IDT310: Innovation and Design Thinking
Interdisciplinary Department
Course Duration: Fall 2022 - Winter 2023 (Full Year)

Course Overview:
IDT310 explores innovation through design thinking methodologies. Students from various disciplines will collaborate to address complex problems using creative problem-solving techniques. The course involves brainstorming, prototyping, and presenting innovative solutions.

Learning Objectives:
1. **Understand Design Thinking:** Grasp the principles and stages of the design thinking process.
2. **Collaborative Problem Solving:** Work effectively in interdisciplinary teams to tackle complex problems.
3. **Prototype Development:** Create and refine prototypes based on iterative feedback.
4. **Innovative Solutions:** Develop innovative solutions that address real-world challenges.
5. **Presentation Skills:** Communicate ideas clearly through presentations and written reports.

Course Structure & Key Deliverables:

Phase	Weeks	Focus	Activities	Deliverables	Due Date
1. Introduction & Team Formation	1-3	Introduction to Design Thinking	Overview of design thinking, team formation	Team Charter (10%)	September 15, 2022
2. Problem Definition & Research	4-7	Defining Problems & Conducting Research	Identifying and defining problems, research methods	Problem Definition Report (15%) Research Summary (10%)	October 31, 2022 November 15, 2022
3. Ideation & Prototyping	8-12	Generating Ideas & Building Prototypes	Brainstorming sessions, creating prototypes	Ideation Report (15%) Prototype Demonstration (20%)	December 15, 2022 January 31, 2023
4. Testing & Refinement	13-17	Testing Prototypes & Refining Solutions	User testing, gathering feedback, refining designs	Testing Feedback Report (15%) Refined Prototype (20%)	February 28, 2023

Phase	Weeks	Focus	Activities	Deliverables	Due Date
5. Final Presentation & Reflection	18-20	Final Presentation & Reflection	Preparing final presentation, reflecting on the process	Final Presentation (15%) Reflection Paper (10%)	March 15, 2023 March 20, 2023

Grading Breakdown:
- **Team Charter:** 10%
- **Problem Definition Report:** 15%
- **Research Summary:** 10%
- **Ideation Report:** 15%
- **Prototype Demonstration:** 20%
- **Testing Feedback Report:** 15%
- **Refined Prototype:** 20%
- **Final Presentation:** 15%
- **Reflection Paper:** 10%

Total: 100%

Detailed Deliverables:
1. **Team Charter (10%)**
   - **Description:** Document outlining team roles, responsibilities, and goals for the project.
   - **Due Date:** September 15, 2022
2. **Problem Definition Report (15%)**
   - **Description:** Detailed report defining the problem to be addressed, including background and scope.
   - **Due Date:** October 31, 2022
3. **Research Summary (10%)**
   - **Description:** Summary of research findings related to the problem, including sources and insights.
   - **Due Date:** November 15, 2022
4. **Ideation Report (15%)**
   - **Description:** Report documenting brainstorming sessions and the range of ideas generated.
   - **Due Date:** December 15, 2022
5. **Prototype Demonstration (20%)**
   - **Description:** Demonstration of initial prototypes, showcasing their functionality and potential.
   - **Due Date:** January 31, 2023
6. **Testing Feedback Report (15%)**
   - **Description:** Report on user testing results, including feedback and implications for refinement.

- o **Due Date:** February 28, 2023
7. **Refined Prototype (20%)**
   - o **Description:** Final version of the prototype incorporating feedback and improvements.
   - o **Due Date:** February 28, 2023
8. **Final Presentation (15%)**
   - o **Description:** Presentation of the final project, including problem definition, process, and solution.
   - o **Due Date:** March 15, 2023
9. **Reflection Paper (10%)**
   - o **Description:** Reflective paper on the design thinking process, personal learning, and project outcomes.
   - o **Due Date:** March 20, 2023

This syllabus for IDT310 integrates the design thinking process with practical application, providing students with structured milestones from problem definition through to final presentation. Each phase of the course is designed to build skills in innovation, collaboration, and effective communication.