DM260V Communicating Science Through Art and Art Through Science 7.5 credits

Att kommunicera vetenskap genom konst och konst genom vetenskap

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

The official course syllabus is valid from the autumn semester 2025 according to the decision by the Faculty Board: J-2024-3420. Date of decision: 2025-01-21

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Specific prerequisites

Degree of Bachelor or the equivalent.

Intended learning outcomes

After passing the course, the student should be able to:

- use, discuss and problematise the perspectives on art, technology and design introduced in the course
- reflect on and compare different basic methods in the field of art, technology and design
- reflect on and compare different basic techniques in the field of art, technology and design
- reflect, discuss and argue for different student roles in the field of art, technology and design
- work in and create projects whose main purpose is to communicate science through art and art through science
- present projects in both a popular science format and an artistic format
- document projects in both scientific and artistic reports
- constructively criticise fellow students' work and make alternative suggestions

in order to

- be able to communicate concepts and principles of science, technology, design and art by visualising them through science, technology, design and art.

Course contents

The course is organised in 6 modules.

Module 1: Introduction to art, technology and design Introduction to the intersections of art, science, technology and design.
Historical and contemporary examples of how art and science inform each other.

Module 2: Art, technology and design methods Comparative analysis of research methods in science(e.g. hypothesis-driven inquiry) and methods in art(e.g. process-driven creation, narrative inquiry). Design thinking: how both areas approach design and innovation. Creative experimentation methods.

Module 3: Techniques in art, technology and design Practical workshops on different techniques:
Introduction to data visualisation, scientific illustration, sonification of information, lighting design.
The basics of visual storytelling, immersive technology (XR), interactive installations and the use of metaphor in artistic communication.

Module 4: Student roles in art, technology and design Discuss the roles of scientists and artists when working together. How do competences change in such collaborations? What power dynamics are at play?
Case studies of multidisciplinary teams analysing how individuals from both fields contribute and communicate.

Module 5: Project development - Communicating science through art and art through science Each student group develops a project that integrates artistic and scientific methods. The project will be designed to engage the scientific and artistic community as well as the general public.
Groups will have access to experts and receive guidance on both scientific rigour and artistic expression.

Peer feedback: For presentations, students will provide constructive criticism of each other's projects.

Module 6: Project presentation and documentation Group project presentation: The project is presented in a public exhibition, with students explaining the scientific and artistic elements to an audience.
The project is presented in both a popular science format and an artistic format.
Group project documentation: Each group submits both a scientific report documenting the concept, method, results and analysis and an artistic report describing the creative process, aesthetic choices and how it communicates scientific principles.

Examination

- INL1 - Hand-in assignment, 1.0 credits, grading scale: P, F
- PRO1 - Project work, 4.5 credits, grading scale: P, F
- INL3 - Hand-in assignment, 2.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.