

Environmental Design 101: The Design Process Fall 2019

Tuesdays-Thursdays 3:55-5:10, Geren Auditorium, Langford B

A. COURSE DESCRIPTION AND PREREQUISITES

Fundamental innovative design processes, issues and theories relevant to design resolution and the creation of new ideas; Creative thought processes from the formation of ideas through incubation to final product and future impact on the physical environment and society. This course does not have any prerequisites.

B. LEARNING OUTCOMES

This course introduces students from multiple disciplines to fundamental concepts of creativity and problem solving, including a creative thinking, humor and creativity, convergent and divergent thinking, and cultural influences on problem solving. The course emphasizes the production of knowledge, given that all assignments require each student to produce knowledge rather than reproduce knowledge, both individually and in teams; to think holistically; and to reach his or her potential creative talent. In addition, the course encourages students to develop their leadership skills, to enhance their written and oral communications skills, and to cultivate an entrepreneur spirit. Students will learn how to conduct patent searches, and will be exposed to the activities of the **Technology Commercialization Center** (TCC), the Technology Licensing Office (TLO), and the Center for New Ventures & Entrepreneurship (CNVE) at Texas A&M University (TAMU) and the Texas A&M University System (TAMUS). Students also will learn about combinFormation, a tool for searching, browsing, collecting, and organizing from the Internet and other information sources, which enables them to work with generative agents to develop their own composition space, a place where the student can put together information clippings that represent documents and ideas on specific topics of their interest. Finally, students will be made aware of how future theory, studies, trends, and influences, and also, **singularity**, will possibly affect career choices in a global context.

The overall learning outcomes for students in this course match the University Learning Outcomes for all Baccalaureate Graduates. They are:

- o Master the depth of knowledge required for a degree
- Demonstrate critical thinking
- Communicate effectively
- Practice personal and social responsibility
- Demonstrate social, cultural, and global competence
- Prepare to engage in lifelong learning
- Work collaboratively

In addition, each individual and team graded, supplementary, and non-graded assignments that you will need to complete for the course this semester (see Section I) will define specific learning objectives for the assignment.

C. Instructor Information

Presidential Professor Rodney Hill

Office Hours: 10:30 - 11:30 T/R & 11:00-12:00 M/W - Room 103 Langford Architecture Center

rhill@arch.tamu.edu 979-845-7058

Teaching Assistant:

Fatemeh Pariafsai pariafsai@tamu.edu

Tucker Harding -tlharding5996@gmail.com

Office hours: by appointment

SUGGESTED READING-available in the TAMU Library

James L. Adams, Conceptual Blockbusting
Robert Sommer, Personal Space
Edward Hall, Beyond Culture
Kaufman S.B., Wired to Create

Ned Herrmann, The Creative Brain
David Keirsey, Please Understand Me
Edward DeBono, Serious Creativity
Csikszentmihalyi, Mihaly, Flow,

The below sites are free and are the most current innovations and discoveries:

Join the iBridge network-http://www.ibridgenetwork.org/search

And join Kurzweil newsletter-http://www/kurzweilai.net

And www.sciencegymnasium.com
And www.Singularityhub.com
www.technologyreview.com

And

- o www.accelerating.org
- o www.extremetech.com
- o www.foresight.org

E. Course Blackboard VISTA and Email Communications

The course will use <u>Blackboard/VISTA</u> (http://eCampus.tamu.edu/) as the official means for communicating with, sending information to, and receiving information from students electronically. In addition, all course material will be posted in the Blackboard/VISTA site for the course (15 Fall ENDS 101 201, 202, 203, 204, 205, 206, 207) so students can have access and to, and be able to download, any material used in class, as well as any complementary, supplementary, or additional relevant material issued for the class.

The official email mode of communication for this course is through the email option of the *Blackboard/VISTA* site for the course. Email to any other address for the instructor is acceptable, but there is a risk that it may be overlooked. In any case, all email communications to the instructor or the teaching assistants should follow the following formats for the subject line. It is VERY IMPORTANT that you include ENDS 101 in your subject line to ensure that I will read your email. If you do not, then there is a possibility that your email may be lost amidst the numerous emails received every day.

