Overview

This catalogue lists HPSC modules offered by UCL Department of Science and Technology Studies (STS) for the 2019-20 session. Detailed information, including sample syllabi, can be found on the department website: https://www.ucl.ac.uk/sts/teaching.

The information in this catalogue is correct at the date of publication (see headers) but may alter. Please check the latest edition of the module catalogue and the on-line timetable prior to formally registering on modules.

For quick filtering, our modules are catalogued by term and themes:

- Introductory module for both postgraduate programmes
- (HPS) emphasising knowledge and skills associated with history and philosophy of science
- (STS) emphasising knowledge and skills associated with contemporary studies of science, technology, and society

Owing to the rich interdisciplinary nature of our programmes, students can expect to find considerable crossing between themes in most modules.

Timetable information

STS uses the UCL online timetable, www.ucl.ac.uk/timetable. The online timetable provides official information about module times and locations. Students should continue to check class locations regularly using the online timetable as rooms are subject to change without prior notice.

Before formally registering, please ensure that you check for timetable clashes between modules. Clashes are not an acceptable excuse for missing classes. It is the student’s responsibility to check carefully that they can attend all compulsory sessions for a module.

The UCL online timetable for the 2019-20 academic year will be published in August 2019.
Registering for HPSC modules

Students studying on other UCL postgraduate taught degree are welcome to register on most postgraduate HPSC modules, except HPSC0073 and HPSC0097.

This catalogue indicates where modules are not open to all UCL students. In some cases, prerequisites 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.

STS students must discuss their selections with their personal tutor. Module selections must be approved by personal tutors before they will be confirmed in Portico. It is the student’s responsibility to ensure their choices satisfy their degree requirements. These can be found on the Moodle parent page for postgraduate taught students: https://moodle-1819.ucl.ac.uk/course/view.php?id=10563.

Module tutors may be contacted directly: see https://www.ucl.ac.uk/sts/staff.
HPSC postgraduate modules at-a-glance

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2019-20 Term 1

Compulsory module

**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. This module is open for registration only to students in the STS or HPS MSc programmes, for which it is compulsory.

Module Co-ordinator: Dr Bill MacLehose

Credits: 15 (contributing 15/180 to degree)

Assessment: Coursework (4000 words) – 100%

Module information and syllabi are available at: [https://www.ucl.ac.uk/sts/teaching](https://www.ucl.ac.uk/sts/teaching).
HPS-themed modules

**HPSC0081 Science in the Nineteenth Century**

The 19thC experienced a tremendous expansion of science. This module explores that expansion through the lens of popularisation, public engagement, and presentation. We cover a variety of settings, including museums, lecture halls, publishing devices, parlours, and private collections. We also cover a variety of communities and types of activities, including professional societies, amateur clubs, working men's clubs, and ephemeral consumer activity. How did the many venues intertwine? How do historians relate science in public to science done elsewhere? Do STS analytical tools and concepts help us understand historical activity related to science in public? This module includes visits to some of the surviving attractions of 19thC science.

**Module Co-ordinator:** Dr Cristiano Turbil  
**Credits:** 15 (contributing 15/180 to degree)  
**Assessment:** Coursework (5000 words) – 100%  
**Teaching Session:** Term 1 – students attend 1 x 2-hour session per week  
**External Examiner:** Dr Rebekah Higgitt - University of Kent

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 the new ideas of quantum theory and relativity. The life sciences responded to genetics and molecular approaches to life science. Geology uncovered evidence for continental drift, while astronomy explored an expanding universe. These intellectual developments were intimately connected to social, economic, political and cultural trends and events, not least global conflicts, ideological clashes and economic transformations. This course introduces and guides the student through accounts of these changes produced by historians and other commentators.

**Module Leader:** Professor Jon Agar  
**Credits:** 15 (contributing 15/180 to degree)  
**Assessment:** Coursework (2500 words) – 50%, Coursework (2500 words) – 50%  
**Teaching Session:** Term 1 – students attend 1 x 2-hour session per week  
**External Examiner:** Dr Rebekah Higgitt - University of Kent

**HPSC0092 Responsible Science and Innovation**

Science, technology and innovation are some of the most powerful shapers of social order known. They have huge potential for both benefit and harm. With power should come responsibility, but history is littered with cautionary tales that suggest that innovation is a form of ‘organised irresponsibility’. Should we expect more from scientists? Should we hold them responsible for failures...
of policy or technological catastrophes? Are there ways to steer and improve technologies while they are still emerging? In this course, we will look at rationales and methods for making science and innovation more responsible. We will look at the responsibilities scientists might have to their profession and the wider world, as well as how these change when they are ‘in public’, as experts, innovators or communicators. Looking back at case studies of technological failure and scientific misdemeanour, as well as ahead to emerging issues such as geoengineering and gene editing, we use ideas from ethics, sociology of science, philosophy of technology and science policy studies to consider what it means for science and innovation can develop responsibly.

