Design Thinking Course Outline

COURSE OUTLINE

Name of Course & Course Code
Design Thinking (JSPE214)

SECTION 1 – GENERAL INFORMATION

1.1 Course Faculty

Faculty Coordinator	Prof. Kamalika Chakraborty

1.2 Level

Tick applicable Level

Foundation	Core	Level 1	Level 2	Level 3	Practice
					√

1.3 Course Weight

Indicate the credit point weighting of this Course

Course credit points
2

1.4 Course workload

Using the table below, indicate the expected student workload for this Course.

Contact Hours (20 for 2 credit course and 30 for 3 credit course)	Directed Learning Hours (learning on one's own)	Total Hours (should be not less than three times the contact hours)
20	40	60

1.5 Delivery mode

Tick all applicable delivery modes for the subject:

☒ Face to face on site

☒ E-learning (online)

☐ Blended (provide details)

1.6 Pre-requisites required for the Course, if any

Yes ☒ No ☐

If YES, provide details of the prerequisite(s) below:

1.7 Other resource requirements

Do students require access to specialist facilities and/or equipment for this subject (for example, special computer access, and physical education equipment)? For example, Bloomberg.

Yes ☐ No ☒

If YES, provide details of specialist facilities and/or equipment below.

1.8. Linkage to Career Goals

Please describe the relevance to an area in brief (one short para). Include the relevance of the course for a career, e.g., Applicable for all students irrespective of the area of major/minor, applicable for a career in Marketing, applicable for a career in HR and marketing etc.

The demands on skills for success in 21st Century corporate world have changed with newer & diverse practices of innovation, creativity, networking, presentations, collaborations, problem-solving, and decision-making gaining currency in current times. Among the skillsets identified for Industry 4.0, solution orientation and problem solving has been identified as one of the major skills. Over the last decade Design thinking is addressing this very need of management and has become the buzz word in management circles & corporate world as a potent process/tool. This is an introductory course for students to learn and appreciate the various tools associated with problem identification and coming up with feasible innovative solutions to those problems. Applicable to all careers.

1.9. Alignment with Learning Goals and Learning Objectives

Aligned to:

GLG4: 4.1 problem framing, 4.2 Evaluation of alternatives and 4.3 Feasible solution Assessment Process: As part of the AOL- GLG no.4- students are required to submit individual assignments related to points 1,2 and 3 below to capture AOL for GLG 4. The assessment events are mentioned below. 1) **Problem Framing**- Students shall frame problem statements based on the observations from the site of enquiry while doing the live project (**Evaluation of LO 4.1)** **2) Evaluation of multiple alternatives**- Assessment of multiple solutions for the identified problem using specific criteria for assessment (such as feasibility, viability of the idea, scalability of the idea etc.) – (**Evaluation of LO 4.2)** **3) Feasible solution**- Outcome of the analysis in step no.2-(**Evaluation of LO 4.3)**

Where Assessed:

Ongoing assignments, End term/project report and exhibition.

1.10. Linkage to Multiple Intelligences

Tick all applicable options

☐ Verbal-Linguistic

☒ Logical-Mathematical

☐ Spatial Visual

☐ Bodily-Kinesthetic

☐ Musical

☒ Interpersonal

☐ Intrapersonal

☐ Naturalist

1.11. Linkage to IDEAS Framework

Tick all applicable options

☒ Innovation

☒ Design Thinking

☒ Entrepreneurial Attitude

☒ Automation

☒ Solutioning

SECTION 2 – ACADEMIC DETAILS

2.1 Learning Outcomes for the Course

Learning outcomes for Course (Use Bloom's Taxonomy as applicable)
1. Use Design Thinking frameworks, tools and techniques 2. Design and formulate a Design Thinking solution for business, through a comprehensive project- for a business idea/product concept/ customer experience. 3. Develop a Design Thinking 'mindset' towards innovative problem solving 4. Framing actionable problem/possibility statements using analysis & syntheses of data and create and test prototypes.

2.2 Assessment

(Add Rows as required)

Assessment task		
Type *	**When assessed – Session/Week**	**Weight**
Observation (Individual)	Week 2 of the term	10%
Empathy (Individual)	Week 3 of the term	10%
Problem Framing (individual)	Week 4 of the term	10%
Ideation (Individual)	Week 6 of the term	10%
Prototyping (individual)	Week 7 of the term	10%
Testing (individual)	Week 8 of the term	10%
Problem-Solving, Evaluation of Alternatives, and Feasible Solutions presentation (Group based) including Video Case. Group Report.	Innovation Exhibition Day Week 10 of the term.	40%

2.1Session Wise Details

Session	Topic	Pedagogy	Pre-session Readings	ESG Inclusion
The Session Format for Design Thinking involves exposing students to the frameworks, tool, techniques with relevant examples, assignments for each concept followed by discussion. Students form themselves into groups of 5 members and select an organization right at the beginning of the course. Students apply the Design Thinking tools on the organization chosen, study the organization, identify the problem, and come out with solution prototypes. This course has been integrated with the ***Design Thinking for Innovation Course*** offered by the University of Virginia. **Design Thinking for Innovation | Coursera.** ***Completion of the above-mentioned Coursera course is mandatory for appearing in the final innovation exhibition day for Design Thinking Course.***				

