

HPSC Module Catalogue (Postgraduate Taught)

2022-23
v1

Please note that the information below is subject to change. We will notify you with any amendments that may affect your module selection.

Overview

This catalogue describes modules offered by UCL Department of Science and Technology Studies (STS) for the 2022-23 session. Detailed information, including sample syllabi, can be found on the department website: www.ucl.ac.uk/sts/teaching.

The modules are catalogued by term and by programme (History & Philosophy of Science, Science Communication and Science, Technology & Society).

STS students must discuss their selections with their personal tutor. Module selections must be approved by personal tutors. It is the student's responsibility to ensure they satisfy their degree requirements.

Term 2 module selection after cannot be changed after **Term 1 2022-23**. It is therefore essential that you research your module choices thoroughly. The teaching administrator will circulate the deadline for changing Term 2 modules during Term 1 2022/23.

Timetable information

Students are advised that it is their responsibility to check for timetable clashes between modules via the [UCL online timetable](#). Clashes are not an acceptable excuse for missing classes.

The online timetable for the 2022-23 academic year will be published on 4 April.

Students from other departments

Students from other UCL postgraduate taught degrees are welcome to register on most postgraduate HPSC modules. This catalogue indicates where this is not the case. In some cases, pre-requisites apply and queries regarding these should be directed to the module tutor. Otherwise, registration for students from other departments is on a 'first-come, first-served' basis by date selected in Portico.

HPSC postgraduate modules

Click on the module code to jump to module information.

HPSC	Title	Tutor/Co-ordinator	Page
Term 1 (Autumn)			
0073	Introduction to Science and Technology Studies	Dr Cristiano Turbil	3
0080	Early Modern Science	Professor Simon Werrett	4
0085	Knowledge, Explanation and Classification in Science	Professor Emma Tobin	4
0091	Science, Technology and Identity	Dr Simon Lock	4
0092	Responsible Science and Innovation	Dr Jack Stilgoe	5
0093	Science Policy in an Era of Risk and Uncertainty	Dr Carina Fearnley	5
0121	Sociology of Science and Technology	Professor Brian Balmer	5
0127	Engaging the Public with Science	Dr Stephen Hughes	3/6
0144	Science and the Global System	Dr Jenny Bulstrode	6
0149	Practical Science Broadcasting*	Noah Baker	3
0151	Practical Science Writing*	Helen Pearson	3
0153	Science Communication in a Global Perspective*	Dr Jean-Baptiste Gouyon	3
Term 2 (Spring)			
0044	Science and the Publishing Industry	Professor Joe Cain	10
0059	Science, Art and Philosophy	Dr Chiara Ambrosio	7
0082	Science in Antiquity	Professor Andrew Gregory	7
0084	Causality, Mechanism, and Evidence in Science	Professor Phyllis Illari	8
0087	Science in the Twentieth Century and Beyond	Dr Charlotte Sleigh	8
0089	Curating Science and Technology	Science Museum Staff	8
0095	Special Topics in Science, Technology and Society	Dr Erman Sözüdoğru	9
0122	Science Journalism	Dr Jean-Baptiste Gouyon	9
0126	Research Methods and Data Analysis in Science and Technology Studies	Dr Simon Lock & Dr Melanie Smallman	9
0147	Digital Media Skills for Science Communication*	Richard Fisher	7
0152	Science Communication and Social Justice*	Dr Melanie Smallman	7
0156	Health Difference and Inequality	Dr Noémi Tousignant	9
0157	Science Technology and International Development	Dr Michel Wahome	10
Term 3 (Summer)			
0097	Research Project	MSc History & Philosophy of Science and MSc Science, Technology and Society only	11
0155	Science Communication Final Project	MSc Science Communication only	11

*These modules are for students on the MSc Science Communication only

2022-23 Term 1

Compulsory modules by programme

History & Philosophy of Science and Science, Technology & Society:

HPSC0073 Introduction to Science and Technology Studies

This module introduces students to key episodes and themes in Science and Technology Studies and the methodological and critical perspectives required for their full understanding.

