



F-7-16

Unit Code	BSD 414
Unit Title:	Design Thinking
Pre-requisites	BDM 121
Program(s):	BSE Year 4 Semester 1
Lecturer Name:	Mr. Daniel Njeru
Lecturer Contacts:	Email: daniel.njeru@zitech.ac.ke Phone No: 0719321351
Consultation time :	Monday 11:00am-2:00pm in Mang'u Campus or Wednesday 11:00am to 2:00pm in TRC Campus.

Purpose of the Course

The purpose of this course is to introduce the learner to the design thinking approaches and mindset using highly interactive exercises that enable the learner to implement techniques and methods of design thinking in an innovative manner.

Expected Learning Outcomes of the Course

By the end of the course, a learner should be able to:

- i. Understand the concepts of design thinking approaches
- ii. Create design thinking teams and conduct design thinking sessions.
- iii. Use critical and design thinking to solve real and simulated problems.
- iv. Evaluate the emerging trends and technologies in design thinking

Course Content.

Introduction to design thinking: Terminologies, skills, mindset and principles of design thinking. Approaches to design thinking: basis and frameworks in design thinking, building a design thinking framework, design thinking team, workshops and design thinking meetings and workshops. Design thinking techniques: Listening and empathizing techniques, ideation techniques, and prototype and test techniques. Design

thinking tools: Form, explore, create, prototype, evaluate. Design thinking practices: Visualization techniques and diagrams, storytelling. Adopt and adapt design thinking: Cautions and pitfalls, best practices. Emerging trends in design thinking.

WEEK	TOPIC	SUB TOPIC	DELIVERABLES
Week 1&2	Design Thinking Overview	<ul style="list-style-type: none"> • Introduction to design thinking • History of design thinking • Overview of design thinking frameworks • Exploring the 5 Stages in design thinking framework • Design thinking for everyone in the organization • Innovation in solving problems with design thinking • Steps to facilitate design thinking in your team 	
Week 3	Approaches to Design Thinking	<ul style="list-style-type: none"> • The Basis for Design Thinking • Design Thinking Frameworks • What Constitutes a Design Thinking Team? 	Class Exercises: Build a Design Thinking Framework Create a Design Thinking Team
Week 4	Approaches to Design Thinking	<ul style="list-style-type: none"> • Design Thinking Workshops and Meetings • Characteristics • Types of Design Thinking Workshops 	
	A Design Thinking Approach in Stages Empathy in Design Thinking	<ul style="list-style-type: none"> • What is empathy? • It's relevance in design thinking • Developing empathy for your target groups • Techniques to develop empathy with users • Understand the ways to get results from ethnographic research • How to conduct user interviews? • How to build empathy with user groups? 	
Week 5	A Design Thinking Approach in Stages Define in Design Thinking	<ul style="list-style-type: none"> • Overview of define phase • Methods with define • Clustering your ideas and reveal insights through Affinity Diagrams • Introduction to personas • Steps to create engaging personas • Constructing and describing a persona • Empathy Maps- Their importance and how to use them • Problem statement- How to create your point of view (POV) problem statement • Mapping the stakeholders in the design project 	Class Exercises: Review the Case Study on Design Thinking Develop Potential Solutions Create a Prototype of the Solution

Week 6	A Design Thinking Approach in Stages Ideate in Design Thinking	<ul style="list-style-type: none"> • What is Ideation? • It's importance in design thinking • Preparing an ideation plan • Technique of brainstorming • Using the SCAMPER Ideation method • Using the worst possible idea method • Use the challenges assumption method • Analogies method • Sketching as an ideation method • Barriers in ideation and how to overcome them 	
Week 7	A Design Thinking Approach in Stages Prototype Alternate Solutions	<ul style="list-style-type: none"> • What is prototyping? • How does it benefit? • How to start with prototyping? • Insights from prototyping • Fidelity prototypes and best practices • Pitfalls in prototyping and how to avoid them • Ensuring feasibility and viability of the prototype to the actual product 	
	<p style="text-align: center;">CAT 1</p> <p style="text-align: center;">Case Study Analysis on Design thinking Approaches in Stages</p>		
Week 9	A Design Thinking Approach in Stages Test/Design the Solutions	<ul style="list-style-type: none"> • Overview of the design phase • Types of Evaluative Research • When to use Evaluative research? • What is a usability Test and when to use it? • How to conduct the heuristic evaluation? • Test your prototypes for feedback and learning • Pitfalls in usability testing • Feedback 	Class Exercises: Art of asking powerful questions Create Personas for the Case Study Prepare and A / B Test of the Prototype
Week 10	General Design Thinking Practices Product Development	<ul style="list-style-type: none"> • Visualization Techniques and Diagram • Story Telling Techniques • Fundamentals of Product Development • System Thinking • Minimum Valuable products 	Create a Set of K-Scripts for the Case Study Perform Role Playing of Scenarios for the Case Study
Week 11	Adopt and Adapt Design Thinking	<ul style="list-style-type: none"> • Cautions and Pitfalls • Pitfalls and Cautions in Design Thinking Workgroups • Final Words and Best Practices • Exercise: Best Practices • Exercise: Take the Practices Back to the Office 	Best Practices
Week 12	Design the Solutions	<ul style="list-style-type: none"> • Overview of the design phase • Types of Evaluative Research • When to use Evaluative research? • What is a usability Test and when to use it? 	

		<ul style="list-style-type: none"> • How to conduct the heuristic evaluation? • Test your prototypes for feedback and learning • Pitfalls in usability testing 	
Week 12	CAT 2		
Week 13	Case Analysis	Presentations of Case Analysis, discussions and presentations	
Week 14	END OF SEMESTER EXAMS		

MODE OF DELIVERY

The course unit will be delivered through blended and Face to Face learning.

TEACHING/LEARNING METHODOLOGY

Lectures, Presentations, Case studies, Lab Practical, Library Research, Video Conferencing

INSTRUCTIONAL MATERIALS

Course texts, Handouts, Presentation slides, Computer Software and Hardware, Simulation Boards, Virtual Labs, Simulators, LMS.

ASSESSMENT CRITERIA

<i>Assessment Type</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Assignment</i>	<i>2</i>	<i>10%</i>
<i>CATs</i>	<i>2</i>	<i>20%</i>
<i>Final Examination</i>	<i>1</i>	<i>70%</i>
<i>Total</i>		<i>100%</i>

Core Reading Materials for the Course

1. Brown, T., & Katz, B. (2019). *Change by design: How design thinking transforms organizations and inspires innovation* (Vol. 20091). New York, NY: HarperBusiness.
2. Stickdorn, M., Hormess, M. E., Lawrence, A., & Schneider, J. (2018). *This is service design doing: applying service design thinking in the real world*. " O'Reilly Media, Inc."

Recommended Reference Materials

1. Gallagher, A., & Thordarson, K. (2018). *Design thinking for school leaders: Five roles and mindsets that ignite positive change*. ASCD.
2. Prud'homme van Reine, P. (2017). The culture of design thinking for innovation. *Journal of Innovation Management*, 5(2), 56-80.

3. Lichtenthaler, U. (2020). Agile innovation: the complementarity of design thinking and lean startup. *International Journal of Service Science, Management, Engineering, and Technology (IJSSMET)*, 11(1), 157-167.

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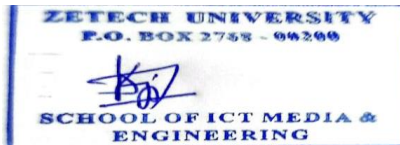
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