

COURSE CONTENT

Course Code	DV5004 (DV9001)
Course Title	Art, Design, and Science
Pre-requisites	3rd year students and above
No of AUs	3
Contact Hours	39 hours studio contact

Course Aims

This intermediate level course will familiarize you with the representation, principles and methods that define projects with a focus on the interrelation between art, design and science. Historical case studies on the subject will be critically analyzed as well as individual artist, designer and scientist's practices. You will be able to ask pertinent questions and to articulate and present your research and/or practice in this interdisciplinary field. This course will establish a foundation for future research or practice carried out in multidisciplinary and collaborative environments in general.

Intended Learning Outcomes (ILO)

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

1. Discuss the interrelations between art, design, and sciences in a given historical context.
2. Identify and investigate practices and research outcomes positioned in the intersections of art, design, and sciences.
3. Apply acquired knowledge to develop and present questions, research and individual projects whenever creative and scientist environments coexist.
4. Present, compare and discuss research findings, ideas and progress in the interdisciplinary art/design/science environment in a clear and convincing manner.
5. Participate in interdisciplinary class discussion, critique ideas and methods employed by yourself and your peers in a constructive manner.

Course Content

Historical summary and case study analysis

You will begin this course with historical and practical analysis of concepts, methodologies and case studies where art, design, and sciences interrelate. You will explore themes such as the innovation from Antiquity to Modernity; representation techniques influenced by the interrelations between visual arts, design, and sciences; and an overview of scientific materials and structures that influenced the development of the visual arts and design fields.

Field trips and collaborations with academic, cultural and/or research institutions

You will be able to share your ideas on topics of individual and collective interest and learn from invited guest professors from NTU and/or cultural and research institutions in Singapore.

Methodological approaches to the interrelations between the Visual Arts, Design, and Sciences

Through the relations between the specializations studied at NTU, you will closely inspect the artistic, design and science methodologies. The student cohort will determine the particular focus of this study. Some of the possibilities include:

- Art, Design, and Biological Sciences
- Art, Design, and Chemical and Biomedical Engineering
- Art, Design, and Physical and Mathematical Sciences
- Art, Design, and Environmental Earth Systems Science
- Art, Design, and Physics
- Art, Design, and Psychology
- Art, Design, and Medicine
- Art, Design, and Social Sciences

E.g. Art, Design, and Biological Sciences could also be '**Art** and Biological Sciences', or '**Design** and Biological Sciences'. This example of binary relations can be applied to the full list.

Experimental projects on the interrelations between the Visual Arts, Design, and Sciences

You will carry out two to three experimental exercises during the semester based on a specific topic of your interest that will explore the interrelation between Art, Design, and Sciences.

Final assignment on the interrelations between the Visual Arts, Design, and Sciences

For the final assignment you will select one of two options:

1. Develop a final written research paper based on literature review, primary and secondary sources, and case studies comparison and analysis.
2. Develop a **practice-led research project** with art and/or design outcomes and a final written process report.