Tutor:	Dr Cristiano Turbil (convenor)
Assessment:	Essay (2000 words) – 50%, Essay (2000 words) – 50%
Teaching Session:	Term 1
External Examiner:	Dr Kirsten Walsh, University of Exeter

Science Communication:

HPSC0127 Engaging the Public with Science

This module focuses on the many different ways publics engage with science in face-to-face contexts. It will focus on direct interactions through events, such as science festivals, and through other informal activities. It also will focus on how specific public groups, such as patient and citizen groups, get involved, engage, and sometimes contribute to scientific and medical research. In addition to gaining practical experience with organizing such activities, students also will reflect critically on the theory and context that underpins these activities. Reflection includes sociological models for publics and audiences, rationales for engagement in different communities, wider policy contexts, and historical trends.

Tutor:	Dr Stephen Hughes and Dr Simon Lock
Assessment:	Group Presentation (20 minutes) – 30%, Group Coursework (2000 words) – 30% and Individual Coursework (2000 words) – 40%
Teaching Session:	Term 1
External Examiner:	Dr Jamie Lewis, Cardiff University

HPSC0149 Practical Science Broadcasting

This module supports students to develop advanced science writing skills, to communicate science to different audiences and through different channels, using different formats. The module is practice-based and is taught by a practitioner. It consists in a short intense period of classroom-teaching and a longer period of independent work, with the possibility of receiving formative feedback during the development of the portfolio content. The assessment is a portfolio of different formats of science writing.

Tutor:	Noah Baker
Assessment:	Podcast (10 minutes) – 100%
Teaching Session:	Term 1
External Examiner:	TBC

HPSC0151 Practical Science Writing

This module supports students to develop advanced science writing skills, to communicate science to different audiences and through different channels, using different formats. The module is practice-based and is taught by a practitioner. It consists in a short intense period of classroom-teaching and a longer period of independent work, with the possibility of receiving formative feedback during the development of the portfolio content. The assessment is a portfolio of different formats of science writing.

Tutor:	Helen Pearson
Assessment:	Coursework (3000 words) – 100%

Teaching Session: Term 1

External Examiner: TBC

HPSC0153 Science Communication in a Global Perspective

Taking a global perspective, this module introduces students to key episodes and themes in Science Communication Studies and the methodological and critical perspectives required for their full understanding.

Tutor: Dr Jean-Baptiste Gouyon (convenor)

Assessment: Coursework (3000 words) – 100%

Teaching Session: Term 1

External Examiner: TBC

HPS-themed modules***HPSC0080 Early Modern Science***

The early modern period, from roughly 1400 to 1800, experienced a radical transformation in Europeans' understanding of the natural world. We explore these changes through a series of key moments in the history of early modern science, including the trial of Galileo, Newton's experiments on light and gravity, Hooke's studies with the microscope, and the creation of the first map of India. The module examines these episodes through critical perspectives developed recently by historians of science. These include studies of patronage; the place of magic and alchemy in science; the role of collecting and museums in the development of science; relations between science and art; and the connections between early modern science and religion. We also pay attention to the value of STS approaches for better understanding early modern science by examining issues of trust, gender, science as practice and culture, science and social order, and the public understanding of science. Using ideas from these approaches transforms our understanding of science in the early modern period.

Tutor: Professor Simon Werrett

Assessment: Coursework (4000 words) – 100%

Teaching Session: Term 1

External Examiner: Dr Sabine Clarke, University of York

HPSC0085 Knowledge, Explanation and Classification in Science

In this module, students will examine some of the core topics in contemporary philosophy of science. There are three core themes: (1) What counts as scientific knowledge. (2) What counts as a scientific explanation? (3) What role does classification play in science? These themes will be examined in the context of some working examples from scientific practice. These topics will be integrated with topics discussed in other modules, such as models, representations, mechanisms, causality and evidence.

