

**SCIENCE, TECHNOLOGY AND SOCIETY:
THE IDEA TRANSLATION LAB AT TRINITY COLLEGE DUBLIN**

COURSE CODE: BCSCI - This course is open to students in arts, humanities and science disciplines.

ECTS VALUE: 5

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COURSE COORDINATOR: Dr. Jane Chadwick Education and Learning Manager, Science Gallery, Trinity College Dublin E: jane.chadwick@sciencegallery.com P: + 353 896 4115

STAFF PROFILES:

Lynn Scarff, MSc is the Acting Director at the Science Gallery Dublin. She holds a BA (mod) in Natural Sciences from Trinity College Dublin and a Masters in Science Communication from Dublin City University. She has six years of teaching experience in 2nd level and developed science education and outreach programmes for a range of NGO and government organizations including Sustainable Energy Ireland, ENFO, Dublin City Libraries and the EPA.

Jane Chadwick is Education and Learning Manager at Science Gallery Dublin. She holds a BA (mod) in Natural Sciences and a PhD in Geochemistry and Volcanology with over six years of research, teaching, and Science Communication experience. At Science Gallery she combines her love of science, technology, and design to develop projects, events, courses and workshops for Science Gallery education programmes.

COURSE RATIONALE AND AIMS:

The Idea Translation Lab course involves working on the boundaries of art, science, technology, and engineering and developing new innovative ideas where these disciplines meet. It is a cross disciplinary undergraduate course stimulating the development of entrepreneurial skills through collaborative group projects.

Modeled on and closely linked to the Harvard University, Idea Translation Lab, the course consists of a combination of lectures, including many guest lectures, and weekly “labs” where students work on developing their collaborative projects. For more information please see examples of [previous iterations of the ITL course from 2011, 2012 and 2013](#). The theme for the 2015/2016 year is FUTURE FARM, a theme that will tie in with Science Gallery’s flagship summer exhibition for 2016 of the same name.

Following the completion of the course and presentation of their projects, a select number of students will have the opportunity to further develop their projects through Trinity term with opportunities to present publicly at national events and Science Gallery exhibitions. This exciting course for undergraduate students in partnership with Trinity College’s unique Science Gallery

allows students opportunities to explore science's interaction with society through practical examples and project work. The programme aims to equip students with skills beyond their discipline boundaries to take creative project ideas and interrogate, applying both design and entrepreneurial skills to produce projects with real world outcomes. These projects may have impact along three axes: social, cultural and commercial.

Furthermore the course will encourage students to reflect critically on the broader perspectives around the cultural, ethical and economic role of science in society including science policy and the commercialization of new ideas.

METHODS OF TEACHING AND STUDENT LEARNING:

The teaching strategy for this course is a mixture of lectures, tutorials, and practical group work (labs). The format of the lectures is conventional, however interaction with the students will be informal, the speakers will be drawn from diverse backgrounds, and students will be encouraged to question and discuss each lecture topic. External experts will contribute to the lecture programme giving students an insight into the practical, everyday application and reality of each topic covered.

COURSE HOURS:

SEMESTER 2: January – April, 11 hrs Lectures, 22 hrs Labs, 22 hrs Group Work

Additional to these contact hours, students will be required to spend approximately an additional 35 hours on self-study and assignments including the idea translation project. Further information on the methods of assessment is included below.

METHODS OF ASSESSMENT FOR COURSE:

Assessment of this module is by;

- Completion of assignment – 20%
- Completion of programme including self-evaluation – 20%
- Completion of group project work including report – 60%

GROUP PROJECT

Students will work in groups to produce group idea translation projects based on the theme of FUTURE FARM, they will be facilitated through this process at weekly group “lab” sessions and can draw inspiration and information from weekly “lecture” sessions with internal and external mentors.

A proposal will be submitted by each group describing the nature of the group's idea, the need it addresses, precedents and challenges to development and how their own idea might be translated to an end product. Each group will present their idea to a judging panel in Science Gallery in Week 12. The winning team will get an opportunity to develop their work further with

Science Gallery.

INDICATIVE COURSE RESOURCES:

Texts

- *David Edwards. Artscience: Creativity in the Post-Google Generation*
- The writing of this book led to the creation of the Idea Translation Lab as an environment of learning around idea development within and between the arts and sciences. It is an exploration of creativity as it is seen today in the lives of contemporary creators, and a synthesis of a kind of 'catalyst' for change and learning, the creative process itself, a fusion of art, as in the aesthetic method, and science, as in the scientific method. All creators fuse these methods at critical stages of an idea translation and thereby innovate.
- Stephen Wilson. **Art & Science Now: How scientific research and technological innovation are becoming key to 21st-century aesthetics**
- *Tom Kelley. The Art of Innovation: lessons in Creativity from IDEO*
- *Stewart Brand. Whole Earth Discipline: An Ecopragmatist Manifesto and "Planetcraft"*

Other Resources

- IDEO - The Deep Dive (1999) - <https://www.youtube.com/watch?v=taJOV-YCiel>
- TIM BROWN - From Design to Design Thinking (2010) - <http://youtu.be/lGOTwFvkfhU?t=8m37s> [It will start at 8m 35s]
- CAROLYN STEEL - How Food Shapes Our Cities (2009) - http://www.ted.com/talks/carolyn_steel_how_food_shapes_our_cities?language=en
- JOHN THACKARA - The End of Endless Growth(2012) - <https://www.youtube.com/watch?v=GlbSAPUAzN8>
- Donella Meadows "Leverage Points: Places to Intervene in a System." <http://www.donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>
- Jonathan Foley "A Five Step Plan to Feed the World" <http://www.nationalgeographic.com/foodfeatures/feeding-9-billion/>