

COURSE CONTENT

Course Code	DR5003 (DR9001)
Course Title	Introduction to Design
Pre-requisites	NIL
No of AUs	3
Contact Hours	39 hours studio contact

Course Aims

In this introductory level course, you will be introduced to the overall concept of design and its role in creating communications, objects, interactions, services and environments. You will be introduced the creative process of design and the various methods and tools that enable design solutions. You will gain insights into creating design solutions for people, context, behaviour, technology and business. This course will prepare you for future studies in fields related to design and design thinking.

Intended Learning Outcomes (ILO)

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

1. Describe how design is applied in a range of industries and sectors.
2. Discuss the design process and how this leads to the application of design thinking.
3. Demonstrate an understanding of the essential role of design in various fields.
4. Evaluate and critique the performance of design processes in selected fields.
5. Contribute constructively to discussions on design, the design process, and design-thinking in this course.

Course Content

Introduction

In this course you will be introduced to the ubiquitous role of design in society. You will examine the development of the deliberate creative process known as The Design Process, where a range of designerly techniques are applied to any aspect of society.

The course begins with a brief history of design, starting with the Bauhaus, 1919 – 1933, where systematic approaches to creative thinking and design problem-solving were developed. From that time, design as a conscious deliberate method was applied to a vast variety of industry, commerce and social development. Over time, the design process itself has also developed, and this will be examined in this course.

Visualising ideas

You will be introduced to processes of designing objects, using visual thinking, models and prototypes, and an overview of a range of computer aided design (CAD) processes.

Industry Sectors

A range of industry sectors will be examined from a design point of view, including consumer products, transportation and mobility, urban design, medical products, service design, furniture, environment, sports, entertainment, UX and UI, graphics and communication, branding and packaging. Throughout these modes, foundational aspects such as form, aesthetics, experience,

and interaction will be investigated.

Design Project and Presentation

You will produce a project that critiques the role and important qualities of design in a selected range of applications. DR9001 is an introduction to design before students take a module on Design & Systems Thinking while concurrently doing their Interdisciplinary Project Work (IPW) in the following semester(s). Project work in DR9001 is meant for students to gain personal perspective on all aspects of design before embarking on subsequent module and IPW and the project is an individual project. The expectation is a visual essay rather than prototype.

Assessment (includes both continuous and summative assessment)

Component	ILO Tested	Programme LO	Weighting	Team/ Individual
Assignment 1 Design history research report	1	--	20%	Individual
Assignment 2 Design in Industry sectors report	2,3	--	20%	Individual
Project: - Topic Research 20% - Critique of design success 20%.	1,2,3,4	--	40%	Individual
Continuous Assessment: Participation	5	--	20%	Individual
Total			100%	

Reading and References

1. Borgmann, A. The depth of design. In R. Buchannan, & V. Margolin (Eds.), *Discovering design: Explorations in design studies* (pp. 13-22). Chicago, IL: The University of Chicago Press. 1995.
2. Brown, T., & Wyatt, J. Design thinking for social innovation. *Stanford Social Innovation Review*, 8(1), 30-35. 2010.
3. Bürdek, Bernhard E. *Design: History, theory and practice of product design*. Walter de Gruyter, 2005.
4. Cuffaro, Dan, et al. *The Industrial Design Reference & Specification Book: Everything Industrial Designers Need to Know Every Day*. Rockport Pub, 2013.
5. Fiell, Charlotte, and Peter Fiell. *Industrial design AZ*. Taschen America Llc, 2000.
6. Gray, C., & Malins, J. *Visualizing research*. Ashgate. 2004.
7. IDEO's The Field Guide to Human-Centred Design (<http://www.designkit.org//resources/1>)
8. IDEO www.ideo.com
9. Kelly, T. Littman, J. *The art of innovation : lessons in creativity from IDEO, America's leading design firm*. Harper Collins Business. 2001

10. King, Simon, and Kuen Chang. *Understanding industrial design: Principles for UX and interaction design*. " O'Reilly Media, Inc.", 2016.
11. Kolko, J. Abductive thinking and sensemaking: The drivers of design synthesis. *Design Issues*, 26(1), 15-28. 2010
12. Myerson, J. *Ideo : masters of innovation*. Laurence King. 2 004
13. Noble, I., & Bestley, R. *Visual research: an introduction to research methodologies in graphic design*. Ava Publishing. 2004.
14. Patnaik, D. Mortensen, P. *Wired to care : how companies prosper when they create widespread empathy*. FT Press 2009
15. Pilloton, E. Chochinov, A. *Design revolution : 100 products that are changing people's lives* Thames & Hudson. 2009.
16. Schon, D. *The Reflective Practitioner*. London: Temple-Smith. 1983.

Course Policies and Student Responsibilities

(1) General

You are expected to complete all assigned readings, activities, assignments, attend all classes punctually and complete all scheduled assignments by due dates. You are expected to take responsibility to follow up with assignments and course related announcements. You are expected to participate in all project critiques, class discussions and activities.

(2) Punctuality

You are expected to be punctual for all classes. If you are more than 30 minutes late, you will be deemed as absent and will not be able to sign on the attendance register.

(3) Absenteeism

In-class activities make up a significant portion of your course grade. Absence from class without a valid reason will affect your participation grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. There will be no make-up opportunities for in-class activities.

Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the [academic integrity website](#) for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in

the course.

Planned Weekly Schedule*

*Subject to adjustment by instructor according to the teaching situation, students' progress, public holidays and unforeseeable circumstances. A revised schedule will be issued to students at the start of the semester.

Week	Topic	Course ILO	Readings/ Activities
1	Introduction to Design Overview of design through the history of design	1	Introductory Lecture - In-class discussion
2	Visualising ideas Introduction to concepts of visual thinking and models and prototypes CAD including virtual modes	1,2	Discussions - Understanding the concepts. Introduction of Assignment 1
3	Industry Sectors: Design of consumer products	2,3,5	Lecture: Consumer Products - Class discussion. - Introduction to Assignment 2
4	Industry Sectors: Design for transportation and mobility	2,3,5	Lecture: transportation and mobility - Class discussion.
5	Industry Sectors: Urban design	2,3,5	Lecture: Urban design - Class discussion.
6	Industry Sectors: Design for Medical Products and Service Design	2,3,5	Lecture: Medical Products and Service Design - Class discussion.
7	Industry Sectors: Design for furniture and environment Design for sports and entertainment	2,3,5	Lecture: furniture and environment. Sports and entertainment - Class discussion.
8	Design for experience and interaction - User experience (UX) - User Interaction (UI)	2,3,5	Lecture: experience and interaction - In class discussion
9	Form and Aesthetics Influence of form and aesthetics in design	2,3,5	Lecture: Form and Aesthetics - In class discussion

10	Visual Communication Graphics and communication. Branding and packaging	2,3,5	Lecture: Visual Communication - In class discussion
11 - 12	Design Project Introduction to the exercise Research, analysis and presentation of exercise	2,3,4,5	In-class consultation Discussions on the start and progress of the exercise
13	Student Presentations Final submission	1, 2, 3, 4, 5	Final presentations of project