Tutor: Dr Emma Tobin

Assessment: Coursework (1000 words) – 30% and Coursework (3000 words) – 70%

Teaching Session: Term 1

External Examiner: Dr Kirsten Walsh, University of Exeter

STS-themed modules***HPSC0091 Science, Technology and Identity***

Where, how, with whom, how much and why we encounter (or not) science matters. In this module we explore how science affects our lives and the lives of other people through the lens of social justice. Science is a prized resource in our societies. As a result, it is important to map where people encounter science in their lives and what happens when they do. We will investigate who can access science, how people access and use science (or not)

Module information and syllabi are available at: www.ucl.ac.uk/sts/teaching.

and the differences in between. We will think about science and technology in contemporary and historic contexts using key concepts such as inclusion/exclusion, representation and recognition, relational and redistributive social justice, as well as intersectional approaches to class, race/ethnicity, gender, ability/disability, sexuality and other social positions, such as age or linguistic background. For instance, what do assistive reproductive technologies (such as IVF) mean for how we understand gender and sexuality? How are science museums 'whitewashed'? Do science policies include a 'hidden curriculum' that reproduces class-based advantages? The module is interdisciplinary and will draw on a wide range of concepts from philosophy, sociology, education, cultural studies, and STS.

Tutor: Dr Simon Lock
 Assessment: Translation Project (2500 words) – 50%, Coursework (2500 words) – 50%
 Teaching Session: Term 1
 External Examiner: TBC

HPSC0092 Responsible Science and Innovation

Science, technology and innovation are powerful shapers of social organisation. They have huge potential for both benefit and harm. With power should come responsibility, but history is littered with cautionary tales to suggest that innovation is a form of 'organised irresponsibility'. Are there ways to steer and improve technologies responsibly while they are still emerging? In this module, we examine technologies that are transforming our world, and we consider examples when established technologies were new. Case studies include: geoengineering, gene editing, AI and self-driving cars. We use ideas from ethics, sociology of science, philosophy of technology, and science policy studies.

Tutor: Dr Jack Stilgoe
 Assessment: Coursework (2000 words) – 50% and Coursework (2000 words) – 50%
 Teaching Session: Term 1
 External Examiner: TBC

HPSC0093 Science Policy in an Era of Risk and Uncertainty

This module brings together key thinkers, debates, and cutting-edge research on how society engages with uncertainty and risk. Diverse research methodologies and interdisciplinary skills will be applied in practical case studies to demonstrate the challenges experts in these subjects face with working on globally complex problems. In this module we discuss the challenges of integrating interdisciplinary data sets, and we examine the potential for more deliberative and participatory engagement with stakeholders. The module adopts a problem-based learning approach, using case studies of specific current interest.

Tutor: Dr Carina Fearnley
 Assessment: Poster presentation – 20%, Group Debate 20%, Briefing Paper – 60%
 Teaching Session: Term 1
 External Examiner: TBC

HPSC0121 Sociology of Science and Technology

This module provides a broad survey of sociological models for studying the complex relationship between science and society. It also examines sociological analyses for the construction of knowledge both through historical and contemporary studies. What are the main currents of thought influential in sociology of science and technology? What are their strengths and weaknesses? How have they influenced researchers across the whole range of science and technology studies?

Tutor: Professor Brian Balmer
 Assessment: Essay (1000 words) – 20%, Essay (3000 words) – 80%
 Teaching Session: Term 1
 External Examiner: TBC

This module focuses on the many different ways publics engage with science in face-to-face contexts. It will focus on direct interactions through events, such as science festivals, and through other informal activities. It also will focus on how specific public groups, such as patient and citizen groups, get involved, engage, and sometimes contribute to scientific and medical research. In addition to gaining practical experience with organizing such activities, students also will reflect critically on the theory and context that underpins these activities. Reflection includes sociological models for publics and audiences, rationales for engagement in different communities, wider policy contexts, and historical trends.

Tutor: Dr Stephen Hughes and Dr Simon Lock
Assessment: Group Presentation (20 minutes) – 30%, Group Coursework (2000 words) – 30% and Individual Coursework (2000 words) – 40%
Teaching Session: Term 1
External Examiner: Dr Jamie Lewis, Cardiff University

HPSC0144 Science and the Global System

Modern science has certain dominant characteristics - international, state-funded, mathematically-characterised and technocratic, it claims view-from-nowhere objective knowledge. These characteristics were brought to dominate in the late 18th and 19th centuries, otherwise known as the age of globalisation, revolution and reform. This module is concerned with reframing canonical analyses of the late 18th and 19th century origins of modern science with the critical insights of radical and decolonising traditions. The aim of the module is to develop the relevance of these histories to present day global concerns and to support students to develop marginalised lines of research.