Session	Topic	Pedagogy	Pre-session Readings	ESG Inclusion
Students are expected to go through the pre-reads and post-reads as indicated in the course outline for effective learning.				
Module 1: Introduction to Design Thinking *Learning Objectives* Understand the basics of Design Thinking and its application to business and innovation.				
1&2	Introduction to the concept of Design Thinking The Gift Giving Experience	Experiential Exercise in Class	What is Design Thinking & Why is it so Popular? **https://www.interaction-design.org/literature/article/what-is-design-thinking-and-why-is-it-so-popular** Introduction to Design Thinking? The Good Kitchen Story. **(Videos from the Coursera Course)**	
3&4	Case: **Jaipur Foot.** Establish a working definition of innovation. Recognize the three conditions for successful innovation.		BMVSS: Changing Lives through Innovation One Jaipur Limb at a Time (Abridged) How Indra Nooyi turned Design Thinking into Strategy	
Module 2 Problem Framing *Learning Objectives* Practice problem finding through systems study of 'AS IS' using observation and interviewing skills to develop an empathetic worldview through ethnographic study of stakeholders. Framing actionable problem/possibility statements using analysis & syntheses of data. Apply Design Thinking to ESG-related challenges.				
5&6	**Observation** The students do an assignment on observation of 'AS IS' system, process, services, organization	Exercises and Class Discussion		✓

Session	Topic	Pedagogy	Pre-session Readings	ESG Inclusion
	design etc. This is done using frameworks & tools which include AEIOU canvas and other exercises			
7&8	**Empathy** Creation of research questionnaire contextual to stakeholders, using Laddering technique & 5W & H framework. Empathy Canvas. Journey Map of stakeholders Persona of stakeholders Develop empathy not just for customers, but for affected communities and the planet.	Exercises and Class Discussion	The MeYouHealth Story Part I: What Is? | Coursera	✓
	Mentoring Session -1 Each student group undergoes focussed mentoring with faculty-in charge where the team discusses progress and is provided feedback for further improvement on the assignments.			
9&10	**Problem Articulation** This session builds upon the previous sessions whereby the students are encouraged to identify opportunity areas by developing a mindset/frame to see problems & possibilities. Articulating the problem / possibility i.e., framing & defining the problem using "How Might we" approach	Exercises and Class Discussion		

Session	Topic	Pedagogy	Pre-session Readings	ESG Inclusion
Module 3: Problem-Solving Stage *Learning Objectives* Structured Ideation and create an innovative solution. Understanding of prototyping as a strategy to develop & test ideas.				
11, 12 &13	**Mentoring Session- 2** Each student group undergoes focussed mentoring with the faculty-in-charge where the team discusses progress and is provided feedback for further improvement on the assignments.		.	
14	**Ideation** Lateral Thinking techniques Divergent Thinking techniques Brain Storming SCAMPER tool Evaluating the ideas for apt solution i.e., prototype – individually on basis of feasibility, viability, scalability.	Cases, exercises and Class Discussion	The MeYouHealth Story Part II: What If? | Coursera	
15	**Mentoring Session-3** Each student group undergoes focussed mentoring with faculty-in charge where the team discusses progress and is provided feedback for further improvement on the assignments.			
16	**Prototyping** Students are encouraged to create a rough prototype based on the solution.	Cases, exercises and Class Discussion	The IBM Story | Coursera	

Session	Topic	Pedagogy	Pre-session Readings	ESG Inclusion
17	**Testing of prototype** Testing the various aspects of the product/service using feedback collected from the stakeholders. Implementation plan of the project.	Cases, exercises and Class Discussion	Learning Launch Tool | Coursera	
Post read: **Reviewing Our Lessons | Coursera**				
18	Student Final Presentations on the Project.			

BOOT Camp before Innovation Exhibition Day

- **BOOT CAMP FOR BOTH THE GROUPS TOGETHER.**
  - **Day 1: Group 1: 4 Sessions / Class / Day**
  - **Day 2: Group 2: 4 Sessions / Class / Day**

Prescribed and recommended readings

Provide below, in formal reference format, a list of the prescribed and recommended readings for the Course.

Recommended Articles

The evolution of Design Thinking- Harvard Business Review

From Design-to-Design Thinking at Stanford and IDEO.

What is Design Thinking & Why is it so Popular?

https://www.interaction-design.org/literature/article/what-is-design-thinking-and-why-is-it-so-popular

Design Thinking Process (Stanford D-School PDF)

Design Thinking Bootcamp Tools (Stanford D-School PDF)

Brief outline of the Course Project

The main purpose of the course project is to get a hands-on experience on the process of Design Thinking and develop a problem-solving mindset. Students are divided into groups of 5 or 6 and will identify an organization at the beginning of the course. The project deliverables will entail finding and articulating a problem, solving the problem by proposing a unique and innovative solution and testing the prototype based on feedback from the stakeholders. Students can choose any organization in their vicinity from any domain which may involve IT Companies, manufacturing units, Logistics organizations, Consulting, Bank, Retail outlet, FMCG, National Chains in food & beverages, hotels, Waste Management, Municipal Corporation, Traffic Police etc. Based on the analysis of the above sections, students should make necessary recommendations about how the company can retain/improve its performance.

Students will also submit their group reports on their projects which should not be more than 7-8 pages and must cover:

Problem Statement
Insights behind the problem statement i.e., pains that stake holders face
Solution
Prototype for the solution
Uniqueness of Solution
Is the Solution Scalable, Sustainable, Feasible, Viable
Feedback from Organization
Challenges/Limitations related to the project
Team Learning
Acknowledgements
Supporting photographs/diagrams for each point.

Students will also make ***a video case of their projects*** before the Innovation Exhibition Day and will make a presentation of their prototypes on the Innovation Exhibition Day in front of a jury of experts.

Important Note: Students should cite all the sources of data used while analyzing and preparing the report. Failure to acknowledge the source shall be considered as plagiarism and will subject to penalty. The submitted projects will be checked for any kind of plagiarism activity. Students found with plagiarism activity shall receive strict penalty. Academic integrity of the highest order should be maintained by all the students in the class.