


This course introduces students to the fundamental concepts and applied techniques of innovation through the lenses of Design Thinking and Lean frameworks. Through hands-on group projects and peer assessments, students will learn to identify user needs, conceptualize solutions, prototype, and gather user feedback to refine their ideas. The course aims to equip students with the skills to approach problems creatively and develop innovative solutions in any field.



Week 1: Introduction to Innovation

‡ Understand the concept of innovation and its importance across different fields.

‡ Remember, Understand

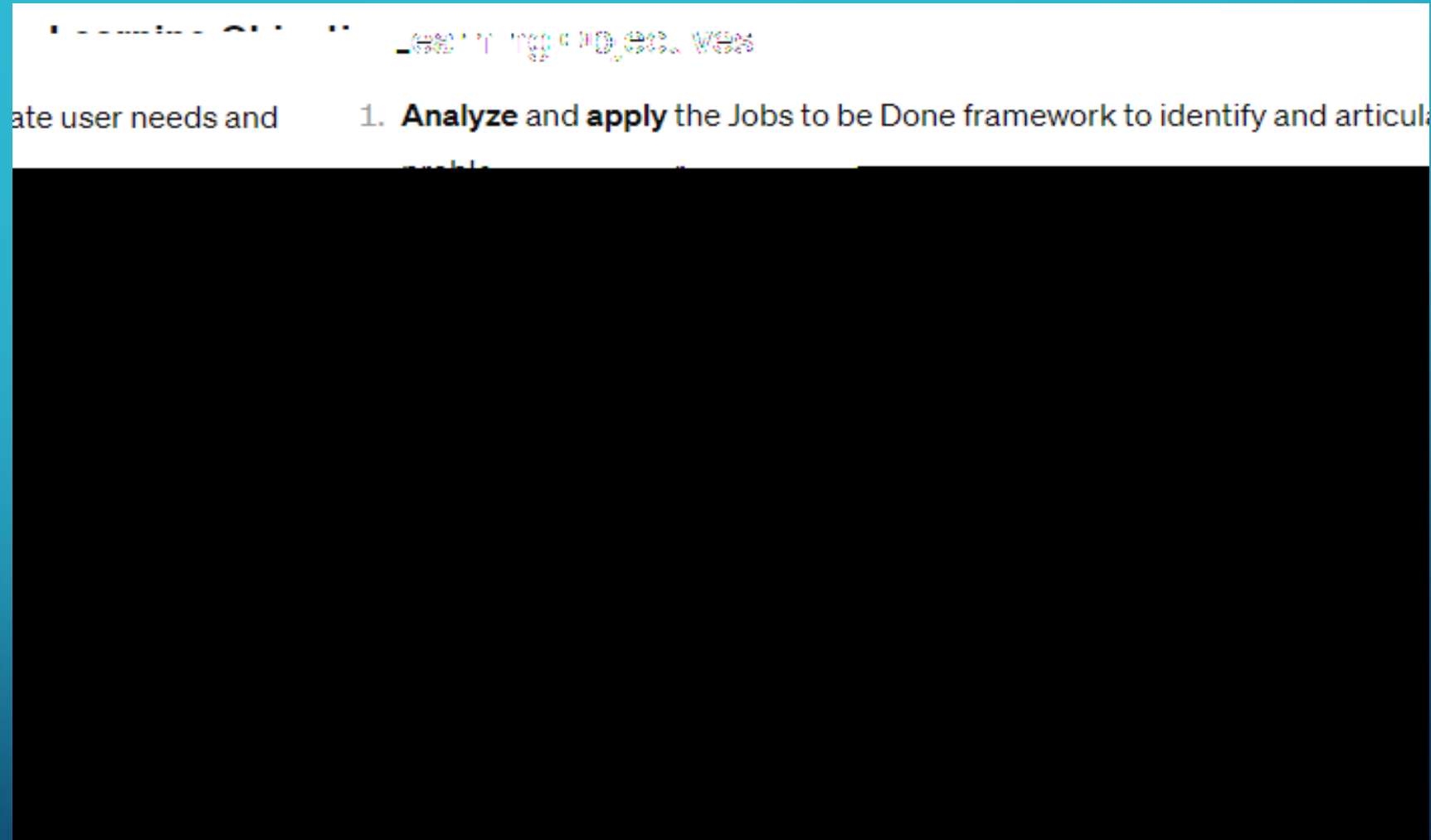
Week 23: Jobs to be Done (JTBD) Framework