Tutor: Dr Jenny Bulstrode
Assessment: Coursework (3500 words) – 100%
Teaching Session: Term 1
External Examiner: TBC

*Note: this module also can be considered an HPS module.

2021-22 Term 2

Compulsory modules by programme Science Communication

HPSC0147 Digital Media Skills for Science Communication

This module supports students to develop advanced digital media skills, to communicate science to different audiences and through different channels, using different formats. The module is practice-based and is taught by a practitioner.

Tutor:	Richard Fisher
Assessment:	Coursework (20 pages or equivalent) – 100%
Teaching Session:	Term 2
External Examiner:	TBC

HPSC0152 Science Communication for Social Justice

This module maps people's encounter with science in culture. It explores the co-construction of science and technology alongside the intersections of gender, 'race'/ethnicity, class, sexuality, ability, age and other factors that affect our life chances and our identities. It looks at science communication in relation to social justice.

Tutor:	Dr Melanie Smallman (convenor)
Assessment:	Coursework (2500 words) – 100%
Teaching Session:	Term 2
External Examiner:	TBC

HPS-themed modules

HPSC0059 Science, Art and Philosophy

This module explores the interactions between science and art from the mid-nineteenth century to the present. Its philosophical focus is the notion of "representation," conceived as a crucial link between scientific and artistic visual practices. Integrating the history and philosophy of scientific and artistic representations, the module will address a broad range of issues. These will include questions on the nature and role of visual representations in scientific and artistic practice, what counts as "objective" and "accurate" representation, when and how images count as "evidence", and whether the relations between science and modernism contribute to overturn the common sense view that "art invents, science discovers".

Tutor	Dr Chiara Ambrosio
Assessment	Coursework (4000 words) – 100% and Coursework (1000 words) – formative
Teaching Session:	Term 2
External Examiner:	Dr Kirsten Walsh, University of Exeter

HPSC0082 Science in Antiquity

This module examines the activities of the ancients in attempting to understand, predict and control the world around them. The main focus is the Greek 'investigation concerning nature and its philosophical, religious and social context. We investigate how they studied of the heavens (including theories of how the world came into being), medicine, mathematics and technology. We also investigate how the Greeks thought in subjects such as astrology and alchemy and how their activities related to magic. In addition to the Greeks, we also investigate Babylonian and Roman cultures, medicine, and technology as well as how they conceived of the world around them.

Module information and syllabi are available at: www.ucl.ac.uk/sts/teaching.

Tutor: Professor Andrew Gregory
 Assessment: Coursework (4000 words) – 100%
 Teaching Session: Term 2
 External Examiner: Dr Sabine Clarke, University of York

HPSC0084 Causality, Mechanism and Evidence in Science

Much of science aims to find and use causes, and finding evidence of causes and mechanisms is a core problem of science. Does penicillin cure bacterial infection? How large a dose and how often should we give a dose to be effective? Mechanisms are key elements of causal descriptions. For example, we seem to explain how penicillin cures bacterial infection when describing the mechanism by which it kills bacteria in the body. This module explores some of the most important views of causality and mechanisms in philosophy of science, and it examines how these views affect our understanding of the world around us.

Tutors: Professor Phyllis Illari & Dr Erman Sözüdoğru
 Assessment: Coursework (4000 words) – 100%
 Teaching Session: Term 2
 External Examiner: Dr Kirsten Walsh, University of Exeter

STS-themed modules

HPSC0087 Science in the Twentieth Century and Beyond

More science was done, and more scientists lived, in the twentieth century than in any other century of human history. Furthermore, there were major changes in the framing ideas and organisation of major disciplines. Physics, for example, grappled with new ideas of quantum theory and relativity. The life sciences responded to genetics and molecular approaches. Geology uncovered evidence for continental drift, and astronomy explored an expanding universe. Social science experimented with new methods to measure society and the individual. These intellectual developments were intimately connected to social, economic, political and cultural trends as well as global conflicts, ideological clashes, and economic transformations. This module examines accounts of these changes. The assessment explores primary sources and archives of twentieth century science, developing skills for relating interpretation to an understanding of context based on secondary sources.

