from **Monday, December 9th, through Sunday, December 15th**. Students are required to be available for their exam and/or complete any assessment during the time stated in the Registrar's Office schedule. If you have a conflict with this time you must visit the Dean of Students to discuss the possibility of rescheduling this final. Please note that vacations, previously purchased tickets or reservations, graduations, social events, misreading the assessment schedule and over-sleeping are not viable reasons for rescheduling a final. If you think that your situation warrants permission to reschedule, please contact the Dean of Students (located in Wilbur Cross) to meet with a staff member.

ACADEMIC MISCONDUCT
"A fundamental tenet of all educational institutions is academic honesty; academic work depends upon respect for and acknowledgment of the research and ideas of others. Misrepresenting someone else's work as one's own is a serious offense in any academic setting and it will not be condoned."
-University of Connecticut, Student Code, Section VI
The Student Code: http://www.dosa.uconn.edu/student_code.html

What is considered academic misconduct for undergraduate students?
Academic misconduct includes, but is not limited to:
* Providing or receiving assistance on academic work (papers, projects, examinations) in a way that was not authorized by the instructor
* Any attempt to improperly influence (bribery, threats) any member of the faculty, staff, or administration of the University in any matter relating to academics or research
* Plagiarism
* Doing academic work for another student
* Presenting the same, or substantially the same, papers or projects in two or more courses without the explicit permission of the instructors
* Situations where one student knowingly assists another student in committing an act of academic misconduct, and any student doing so will be held equally accountable for the violation

Plagiarism
Plagiarism can be a deliberate action, in cases of downloading or purchasing pre-written essays or accidental, when a student paraphrases incorrectly or assumes that because the information is online, it needs no attribution. Presenting the same paper in two or more courses without the explicit permission of the instructors involved is also considered a form of academic misconduct. Recycling papers addresses various ethical issues, including "self-plagiarism," providing individuals with an unfair academic advantage, and undermining the objectives associated with a particular assignment. For academic misconduct, typical sanctions for serious offenses are generally considered to be failure in the course. For less serious offenses, it is generally failure in that portion for which you are accused of academic misconduct. If you find yourself with additional questions about the policy, contact me immediately. If you are desperately tempted to plagiarize, stop. Come see me or e-mail me. As you will see in our Information Literacy unit, there are much better solutions to the problem.

I reserve the right to alter this syllabus. However, if I do I will give you ample notice.

Intro to Making Course Calendar		
Class Date	**Topic**	**Assignments Due**
August 28th	**Welcome! Introductions and review of Syllabus, Expectations, Course Objectives, and Introduction to Innovation Zone.** **Problem Finding & Prototyping with simple materials.**	**Complete Interest-A-Lyzer Complete in Class**
September 11th	**Review Safety Training Evolution of Hand & Power Tools**	**DUE 9/11 IZone Safety Training**
September 25th	**Overview of Basic 2D Design & CAD; Vinyl Cutter; Laser Cutter Group Project Overview**	
October 9th	**Share 2D Projects** **Basic 3D CAD & 3D Printers**	**DUE 10/9: Laser & Vinyl Cut Objects**
October 23rd	**Share 3D Projects Work on Group Project**	**DUE 10/23: 3D Printed Object**
November 6th	**Group Project**	**DUE 11/7: Month of Discovery DUE 11/6: Group Project**
November 20th	**Work Session**	**DUE 11/20: Additional Equipment Trainings Due**
November 23rd-30th	**FALL BREAK!**	
December 4th	**Storytelling through Making Project**	**DUE 12/4: Storytelling through Making**

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