Module Leader: Dr Jack Stilgoe
Credits: 15 (contributing 15/180 to degree)
Assessment: Coursework (2500 words) – 50% and Coursework (2500 words) – 50%
Teaching Session: Term 1 – students attend 1 x 2-hour session per week
External Examiner: Dr Angela Cassidy – University of Exeter

HPSC0094 Political Economy of Science

Knowledge and money are bound together. Science and research are integral to the production of value and wealth in contemporary capitalism. The purpose of this module is to unpack this relationship drawing from literatures in economic history, political sociology, the economics of R&D and business administration. We will examine how transformations in the political economy such as the rise of the corporation, the building up of national government bureaucracies, the spread of markets, and most recently financialisation and globalization have transformed the funding of research, and how science is administered and commodified. The meetings will comprise of a short lecture follow by class discussions on a weekly set of readings.

Module Leader: Dr Tiago Mata
Credits: 15 (contributing 15/180 to degree)
Assessment: Coursework (5000 words) – 100%
Teaching Session: Term 1 – students attend 1 x 2-hour session per week
External Examiner: Dr Angela Cassidy – University of Exeter

HPSC0126 Research Methods in Data Analysis in Science and Technology Studies

This course introduces students to the theory and practice of research methods in STS and social science more generally, comprising both qualitative and quantitative methods. It will cover research design; qualitative and quantitative methods; research management and ethics; and the epistemology of social research. The course is strongly recommended for any students wanting to undertake empirical social science research for their dissertation, and for students who want to familiarise themselves with how social scientists (particularly within STS) undertake research. In addition, for those wishing to apply for ESRC +3 PhD funding, it is designed to cover the core training requirements specified within Annex I of the ESRC Postgraduate Training and Development Guidelines (2009).

Module Leader: Dr Melanie Smallman
Credits: 15 (contributing 15/180 to degree)
Assessment: Coursework (1000 words) – 20%, Coursework (4000 words) – 80%
Teaching Session: Term 1 – students attend 1 x 2-hour session per week
External Examiner: Dr Angela Cassidy – University of Exeter

Module information and syllabi are available at: https://www.ucl.ac.uk/sts/teaching.
HPS-themed modules

**HPSC0059 Science, Art and Philosophy**
This course 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 common link between scientific and artistic visual practices. Integrating the history and philosophy of scientific and artistic representations, the course 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”.

Module Leader: Dr Chiara Ambrosio  
Credits: 15 (contributing 15/180 to degree)  
Assessment: Coursework (1000 words) – 20% and Coursework (4000 words) – 80%  
Teaching Session: Term 2 – students attend 1 x 2-hour session per week  
External Examiners: Dr Ian Kidd – University of Nottingham

**HPSC0080 Early Modern Science**
The early modern period, from c.1400 to 1800, experienced a radical transformation in Europeans’ understanding of the natural world. We explore these changes through a series of signal 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 course will examine these episodes through critical perspectives developed in recent history 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 of science and art; and the connections between early modern science and religion. Throughout we will also pay attention to the value of STS approaches for better understanding early modern science. We will examine issues of trust, gender, science as practice and culture, science and social order, and the public understanding of science in the early modern period.

Module Co-ordinator: Dr Simon Werrett  
Credits: 15 (contributing 15/180 to degree)  
Assessment: Coursework (5000 words) – 100%  
Teaching Session: Term 2 – students attend 1 x 2-hour session per week  
External Examiner: Dr Rebekah Higgitt – University of Kent

**HPSC0082 Science in Antiquity**
This course 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 look at the study of the heavens, including theories of how the world came into being, medicine, mathematics and technology. We also look at how the Greeks thought of disciplines such as astrology and alchemy and how their activities related to magic. While the main focus is the Greeks, we also look at the Babylonian and Roman cultures, their medicine, technology and how they conceived of the world around them.

Module information and syllabi are available at: [https://www.ucl.ac.uk/sts/teaching](https://www.ucl.ac.uk/sts/teaching).
Module Leader: Professor Andrew Gregory
Credits: 15 (contributing 15/180 to degree)
Assessment: Coursework (5000 words) – 100%
Teaching Session: Term 2 – students attend 1 x 2 hour session per week
External Examiner: Dr Rebekah Higgitt - University of Kent

**HPSC0084 Causality, Mechanism and Evidence in Science**

Much of science aims to find and use causes. Does penicillin cure bacterial infection? How big a dose and how often should we give it for it to be effective? Mechanisms are most obviously important in the biomedical sciences, but are relevant far beyond them. For example, we seek to explain how penicillin cures bacterial infection by describing the mechanism by which it kills bacteria in the body. So finding evidence of causes and mechanisms is a core problem of science. Further, our fundamental view of the world we live in has been profoundly affected by the kinds of causes and mechanisms we discover. This module explores the most important views of causality and mechanisms and how we seek evidence for them, and examines how they affect our view of the world around us.