*Note: this module also can be considered an HPS module.

Tutor: Dr Charlotte Sleight
 Assessment: Coursework (2000 words) – 50%, Coursework (2000 words) – 50%
 Teaching Session: Term 2
 External Examiner: Dr Sabine Clarke, University of York

*Note: this module also can be considered an HPS module.

HPSC0089 Curating Science and Technology

This module is designed around a simple question: how is the museum a different environment for historical and interpretative work compared with a university or a library? It opens access to the Science Museum's galleries, reserve collections, and curators to help students learn the ways history of science and technology are preserved, researched, and displayed in a national museum. The module includes practical engagement with objects and collections in Science Museum facilities. It also includes general museological questions about how to interpret objects in HPS and STS. The module also examines how different kinds of objects feature in museum's work, from acquisition and conservation to display.

Tutor: Dr Tim Boon
 Assessment: Presentation (10 minutes) – 20%, Coursework (4000 words) – 80%
 Teaching Session: Term 2

External Examiner: Dr Sabine Clarke, University of York

*Note: this module is also considered a Science Communication module.

HPSC0095 Special Topics in Science, Technology and Society

Topic TBC.

Tutor: Dr Erman Sözüdoğru

Assessment: Coursework (4000 words) – 100%

Teaching Session: Term 2

External Examiner: TBC

HPSC0122 Science Journalism

This is a practical module in communicating science across different genres of output for different audiences and on different platforms. Students write short news stories, profiles, and reportages for broadsheet newspapers and popular science magazines targeting audiences from educated adults to school children with an interest in science. They write blog posts and produce other kind of content for social media, such as short captioned videos. They interview scientists and present their interviews in writing as well as through podcasting. Issues in the public communication of science are discussed from this practical standpoint. This module is time intensive and requires substantial group work. It rests on the idea that the only way to learn how to write for journalism is to work in career appropriate setting. The assessment for the module is a mixture of formative and summative work.

Tutor: Dr Jean-Baptiste Gouyon

Assessment: Portfolio (4000 words) – 100%

Teaching Session: Term 2

External Examiner: Dr Jamie Lewis, Cardiff University

*Note: this module is also considered a Science Communication module.

HPSC0126 Research Methods in Data Analysis in Science and Technology Studies

This module introduces students to the theory and practice of research methods in STS and social sciences. It covers research design; qualitative and quantitative methods; research management and ethics; and the epistemology of social research. The module is strongly recommended for any students wanting to undertake empirical social science research for their dissertation and later in their career. It also is strongly recommended for students who want to familiarise themselves with how social scientists (particularly within STS) undertake research. For students wishing to apply for ESRC +3 PhD funding, this module is designed to cover the core training requirements specified within Annex I of the [ESRC Postgraduate Training and Development Guidelines \(2009\)](#).

Tutors: Dr Carina Fearnley and Dr Michel Wahome

Assessment: Coursework (1500 words) – 40%, Group Presentation (10 minutes) – 60%

Teaching Session: Term 2

External Examiner: TBC

HPSC0156 Health Difference and Inequality

Disparities in health across geographical space and social groups are well documented. Yet how and why these arise, and what can and should be done in response remain challenging and controversial questions. In this module, we will explore how science and technology can reveal and resist, or instead be complicit with – by obscuring, legitimating and enabling – the production of embodied inequalities. We will interrogate biomedical and social 'ways of knowing' patterns of risk, sickness and longevity as linked to, or as isolated from, inequalities in access to power, resources, privilege, rights, recognition and wealth. Using tools from science and technology studies as well as from critical race and queer theory, social epidemiology and medical anthropology, we will critically examine how categories such as 'biology,' 'the environment,' 'culture,' 'the economy' or 'society' have been used to investigate and explain differences in health. We will study examples of how biomedical research,

Module information and syllabi are available at: www.ucl.ac.uk/sts/teaching.

technologies, practices and institutions have both exacerbated and depended on inequality. We will also learn about critical and activist responses. Topics covered might include controversies over the genetic basis of race; environmental (in)justice; medical discrimination and exploitation; feminist, queer and Black health activism; concepts of structural violence, syndemics and local biologies; and critiques of the coloniality of global health.