F. Grading Criteria

The *final grades* for this class will be determined using the following point scale:

90 – 100 Points = A 80 – 89 Points = B 70 – 79 Points = C 60 – 69 Points = D Below 60 Points = F

<u>Note G1:</u> Grades in this course will <u>NOT</u> be decided by curve, only straight averages. Borderline cases (i.e., 89, 79, 69, and 59) will be decided based on the quality and consistency of the student's overall class performance and her/his active participation in any non-graded assignments and activities.

G. Grading Breakdown

Soft Innovation Individual: 10 points-patent search required Soft Innovation Group: 10 points-patent search required

Creativity Assignments: 60-15 points per assignment (total of 4 assignments)

Final Examinations: 20 points-10 points (for individual grade) and 10 points (for group grade)

Total 100 points

There will be some class participation credit that will used to determine borderline grades.

For perfect attendance, you will get 3 points added to your final grade.

IMPORTANT****

All graded team assignments will receive a single team grade. However, the grade for individual members of the team will be a function of the peer evaluation of their contribution to the team.

****** Each of the assignments will need to be submitted on ecampus BEFORE midnight the night before class. After each assignment you will fill out and bring a peer evaluation form. There is a link to this form on ecampus under course content. You must print and fill one out after completing any GROUP ASSIGNMENT ONLY. They need to be turned into me the next day during class. These Are individual evaluations of the effort/participation of EACH of your group members. Therefore each person in the group will evaluate every person in your group based on how they contributed to the assignment. These are anonymous and I should be receiving one from each group member.

******Mandatory: Completion of the Non-Disclosure Agreement (NDA) (Students are required to complete and submit a hard copy of the mandatory NDA) *****PLEASE BRING THESE ASAP after they are handed out to you on the first day of class. If you have not turned these in before the group presentations start, you will not be able to participate or be present during the class presentations until you do.

CHEATING: Students caught cheating will earn an 'F' for the semester. See TAMU Rules and Regulations for specific details.

H ABSENCES

See University Rules regarding absences, http://student-rules.tamu.edu/search/rule7.htm.

If you have an excused absence when we have a problem solving session in class, you don't get the credit for the problem solving session. You will have to contact the teaching assistant for a make up session.

I. Course Topics, Calendar of Activities, Major Assignment Dates

The following schedule outlines the course lecture topics and assignments. Any assignment turned in late, after the end of the class period, up to 3 days from the due date, will be docked a letter grade. Documentation will be required for medical extensions and University Excused Absences. **NO CREDIT will**

be given for projects turned in over three days late. All documentation and inquiries should be directed to Megan Zhang-Teaching Assistant

<u>DATE:</u> Aug. 27	DAY: T	LECTURE TOPIC: Introduction-Intuition and Flow-Rodney Hill	ASSIGNMENT: Non-Disclosure Form assigned
Aug. 29	R	Intuition & Flow	Personality Tests assigned Non-Disclosure Form due
Sept. 3	T	 Www.humanmetrics.com/cgi-win/JTypes2.asp. After completing the test, click on the Keirsey description and indicate your temperament and role variant on WebCT and the group folder. www.ncsu.edu/felder-publi /ILSpage.html. Take the ILS questionnaire and indicate your results on WebCT and the group folder. Take the Goldberg Intuition Test 	Personality Tests due
Sept. 5	Darrell Kuhn- Patents, Trademarks & Copyrights		1 Soft Innovation due- Individual (SI1)
Sept. 10	Т	Futures	
Sept. 12	R	Game Changers	1 Soft Innovation due- Group (GSI1)
Sept. 17 Sept. 18	T W	Brain Storming-sit in groups Post Presentation #1 by 11:59 PM	
Sept. 19	TR	Presentation #1	1 Soft Innovation due- Individual (SI2)
Sept. 24	T	Presentation #1	
Sept. 26	R	R	1 Soft Innovation due- Group (GSI2)
Oct. 1	Т	Shelly Brenckman-Startup Aggieland	
Oct. 3	R	Privacy	1 soft Innovation due- Individual (SI3)
Oct. 8	Т	Unintended Consequences	