Module Leader: Dr Phyllis Illari
Credits: 15 (contributing 15/180 to degree)
Assessment: Coursework (1000 words) – 20% and Coursework (4000 words) – 80%
Teaching Session: Term 2 – students attend 1 x 1 hour lecture, 1 x 1 hour seminar per week
External Examiner: Dr Ian Kidd – University of Nottingham

**STS-themed modules**

**HPSC0088 STS Perspectives on Security and War**

This course focuses on how history, philosophy and social studies of science investigates the relationship between science, technology and security issues. Our focus will be on security in relation to war and violence, particularly the control of biological, chemical and nuclear weapons; automation and simulation in war; the use of non-lethal weapons; and the role of secrecy, absence and ignorance in security and war. To address this issue, the course will explore concepts and ideas derived from science and technology studies such as tacit knowledge; social shaping of technology; actor-network theory; risk; secrecy, uncertainty, ignorance and science; and bio-politics.

Module Leader: Professor Brian Balmer
Credits: 15 (contributing 15/180 to degree)
Assessment: Coursework (4000 words) – 80%, Coursework (1000 words) – 20%
Teaching Session: Term 2 – students attend 1 x 2 hour session per week
External Examiner: Dr Angela Cassidy – University of Exeter

**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, revealing the ways that the history of

*Module information and syllabi are available at: [https://www.ucl.ac.uk/sts/teaching](https://www.ucl.ac.uk/sts/teaching).*
Module Leader: Dr Tim Boon
Credits: 15 (contributing 15/180 to degree)
Assessment: Presentation (10 minutes) – 20%, Coursework (4000 words) – 80%
Teaching Session: Term 2 – students attend 1 x 2-hour session per week
External Examiner: Dr Rebekah Higgitt - University of Kent

HPSC0091 Science, Technology and Identity
Where, how, with whom, how much and why we encounter science (or not) matters. In this module, we will 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 look at who can access science, how people access and use science (or not) 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.
Module Leader: Dr Emily Dawson
Credits: 15 (contributing 15/180 to degree)
Assessment: Translation Project (2500 words) – 50%, Coursework (2500 words) – 50%
Teaching Session: Term 2 – students attend 1 x 2-hour session per week
External Examiner: Dr Angela Cassidy – University of Exeter

HPSC0122 Science Journalism
A practical course in communicating science considering various genres of output for different audiences and on different platforms. Students learn how to write short news stories, profiles, and reportages for broadsheet newspapers and popular science magazines, targeting a range of audiences from educated adults to school children with an interest in science. They write blog posts and produce other kinds of contents for social media such as short captioned videos. They interview scientists on their work 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 is to write as much as possible. The assessment for the module is a mix of formative and summative assessment and assignments.
Module Leader: Dr Jean-Baptiste Gouyon
Credits: 15 (contributing 15/180 to degree)
Assessment: Portfolio (5000 words) – 100%
Teaching Session: Term 2 – students attend 1 x 1-hour lecture and 1 x 2-hour IT skill session per week
External Examiners: Dr Declan Fahy - Dublin City University

Module information and syllabi are available at: https://www.ucl.ac.uk/sts/teaching.
**HPSC0127 Engaging the Public with Science**

This module focuses on the many different ways in which publics engage with science in face-to-face contexts. Teaching will particularly focus on direct interactions such as science festivals and other more informal activities, and on how specific public groups, such as patient and citizen groups get involved, and engage with, scientific and medical research. Alongside gaining a practical understanding of how to organize such activities, students will also critically reflect on the theory and context that underpins such activities such as models of publics and audiences, rationales for engagement in different contexts and the wider policy contexts and historical trends.

**Module Leader:** Dr Simon Lock  
**Credits:** 15 (contributing 15/180 to degree)  
**Assessment:** Group Presentation (20 minutes) – 30%, Group Coursework (2000 words) – 30% and Individual Coursework (2000 words) – 40%  
**Teaching Session:** Term 2 – students attend 1 x 2-hour session per week  
**External Examiner:** Dr Declan Fahy - Dublin City University
Compulsory module

**HPSC0097 Research Project**

The Master’s degree culminates 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.

**Pre-requisites:** HPSC0073 Introduction to Science and Technology Studies

**Module Leader:** All STS academic staff serve as supervisors.

**Credits:** 60 (contributing 60/180 to degree)

**Assessment:** Research Proposal – 15% and Dissertation (10,000 words) – 85%

**Teaching Session:** Term 3 and Summer

**External Examiner:** All STS External Examiners