Online Resource 2 Design Thinking intervention divided in stages

Stage (Class hours)	Stage description	Activities/Tools
MID-TERM (7 weeks: Sessions 1-14)		
Research (6 hours)	In this stage, the students start at the left side of the first diamond of the DT model used in the course. The students begin the discovery of the context around their projects. They are guided to apply a divergent thinking by collecting as much as primary and secondary data	Secondary research
		Actors Map
		Context interviews
		Observation
Empathy (4.5 hours)	Since DT is based on a human-centered approach, the students learn about the meaning and importance of empathy when analyzing a problem. This stage is also at the left side of the first diamond of the DT model, so the students are encouraged to apply divergent thinking.	Forced Priorities
		Journey Map
		Customer's Empathy Map
Define (6 hours)	Based on the information collected, it is time for the students to converge in a definition or re-definition of the problem (right side of the first diamond in the DT model), including the identification of who has the problem they, as a team, will address. A key element in this stage is finding good insights, or the so-called "aha moment".	Clustering
		Customer User's Profile (Buyer persona)
		Point of View (POV)
		Design principles
First evaluation week: Teams present the progress on their course projects applying first three DT stages		
FINAL TERM (7 weeks: Sessions 15-28)		
Ideation (6 hours)	In this stage, the students jump into the second diamond of the DT approach used in the course, which means applying once again a divergent thinking to come up with as many ideas as possible which should be evaluated and filtered later. Normally, the students choose the best three ideas to take them to the next stage (prototyping).	Brainstorming
		Analogies
		Upside Down
		Impact – Difficulty matrix
		IPOS (Insights, Design Principles, Opportunities, Solution) table

Prototype (6 hours)	The students become 'makers' building prototypes from their ideas. As in the previous stage, prototyping is situated at the left side of the second diamond, which means the students apply divergent thinking by being flexible to iterate their prototypes as many times as necessary. They go from low-fidelity prototypes to medium or high-fidelity ones.	Sketching
		Physical Mock-up and Mock-up apps/webs
		Storyboard
		Role-playing
Validation (6 hours)	Closing the second diamond (right side) of the DT approach, students need to make choices, i.e., to converge. They test their prototypes with real users and also collect feedback from experts until they find the one that will be presented as the solution proposal.	Smokescreen (Landing page), False interface
		'Wizard of Oz' technique
		Interviews
		Feedback Capture Matrix
Final Evaluation week: Teams present their final solution proposal, as a result of following the DT phases		