DATE: Oct. 10 Oct. 14	DAY: R M	LECTURE TOPIC: Gender Post Presentation #2 by 11:59 PM	ASSIGNMENT: 1 Soft Innovation due- Group (GSI3)
Oct.15	Т	David Mebane-Segway tours	
Oct. 17	R	Presentation #2-Raymond Ideas Challenge	1 Soft Innovation due- Individual (SI4)
Oct. 22	T	Presentation #2 –Raymond Ideas Challenge	
Oct. 24	R	Scott Moscrip-Innovative Entrepreneur	1 Soft Innovation due- Group (GSI4)
Oct. 29	T	Personal Space	G10up (GG1+)
Oct. 30	W	Post Presentation #3 by 11:59 PM	
Oct. 31	R	Presentation #3-Gender Reversal	1 Soft Innovation due- Individual (S15)
Nov. 5	т	Presentation #3-Gender Reversal	
Nov. 7	R		1 Soft Innovation due-
Nov. 12	Т	Future Trends, The Perfect Storm	Group (GSI5)
Nov. 14	R	Christene Proctor-Disney World	Resume Due
Nov. 19	T	Future of Texas	
Nov. 21 Nov. 25	R M	Singularity Post Presentation #4 by 11:59PM	
Nov. 26	T	Presentation #4	
Nov. 28	R	Thanksgiving Vacation-if you want to take it.:-)	
Dec. 3	Т	Presentation #4	
Dec. 5	R	Reading day-no classes	
Dec. 9 Dec. 10	M T	Post Final Presentation by 11:59 PM Final Presentation 1:00-3:00	

J. **ASSIGNMENTS OVERVIEW**

All of your assignments require that you produce knowledge instead of reproduce knowledge. This means that the correct answer is not in the back of the book or that there is even a correct answer. You may be introducing to the world something unique that has never existed until you created it. You will have to exercise your

imagination, intuition, creativity, and innovation to produce results similar to what the future will demand for your success and survival.

BREAK OUT OF YOUR OLD "PRESENTATION STYLE" PARADIGM. NUTURE YOUR IMAGINATION! EXPERIMENT! All assignments will be digital, so it would be to your advantage to explore their use as the medium for your presentations, illustrations, etc. Scanned hand drawings are definitely permitted, but know that the quality and effort put into your illustrations (not your drawing ability) as well as the clarity of your handwriting affect your grade. Every assignment in this class use visuals to help illustrate your ideas and innovations. Therefore it is important for you to put sufficient effort into these visuals to best communicate the ideas to the audience.

Assignments will often be presented in class. You may utilize PowerPoint, PhotoShop, live performances, AutoCAD, animations, MediaPlayer, QuickTime, etc. to convey your ideas. You may incorporate performance art or any other means of communication. You must be able to communicate!

If your group will need sound for the presentation, arrangements will need to be made with the teaching assistant, Megan Zhang, prior to the class presentation times.

All assignments will be digital and turned in through eCampus. http://eCampus.tamu.edu/

*****Regarding group presentations, You MUST submit your presentation file BEFORE MIDNIGHT the night before the presentation!! We will not be accepting any flash drives on the day of the presentation, unless there are problems opening the file during class. If you have any technical problems, problems with ecampus, etc, PLEASE EMAIL them to Megan BEFORE the deadline.

Always include your name, team number, assignment number and due date on assignment. Use title page when appropriate. **DO NOT PUT YOUR UIN ON ANY ASSIGNMENT.**

ANY ASSIGNMENT <u>NOT</u> COMPLETED IN A UNIVERSITY-LEVEL MANNER WILL NOT BE GRADED! All of your assignments will take into great consideration the visible effort and quality in the material submitted. This includes your visuals, textual description, and presentation.

FILE SUBMISSIONS

All group presentations will be submitted through eCampus by midnight the night before it is presented. If your group presentation requires sound or it is a "movie" file, then eCampus will not accept the file. Your group needs to contact Zach Wise and we can make arrangements to submit the file.

It is **highly recommended** that groups bring a copy of the presentation on a flash drive as a backup for the presentation in case of Murphy's Law. It is ONLY for this reason that flash drives will be accepted. If you changed something on the presentation after you submitted it on ecampus, then email it to Zach Wise. But any changes/submissions after the deadline will be considered LATE.

