Module Name	**Innovation for Sustainable Development**				
Module Code	E8-ISD-17	Version no.	02	Last Modified Date:	19-03-2019
Level	8	Credits	20		

Aim	The overall aim of the module is to prepare students to develop solutions to meet laid down United Nations Sustainable Development Goals (SDGs). This is largely achieved through applying the design thinking process in a challenge driven human-centered, solutions-focused, action oriented manner to create innovative solutions. The students learn to identify and appreciate the human and environmental need behind a business opportunity.
Rationale	Instead of traditional lectures, learning by doing is at the forefront of the design thinking process which nurtures creativity, self-competencies, group dynamics, project management, innovativeness and collaboration. Students will learn to work in small multidisciplinary groups, appreciate different views, cultures, develop patience, understanding and appreciate one another. They will also get immersed in a social environment wherein they identify challenge(s), reformulate problems and develop innovative and viable solutions that satisfy the needs of selected challenge givers and/or stakeholders.

Pre-Requisites	None	Co-Requisites	None

	Campus Learning (CL)	Distance Learning (DL)	
Delivery Approach	CL		
Notional Learning Hours	Guided Learning	50	
	Independent Learning	150	

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Learning Outcomes	After passing the module the students should be able to:
	- Describe and apply systematic methods that are used in different phases of design thinking approach to different societal challenges; - Appreciate the multidisciplinary learning process in solving societal problems; - Define different typologies of challenges and explain how they relate to humans and then business; - Explain strategic and organizational problems related to innovation work; - Make assessments of the commercial potential of innovations; - Write a brief business plan or gather information needed for assessing the potential of an innovation; - Create and carry out a project plan; - Handle and tackle technical problems that appear vague and ambiguous; - Independently collect relevant data to solve technical and organizational problems; - Apply research in innovation management and product development; - Communicate orally and in writing, the development processe(s) of work done with data to back up - Study, judge and exchange feedback on project work in a structured way. - Work as a team and reflect on their own development (Self-competencies) and learning process. - Work collaboratively in a structured way, formulating, planning and carrying out a developmental project and coming out with a prototype and communicating with stakeholders and intended end-users. - Be able to relate to and promote awareness of the UN SDGs.

Assessment	Assessment Heading	Assessment Type		Contribution (%)
		CL	**DL**	

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	Attendance\n\nStudents should show participation by providing a signature on specified days.	N/A		5
	Self-Reflective Essays\n An Essay based piece of writing that gauges the individual understanding of students in terms of;\n\n• Self-competencies\n• Group dynamics	Interim Self-Reflective Essay Submission		35
	Project Report Assessment & Delivery\n\nFor this project, deliverables consist of a draft plan, a set of presentation material, and an in-depth outline of the project based on the use of the Design Thinking Process.	Final Project Report Submission & Oral Presentation Delivery		60
	Supplementary Assessment:\n\nWritten Project Report of the Challenge.	Revised Project Submission		100
Learning Resources	Required reading:\n1. Introduction to design thinking prepared by module facilitator(s);\n2. Design Thinking (Innovation Trends Series) Kindle Edition, BBVA Innovation Center (EBook)\n3. Design Thinking Methodology Book Kindle Edition by Emrah Yayici\n\n\nReference Material:\n1. Complete Design Thinking Guide for Successful Professionals Kindle Ling, Daniel Ling\n\nDelft Design Guide			

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	Open Education Resources: <to include information on web-based and electronic resources containing Open Education Resources relevant to this module; hyperlinks to relevant pages to be provided>
Other Resources	Workshop examples from KTH and Youtube.

Indicative Content	• Group dynamics:-
	    ✓ It increases the group's efficiency and productivity.
	    ✓ It increases the group's participation
	    ✓ It increases group satisfaction.
	
	 • Running effective Multidisciplinary groups and encouraging the Design Thinking Process amongst groups.
	
	 • Developing facilitation skills
	 • Developing good research and analysis skills amongst students.
	 • Encouraging Students in Defining and analyzing real societal problems.
	 • Encouraging Students to put into practice their solutions using learnt self-competencies and group dynamics.