COURSE CONTENT

Course Code	DA3000
Course Title	Thinking and Communicating Visually III
Pre-requisites	DA1000 Thinking & Communicating Visually I
No of AUs	3
Contact Hours	39 hours studio contact

Course Aims

This is a studio-oriented workshop where students are given the opportunity to experience the creative design process and be expose to different skill sets required towards the development of new products and devices. Students are guided with appropriate precedent studies engaging them in studio projects involving the 'hard' and 'soft' skill of the 3d visualization technique.

Through a series of exercises and assignments, students are introduced to stages of the conceptual design from 3-dimensional modeling in digital environment to creative thinking and analysis of product in terms of syntactic, pragmatic and semantic.

Intended Learning Outcomes (ILO)

By the end of the course, you should be able to:

1. Define the fundamentals of product design elements and principles
2. Demonstrate the skill and ability to develop 3-dimensional forms in digital environment
3. Develop the ability to conduct product research
4. Present findings and insights into product design data collected in a clear and cohesive way
5. Critique ideas and techniques employed by yourself or your peers in a constructive manner

Course Content

The subject will be conducted in a studio-classroom.

Teaching methods will consist of a short lecture/presentations and demonstrations presented in each class, followed by practical exercises that reflect the concepts introduced in the lecture. Throughout each class there will be individual and/or group critiques.

Course content includes:

- **Product Design Process & Principles**

    1. The fundamental of product design elements and its application
    2. Design principles and the perceptual process by which the visual world is constructed and its application

- **Development of 3-Dimensional Form in Digital Environment**

    1. Introduction to Inventor 1
        - File Types

        - Interface Basics

        - Part Creation

    2. Introduction to Inventor 2

- Assembly

- Place Parts

- Constraint Parts

- View Parts/ Assembly

- Modeling an Object (assignment 1)

3. Introduction to Keyshot
   - Interface Basics

   - Assign Material

   - Render

- **Conceptual ability through Research and Analysis of data**

1. Investigate and analyse the composition of a product in terms of its structure, component details and respective material (assignment 2 – Syntactic Analysis)

   2. Investigate and analyze the use functions and ergonomics of a product through user observation (assignment 3 – Pragmatic Analysis)
   3. Demonstrate the appreciation and application of how context, form analogies and spirit is projected in an object (assignment 4 – Semantic Analysis)

- **Creative thinking**

   1. Demonstrate the ability to visually communicate research data
   2. Generate creative design thru the application of design principles (assignment 5 – Conceptual Sketches of Deformed Objects)
   3. Critically analyze a product as a communication tool in conveying a desired idea (Final Assignment – Development of New Designed Object)