MAKE CERTAIN YOUR ELECTRONIC FILES WORK ON CAMPUS COMPUTERS, PC'S, AND ON A MAC. PLEASE DO NOT SUBMIT "KEY" FILES. IF YOU COULD MAKE THEM PDF, POWERPOINT, OR WORD, IT WOULD BE EXPTREMELY HELPFUL.

You use other formats like Presi or google docs, but make sure I have access to the file/link

VIDEO FILES The preferred file formats are: wmv, mov (quicktime) avi, (non-Divx); other file types will not work on Macs and the computer in the lecture hall.

Some assignments have time limits, please be mindful of those. If a group exceeds the time limit points will be deducted from the presentation grade. When you are put into groups, each group will have a number. This

number will determine the order you present the rest of the semester. Some groups may need to go earlier or later. If so, you need to contact the TA to make the request.

GROUPS Some assignments require the use of groups to complete the work. Groups are assigned by the Teaching Assistant. Communication between group members is the responsibility of each group member. Suggested communication tools include Facebook groups, Twitter, email, face to face and phones. Group members will decide the grade assigned to their own team members for each presentation based on their performance using the group evaluation sheet from eCampus.

All group evaluations of your participation are final. The only way you can have your grade changed from the original group evaluation is by an email from every member of your group. ***The group evaluations are anonymous, so there is no need for you to evaluate yourself or put your name on the paper. But please put the name/number of the assignment that it is for, as we are receiving quite a lot of these evaluations through the semester.

Group Extra Credit: Groups will submit a list of their top 5 group presentations. Groups cannot submit their own group number. The top five groups of each Presentation will receive and additional 2 points to their final grade.

PRESENTATION #1 - ENTER TWO COMPETITIONS - Group Project (15 points)

http://www.ideaconnection.com/contests/contest/

https://www.innocentive.com/ar/challenge/browse http://www.innovationworldcup.com/iot-m2m/

https://search.usa.gov/search?utf8=\sqrt{&affiliate=challenge.gov&query=competitions&commit=Search

You can also find a competition on the Internet not listed above.

NO PHOTOGRAPHY COMPETITIONS ALLOWED!

It can be a system, process, business or product that will enable you to compete globally. You can also find your own competitions. If your group is selected as a finalist, you will get 5 extra points.

Members of each group will decide the grade assigned to their own team members. There is a 3 minute time limit for the presentation with a 1 minute grace period. Post presentation on eCampus by 11:59 P.M. on Sept. 18th.

PRESENTATION #2 – Raymond Ideas Challenge - Group Presentation Project (15 points) . If your group is selected as a finalist, you will get 5 extra points.

The Raymond Ideas Challenge encourages undergraduate and graduate students to dream up the next great product or service and enter their big idea in this campus-wide competition. This program offers a number of unique features and benefits:

- Real-world experience: Students receive valuable experience developing business concepts, writing skills and presentation abilities.
- Networking opportunities: Students have the opportunity to network with the judges and gain invaluable contacts.

Participation: Students who are pursuing any major are encouraged to submit applications describing their concept.

Selection process: Members of the business and academic worlds judge each submission and the top 40 are named finalists. Finalists present their concept to judges from the business community who challenge them with questions. https://mays.tamu.edu/mcferrin-center-for-entrepreneurship/ideas-challenge/2019 Important Dates

- Tuesday, October 1, 2019: Applications Open
- Thursday, Oct. 10: Informational #1
- Monday, October 14: Informational #2
- Thursday, October 17, 2019: Applications Close
- Friday, November 1-15: Online Voting Period
- Thursday, November 7: 2019: Finalist Workshop
- Sunday, November 17, 2019: Raymond Ideas Challenge

PRESENTATION #3 – Gender Reversal Ads - Group Project (15 points)

Make a video, posters, series of ads, etc.. that objectifies men to sell a product to a woman.

PRESENTATION #4 – MAKE A BUSINESS OBSOLETE - Group Project (15 points)

Locate a business, product, service, etc.-somewhere in the world and make it obsolete by creating a new business, product, service that makes the one you selected antiquated.