Tutor: Dr Noemi Tousignant
Assessment: Coursework (1000 words) – 25%, Coursework (3000 words) – 75%
Teaching Session: Term 2
External Examiner: TBC

HPSC0157 Science Technology and International Development

The module will familiarise students with the global policy arena and the role that scientific expertise and technology development play in it. The module familiarises students with theories, perspectives and approaches that interrogate development and progress. It focusses on the interface between international policy regimes and developing country positionalities and examines evolving expectations and assumptions about modernity, technoscientific progress and ethics of knowledge production. The module is structured to teach and illustrate the application of STS theories and concepts through case study examples and have students reflect on how they engage with these ideas. Aside from introducing students to these concepts, the goal is also to build critical thinking and research skills through examination of key international development policy regimes and governance theories, strategies and practices and interrogating the ways in which global economic asymmetry is framed and addressed.

Tutor: Dr Michel Wahome
Assessment: Coursework (1500 words) – 40%, Coursework (2500 words) – 60%
Teaching Session: Term 2
External Examiner: TBC

Science Communication module (open only to MSc Science Communication Students)

HPSC0044 Science and the Publishing Industry

Science involves extraordinary amounts of publishing. How does publishing work? How does publishing shape science communication? How is science publishing a global business and a local activity? This module investigates publishing as a process (who is involved? what are the parts of this complex business?). It also investigates the anthropology and STS of publishing (how is power distributed in the publishing industry? how do scientists control publishing? how are scientists controlled by it?) Topics discussed include: peer-review journals, popular science publishing, book publishing, textbooks, and related consumer goods. In recent years, changes in the industry have been nothing short of revolutionary: open access, print-on-demand, tablet reading, data-mining, and so much more. We examine these changes. The module includes a deliberate careers focus, with opportunities to meet professionals in the industry. Assessment focuses on practical projects associated with the creation of real publications. No prerequisites.

Tutor: Professor Joe Cain
Teaching session: Term 2
Assessment: Project (4000 words) – 100%
External Examiner: Dr Jamie Lewis, Cardiff University

2021-22 Term 3 and Summer

Compulsory modules

HPSC0097 Research Project - MSc History & Philosophy of Science and MSc Science, Technology and Society degrees only

The MSc History & Philosophy of Science and MSc Science, Technology and Society degrees culminate in a research project of the student's own design, and this project is documented by a research report or a dissertation. The student's work is guided by an academic supervisor. It also is supported by a variety of key skill programmes. Students are expected to construct a research project that includes original research, clear methodological choices, and relevance to significant conversations within the discipline. The dissertation is the capstone of the Master's programme. It should represent the very best research and analysis a student can produce.

Convenor:	Dr Cristiano Turbil (all STS academic staff serve as supervisors)
Assessment:	Dissertation (10,000 words) – 85%, Oral Presentation (15 minutes) –15%
Teaching Session:	Term 3 and Summer
External Examiner:	All STS External Examiners

HPSC0155 Science Communication Final Project – MSc Science Communication only

The Master's degree culminates in a science communication project of the student's own design. This project is documented by a project report, or a portfolio of science communication writings, or a science documentary, or a podcast, or any other mode of communication. The student's work is guided by an academic supervisor. It also is supported by a variety of key skill programmes. Students are expected to construct a project that includes original research, deliberate methodological choices, and shows relevance to significant conversations within the discipline. The project should represent the very best science communication a student can produce in their medium of choice.

Convenor:	Dr Jean-Baptiste Gouyon and Dr Melanie Smallman (convenors)
Assessment:	Dissertation (15,000 words or equivalent) – 80%, Oral Presentation (15 minutes) – 20%
Teaching Session:	Term 3 and Summer
External Examiner:	All STS External Examiners