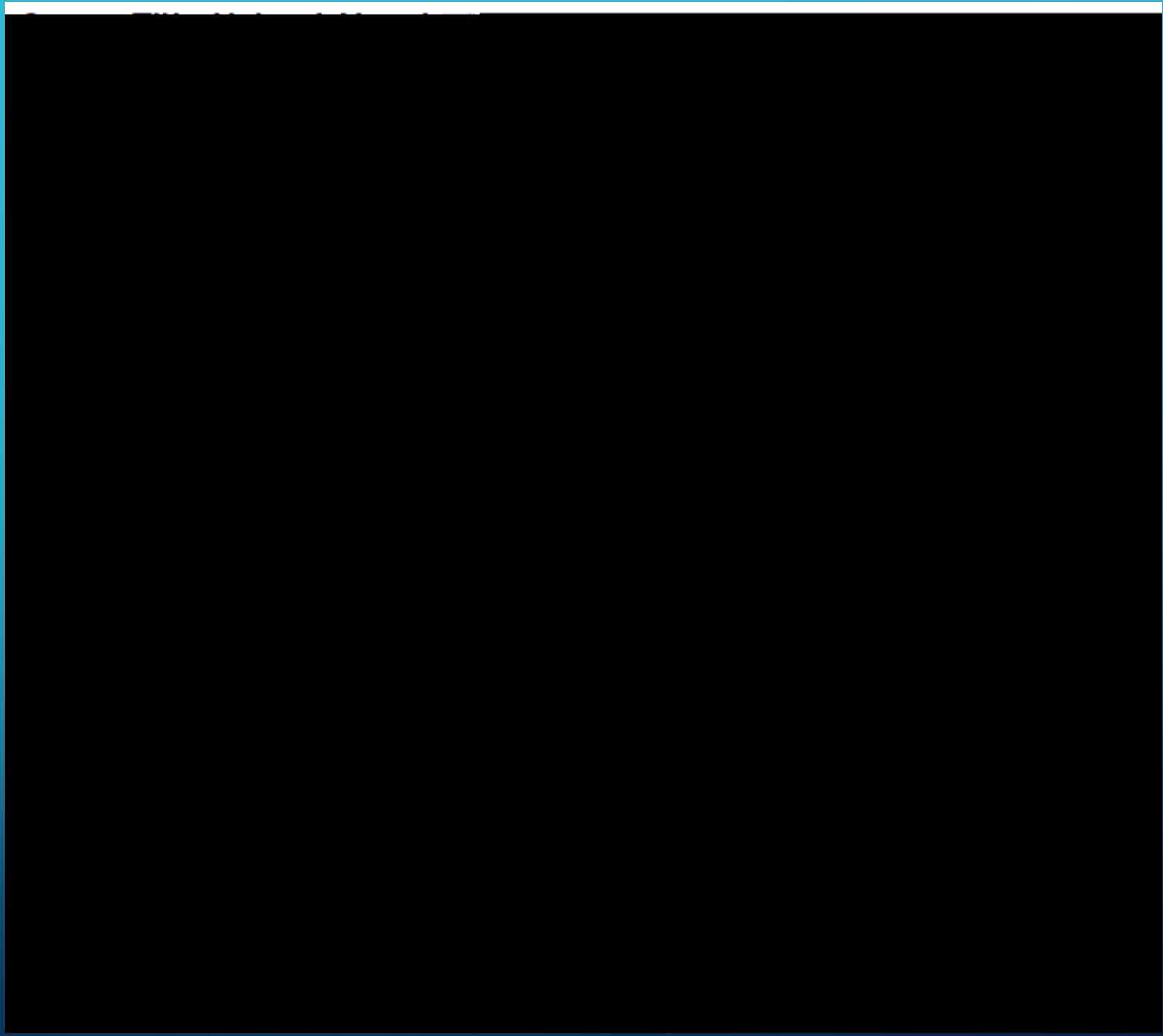
‡ Explain the JTBD framework and apply it to identify realworld problems.