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."-Buckminster Fuller

FINAL PRESENTATION – THE IMPACT OF THE SINGULARITY ON THE FUTURE OF TEXAS, TEXAS A&M UNIVERSITY-2025-2040-2050

Dean Vanegas and myself have been appointed to the Futurist Panel of the Texas A&M University System. The Chancellor wants feedback from the students on their perception of the future and how we can position Texas and Texas A&M to be preparing for rather than reacting to future events. A&M has Extension Service in every county in the State and our duty as a Land Grant University is to alert the citizens and legislature of steps that must be done to insure a prosperous future. Will citizens of Texas need to be a mix of human and AI to compete in the future? The ENDS 101 class has been designated as the vehicle for student opinion to reach the Chancellor, Board of Regents and the Legislature. Your thoughts could affect the decisions and future of the State. Your group has 4 minutes to present your insight on the State of Texas.

Your final will be sent to the Chancellor and he will select which ones will be presented to the Board of Regents and to the Legislature.

We will present the power points back to back until every group has presented. We have 120 minutes to do so. Your exam is Tuesday, Dec. 10 from 1:00-3:00PM.

EXTRA CREDIT: ENTREPRENEURIAL DEVLOPMENT- Individual or Group Project (10 points)

Keep a record of your entrepreneurial adventure and how your business developed. Tell how you proceeded from your first brainstorming, how you picked your ideas, your clients and how you communicated to the rest of the world about your product(s). Do a power point showing development of the project to implementation. Is it a service or product? Tell what you would have done differently if you could start the project over now.

- 1. Show how many customers you have acquired.
- 2. Minimum of \$500 profit -so start early

EXTRA CREDIT: ENTREPRENEURIAL DEVLOPMENT-If you can license or sell your provisional patent idea to a company, you will receive 10 points. You must provide proof of purchase and legal documents.

One of the parts to the final will be for each group to create a semester summary CD or thumb drive of group and individual work. This CD or thumb drive will also comprise a folder of each student's work created throughout the semester. Each student is responsible for keeping a digital record of his or her work. There should be a folder for each student that contains their soft innovations. There should be another folder for the group soft innovations. There should be a folder that contains the four presentations and the final.

SOFT INNOVATIONS- Individual Project (10 points total, 2 points for each Soft innovation) Group Project (10 points total, 2 points for each Soft Innovation)

A soft innovation is an original invention or an adaptation to an existing idea that meets patent requirements. Soft innovations must contain a written description, a visual description and must include a patent search.

United States Patent and Trademark Office (USPTO) http://www.uspto.gov/ Google Patent Search http://www.google.com/patents Freepatentsonline http://www.freepatentsonline.com/

Soft innovations are to be submitted to eCampus in the following format (meaning you save as): Individual

(Last name)_(First name)_(SI#)_(Section number)

SI# means Soft Innovation Number.

Example: Hill_Rodney_SI2_201

Group

(Group#)_(GSI#)

GSI# means Group Soft Innovation Number.

Example: Group3_GSI2

By the end of the semester, you should have 10 soft innovations for a combination of 5 individual soft innovations and 5 group soft innovations. **Do a patent search for each soft innovation/competition.** If your innovation exists, you will not receive credit for it. Examples of Soft Innovations are posted on eCampus.

You must be able to communicate! Production of written work with a computer is encouraged except where your style of writing is integral to your assignment's presentation. If your printing or handwriting is less than stellar, use the computer, paste and copy. Use spellchecker and proofread! If you can't draw your object(s) well, use cutouts, photos, Google images, bribe one of your team members or utilize the computer.

All work should be done at a University Level. This does not include notebook paper. This also includes scans of drawings and writing on notebook or graph paper. The soft innovations should be on

^{*}Innovations not submitted in this format will be returned ungraded.*

Word, PowerPoint, etc. If you draw the soft innovation, then you should scan the image then type the text or you can use programs & software to draw your idea on the computer.

You will be graded on cleverness of design, originality, performance, patentability and presentation. Think of each submission as a presentation to a prospective investor or CEO of a major company. Think of the commercial value of your invention when creating the format, communicating your idea and preparing the assignment to be graded. The soft innovation MUST INCLUDE a written description, a visual description and a patent search. Refer to the examples that are on ecampus in the course content folder. You WILL be graded on quality of your presentation, graphics, creativity, originality, novelty, effort, your description of the innovations, etc. Be aware that it is inherently somewhat subjective evaluation, as it is not an exam with a right or wrong answer. Therefore do not expect to receive a perfect grade for just checking off the list of items and doing the bare minimum.

