Design Thinking through Research Course

Research
- Literature Review
- Market Review

Insights
- Synthesis of Secondary Sources
- Synthesis of Primary Sources

Ideation
- Divergent Ideation
- Storyboarding

Prototyping
- Prototyping with Make Tools
- Prototypes Refinement

Testing
- Critique: Problem Definition
- Concept Evaluation
- Critique: Prototyping
- Final Critique

Course Description
This short course is focused on introducing participants to design thinking through an immersive design experience. By engaging in a situated design challenge (protect our food chain from the risk of intentional contamination), participants will learn and apply a variety of design methods to conduct research, analyze and synthesize information, propose and evaluate solutions, and materialize and communicate design alternatives.

Course Objectives
The objective of this short course is to expose LAS members to varied approaches to problem identification and problem solving from a design perspective. In this course, LAS members will engage with design thinking and research methods while identifying, exploring, and proposing solutions to a specific challenge.

Course Content
This course will emphasize balancing primary and secondary sources of data, differentiate between inductive and deductive reasoning, utilize signals from extreme users, differentiate between investigation and evaluation, and distinguish between working in a cyclic process and communicating results in a linear presentation.

Course Organization
This course’s organization is based on the Double Diamond design model. This model is characterized by having two main moments, finding the right problem to address (design research), and creating an appropriate solution to that problem (design development).

Design research involves collecting data through methods such as interviews, observations, and/or experiments. These data are then analyzed to find insights useful for the development of a design solution. Design development involves generating multiple ideas to solve the identified problem, evaluating these ideas and developing a design solution through the use of models and prototypes. This process occurs in cycles in which the design solution is refined with each iteration.

Source: British Design Council (adaptation)