‡ Understand, Apply

Week 4

Week	Topic	Objectives	Bloom's Taxonomy Levels
1	Introduction to Design Thinking	Understand the stages of the Design Thinking process and apply it to a problem.	1-3
2	User Feedback	Collect and integrate user feedback to refine prototypes.	Evaluate, Apply
3	Final Project	Utilize JTBD, Design Thinking, and prototyping to create a solution.	Create, Evaluate







emphasized."

Hello, as an expert in mechanical engineering, I would like you to solve the following problem. A turbine engine produces 7,000 kW at 5,500 RPM. A solid circular shaft of diameter D_1 connects the output

You

In the above you stated that the torque expression, $P = T \cdot \omega$, is the same for both shafts.

But the difference between the two shafts is the angular velocity, ω , which is different for the two shafts.

So, if the torque is the same for both shafts, and the angular velocity is different, then the power must be different.

ChatGPT

The torque expression, $P = T \cdot \omega$, is the same for both shafts, but the angular velocity, ω , is different for the two shafts.

Therefore, the torque is different for the two shafts, and the power is the same for both shafts.

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Understanding and _____. Absolutely, incorporating hands-on activities can significantly enhance un-
with the Jobs to Be Done (JTBD) framework. Here are some creative, group-oriented _____ engagement
works 1 and 2, focused on making the JTBD concept more relatable for students. _____ activities for

Activity 1: JTBD Interview Role Play Activity

Objective: To practice identifying underlying customer needs through the JTBD framework by _____ role-playing interviews.

small groups. Each group is given a product or service category (e.g., _____ • **Setup:** Divide the class into small
groups of 3-4 students. Assign each group a product or service category.
With each group, students take turns role-playing as the customer and _____ • **Task**

You

Can you identify any youtube videos that could accompany these activities?

ChatGPT

Here are some YouTube videos that could accompany these activities:

1. [Introduction to User-Centered Design \(UCD\)](#) - This video provides an overview of the UCD process and its importance in product development. Watch here: [Introduction to User-Centered Design \(UCD\)](#)

2. [The Design Thinking Process](#) - This video explains the five stages of Design Thinking: Empathize, Define, Ideate, Prototype, and Test. Watch here: [The Design Thinking Process](#)

3. [User Research Methods](#) - This video discusses various user research methods, including interviews, surveys, and usability testing. Watch here: [User Research Methods](#)

4. [Prototyping in Design](#) - This video explores the importance of prototyping in the design process and provides tips for creating effective prototypes. Watch here: [Prototyping in Design](#)



You

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1. Understanding the Difference

What is the essential difference?

2. Role of Choice & Willingness

How does Willingness

3. Role of

5. The

ChatGPT

ChatGPT is a generative AI chatbot powered by OpenAI's GPT-4 language model. It can generate human-like text based on the prompts it receives. The interface is simple and intuitive, allowing users to interact with the AI in a conversational manner. The AI's responses are often highly relevant and detailed, making it a valuable tool for various tasks such as content creation, research, and problem-solving.

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(3) Politics - Exemplary

As a democratic nation, it is crucial to ensure that the U.S. Constitution is properly interpreted and applied in all government actions.

The Supreme Court's recent decision in *Dobbs v. Jackson Women's Health Organization* is a landmark ruling that has significant implications for the future of the country. It is important to analyze this decision in the context of the broader political landscape.

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