TE 333: Creativity, Innovation, Vision

Technology Entrepreneur Center
GRAINGER ENGINEERING

Spring 2025

- **4 credit hours**
- **Tuesday/Thursday**
- **12:30pm-1:50pm**
- **2320 DCL (Digital Computer Laboratory)**

Instructor

Dr. Keilin Jahnke
deahl1@illinois.edu

Office Hours

Sign up available at
https://calendly.com/kjahnke/officehours

Course Purpose

The purpose of this course is to **enhance your creativity, innovation, and vision**.

Learning Objectives

Upon completion of this course, you will be able to:

1. Define creativity, innovation, and vision,
2. Use a model as a means to represent the creative process in order to:
   2.1. find problems, including increasing your curiosity and ability to embrace problems as opportunities,
   2.2. master a set of tools to have ideas, while delaying decision making and tolerating ambiguity,
   2.3. take initiative, including prototyping to answer key questions and facilitate decision making,
   2.4. implement solutions, including marshaling resources and persisting,
3. Practice creativity skills regularly and use feedback to improve,
4. Arrange your lifestyle to enhance creativity,
5. Recognize when and how to apply creativity skills in your life,
6. Foster an environment for creativity, including dealing with obstacles to creativity,
7. Evaluate or critique your own ideas and those of others,
8. Understand and use theories of creativity,
9. Lead others in creative processes, and
10. Communicate creatively and effectively.

Course Philosophy

Creativity is a vital skill that can be enhanced by learning. You enhance your creativity by becoming proficient with a set of *techniques*, developing a *mindset* that favors creative behaviors, and by establishing a *lifestyle* that promotes having ideas and bringing them to be.

Much of the knowledge you learn in this course will occur through reading, activities, and discussion. Class time will be used to discuss the readings and to work on applications in which you practice new skills by creating in a supportive environment. Class time will also involve reflection and feedback. By design, the course has many components, so staying organized, archiving what happens, and looking for connections will help you get the most from the experience.

Required Course Materials

1. *Creative Confidence* by Tom Kelley and David Kelley (2013)
2. *Zig Zag: The Surprising Path to Greater Creativity* by Keith Sawyer (2013)
3. Physical notebook
    - Choose whichever style you like best! This may be periodically collected by the instructor.

Course Platform

This course will use Canvas (canvas.illinois.edu) as the primary learning management system for:

1. Posting course materials and documents
2. Submitting assignments (unless otherwise noted)
3. Announcements (verify that you have Canvas set up to get these emailed to you)

Technology Policy

While participating in class sessions, please refrain from using devices; you are welcome to leave the classroom to take care of something important on a device. Using a physical notebook and pen/pencil to jot down notes and ideas during class is required! You are welcome to use devices (laptop, tablet, etc.) when appropriate for activities or project work time. Recording material from this course, including class sessions and team meetings is forbidden. Additionally, sharing or posting recorded material online is prohibited and any violation of this policy will be forwarded to the Office of Student Conflict Resolution.

Student Diversity

The diversity represented by the participants in this course is deeply valued. Our diversity is a primary source of ideas and perspectives, and you will work in groups and teams in this course to practice the use of that diversity.

Attendance Policy

This course primarily uses active learning techniques during class sessions to work towards the course objectives. This includes small group and partner activities as well as whole class and small group discussions. Because of this, it is expected that you will attend class. If you are unable to attend a single class session, please complete the form available on Canvas prior to your absence. If you need to miss multiple, consecutive class sessions, please email the instructor and plan on signing up for office hours to develop a strategy to continue successfully in the course. Extended absences may require a formal letter from the Connie Frank CARE Center.

