



# **INNOVATION AND DESIGN THINKING**

**AI SYLLABUS**

# Innovation and Design Thinking

## Course Description

This course provides an introduction to the principles and practices of innovation and design thinking. Topics include ideation, prototyping, user-centered design, and product development.

## Course Goals

- Understand the key concepts and principles of innovation and design thinking
- Identify the major components of the innovation process and their interrelationships
- Analyze and evaluate the performance of innovative products and services
- Develop strategies to optimize the innovation process
- Understand the role of user-centered design in innovation
- Gain an understanding of the challenges and emerging trends in innovation and design thinking

## Course Policies:

- Attendance is mandatory and will be factored into the final grade
- Late submissions will be penalized
- Plagiarism will not be tolerated and will result in a failing grade
- Classroom discussions should be respectful and constructive

## Course Schedule:

### Week 1: Introduction to Innovation and Design Thinking

1. Overview of innovation and design thinking
2. Historical perspectives on innovation
3. Importance of innovation and design thinking
4. Major components of the innovation process

### Week 2: Ideation

1. Ideation techniques and methods

2. Brainstorming and ideation exercises
3. Creative problem-solving and design thinking
4. Developing and refining ideas

### Week 3: Prototyping

1. Prototyping techniques and methods
2. Low-fidelity and high-fidelity prototypes
3. Iterative prototyping and testing
4. Rapid prototyping tools and technologies

### Week 4: User-Centered Design

1. User research and empathy mapping
2. Design thinking and user-centered design principles
3. Personas and user stories
4. User testing and feedback

### Week 5: Product Development

1. Product development life cycle
2. Product development methodologies and frameworks
3. Cross-functional collaboration in product development
4. Launching and scaling innovative products and services

### Week 6: Emerging Trends and Challenges in Innovation and Design Thinking

1. Open innovation and co-creation
2. Artificial intelligence and innovation
3. Sustainability and design thinking
4. Ethics and social responsibility in innovation

### Grading and Assessment:

Attendance and participation (10%)

Individual case analysis (20%)

Group project on developing and launching an innovative product (20%)

In-class presentations and discussions (20%)

Mid-term exam (15%)

Final exam (15%)

## Required Readings:

1. [The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses by Eric Ries](#)
2. [The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail by Clayton Christensen](#)
3. [The Design of Everyday Things by Don Norman](#)
4. [Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days by Jake Knapp, John Zeratsky, and Braden Kowitz](#)
5. [Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation by Tim Brown](#)
6. [The Ten Faces of Innovation: IDEO's Strategies for Beating the Devil's Advocate and Driving Creativity Throughout Your Organization by Tom Kelley and Jonathan Littman](#)
7. [Designing for Growth: A Design Thinking Tool Kit for Managers by Jeanne Liedtka and Tim Ogilvie](#)
8. [The Innovator's Method: Bringing the Lean Start-up into Your Organization by Nathan Furr and Jeff Dyer](#)
9. [Creative Confidence: Unleashing the Creative Potential Within Us All by Tom Kelley and David Kelley](#)