Each student needs to keep a digital copy of each soft innovation and assignment on his or her web site including the final.

Groups will evaluate each other. Members of each group will decide the grade assigned to their own team members for group presentations and group soft innovations. Inner group communication is the responsibility of each group member. Suggested communication tools include:

- o Facebook Groups
- Twitter
- o email
- video conferencing (i.e. skype)
- o face to face
- phones

Group members will decide the grade assigned to their own team members for each presentation based on their performance using the group evaluation sheet from eCampus.

ALL GROUP EVALUATIONS OF THE PARTICIPATION OF EACH INDIVIDUAL WITHIN THE GROUP ARE FINAL. THE ONLY WAY YOU CAN HAVE YOUR GRADE CHANGED FROM THE ORIGINAL GROUP EVALUATION IS BY AN EMAIL FROM EVERY MEMBER OF YOUR GROUP.

NON-DISCLOSURE FORMS - Individual (Required, no points)

The form is required for all students who are enrolled in the class. The form must be submitted or grades will be withheld. This is because many students will create business based on the ideas they create in the class. The form is posted on eCampus.

PERSONALITY TESTS - Individual Project (1 point – under class participation)

Please take each test and copy the results to a word document. An example of the formatting is posted on eCampus. You will need to copy the information before you close out of each test. Please submit the one page document you create to eCampus on the due date.

- 1. http://www.intuitiontest.com & http://www.humanmetrics.com/cgi-win/jtypes2.asp
- 2. Check out description of your type at-https://www.16personalities.com/entj-personality

FLOW DISCUSSION - Individual (1 point – under class participation)

There will be a discussion group on eCampus, titled Flow, where you will post your name with experiences of creative flow and discovery. Each student needs to have one posting. You can comment on the way others achieve Flow and network.

SECRETS - New Experiment (Not Required, no points)

This is just for fun and it is not required. There will be a "Secrets" discussion group on eCampus where you can anonymously post your secrets. It will give you a sense of who is in the class and common experiences. Also, check out http://postsecret.blogspot.com

RESUME - Individual (1 point – under class participation)

You should show in your resume the new skills you have acquired from creative problem solving, ability to do full patent searches, won or placed in an international competition, possibly filed for a provisional patent, organized presentation and public speaking skills, etc. If an employer receives 100 resumes, how will your stand out from the crowd? Why would the employer ask you for an interview?

L Americans with Disabilities Act (ADA) Policy Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu.

K ACADEMIC INTEGRITY STATEMENT

An Aggie does not lie, cheat, or steal or tolerate those who do.

All syllabi shall contain a section that states the Aggie Honor Code and refers the student to the Honor Council Rules and Procedures on the web http://www.tamu.edu/aggiehonor

L CARE OF FACILITIES

The use of spray paint, spray adhesive or other surface-altering materials is not permitted in the Langford Complex, except in designated zones. Students who violate this rule will be liable for the expenses associated with repairing damaged building finishes and surfaces. At the end of the semester, your area must be clean of all trash.

No power tools may be used in the design studio, no dust or odor producing processes may be conducted in the studio, no wet casting processes may be conducted in the studio, the college shop and spray booth facilities must be used for the above mentioned processes. Professional behavior and conduct is expected of each student.

All studio desks must be covered. In addition students must have at minimum an 18" x 24" cutting mat at their desk.

Important Links Below

Department of Architecture Website

Department Financial Assistance Academic Calendar Final Exam Schedule Online

On-Line Catalog Student Rules Aggie Honor System Office American Institute of Architecture website http://dept.arch.tamu.edu/financial-assistance/ http://registrar.tamu.edu/general/calendar.aspx http://registrar.tamu.edu/Courses,-Registration,-Scheduling/Final-Exam-Schedule

http://catalog.tamu.edu http://student-rules.tamu.edu/ http://aggiehonor.tamu.edu/ http://www.aia.org/index.htm