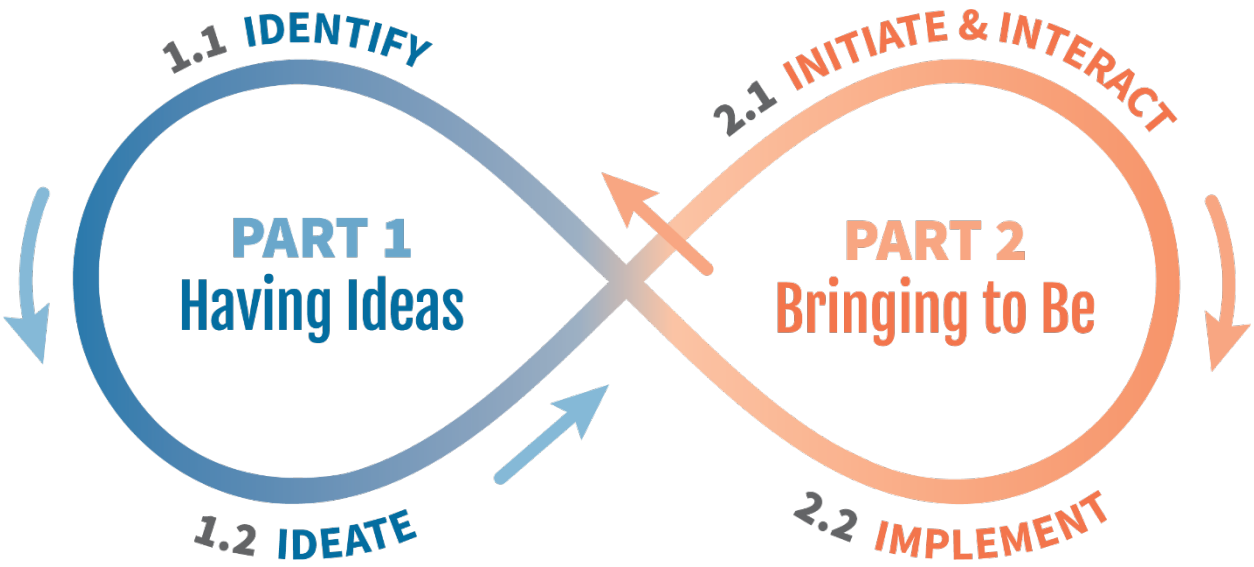
Office Hours and Emails

If you have questions, concerns, ideas you would like to share, are looking for a letter of recommendation, or any other reason to connect with the instructor, please do! **The best way to do so is to either ask after class or sign up for office hours.** If you need to share that you will be absent, please do so by completing the form on Canvas. If you need to email the instructor, please put the course number and semester in the subject line (TE 333 Spring 2025).

Tentative Schedule and Assignment Due Dates

Week	Topic	Tuesday	Thursday
1	• Principles of creativity • Enhancing creativity • Introduction to the creativity model	**January 21**	**January 23**
2	• Juxtaposition • The role of curiosity in creativity and innovation	**January 28** Interests & Goals Presentation	**January 30**
3	• Problem and opportunity identification techniques • Introduction to bioinspiration	**February 4** Creativity Log – Check 1	**February 6**
4	• Free association • Discussion of *Creative Confidence*	**February 11** Read *Creative Confidence* & Submit Reflection	**February 13**
5	• Brainstorming • Introduction to pitching	**February 18**	**February 20** BioInspiration Team Project & Pitch
6	• Ideation techniques • Innovators and innovation • Discussion of *Zig Zag* reading	**February 25** Creativity Log – Check 2	**February 27** Read *Zig Zag* (Introduction + Step 1 + 2 + 3) & Submit Insights
7	• Creativity and decision making in teams	**March 4** Semester Project Pitch	**March 6**
8	• Ideation techniques • Discussion of *Zig Zag* reading	**March 11**	**March 13** Read *Zig Zag* (Step 4 + 5 + 6) & Submit Insights
Spring Break (no class)			
9	• Synthesizing insights	**March 25**	**March 27** Semester Project Insights & Focus Report
10	• Developing idea directions • Discussion and application of *Zig Zag* reading • Art and visual creativity	**April 1** Read *Zig Zag* (Step 7 + 8 + Conclusion) & Submit Insights	**April 3** Creativity Log – Check 3
11	• Peer teaching – topics in areas of student expertise	**April 8**	**April 10** You Teach Us – What You Know
12	• Prototyping and storyboarding • Assessing innovative ideas • Introduction to implementation plans	**April 15**	**April 17** Semester Project Directions & Ideas Report
13	• Peer teaching – topics in creativity The role of empathy in creativity	**April 22** You Teach Us – Creativity & Innovation	**April 24** Creativity Log – Check 4
14	• Vision as the foundation for creativity and innovation	**April 29**	**May 1** Semester Project Prototypes & Feedback Report
15	• Creativity reflection and wrap up • Course evaluations	**May 6** Creativity Log – Check 5	**May 8** **Reading Day (no class)**
16		**Final Exam Time on Monday, May 12 from 1:30-4:30pm** Semester Project Presentation	**Due May 12 by 11:59pm** Semester Project Final Report & Proposed Next Steps Semester Project Team Evaluation *Missing assignments (partial credit)*

Model of Creativity



PART 1 | Having Ideas

1.1 Identify

- Cultivating curiosity
- Finding problems and opportunities
- Reframing
- Understanding
- Evaluating
- Applying wisdom
- ***Evaluate*** *– Is it a good opportunity? Does it have value?*

1.2 Ideate

- Stockpiling knowledge
- Thinking analogically
- Connecting
- Ideation techniques
- Diverging before converging
- Tolerating ambiguity
- ***Evaluate*** *– Is it a good idea? Is it innovative? Does it make a positive impact?*

PART 2 | Bringing to Be

2.1 Initiate & Interact

- Taking initiative
- Managing risks
- Prototyping
- Modeling
- Analyzing
- ***Evaluate*** *– Is it a reasonable risk, project, product?*

2.2 Implement

- Marshaling resources
- Collaborating
- Managing time
- Stewarding money
- Persisting
- ***Evaluate*** *– Is the problem solved? What needs adjustment?*

Iterate: At any point, loop back as needed.