Overview

This catalogue describes HPSC modules offered by UCL Science and Technology Studies (STS) for the 2017-18 session. Detailed information, including sample syllabi, can be found on the department website: http://www.ucl.ac.uk/sts/module-information.

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.

STS postgraduate taught modules use the prefix HPSCGA. 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

We use the UCL online timetable, www.ucl.ac.uk/timetable. The online timetable provides 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 classes.

Then online timetable for the 2017-18 academic year will be published in August 2017.
Registering for HPSCGA modules

Students studying on other UCL PG module are welcome to register on most HPSCGA modules, except HPSCGA01 - Introduction to Science and Technology Studies, HPSCGA98 – Research Project and HPSCGA99 - Dissertation.

This catalogue indicates where modules are not open to all UCL students. 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.

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 they satisfy their degree requirements. These can be found on the Moodle parent page here: https://moodle.ucl.ac.uk/course/view.php?id=22968

Module tutors may be contacted directly: Please see www.ucl.ac.uk/sts/directory for contact information.
HPSCGA modules at a glance

Click on the course code to jump to course information.

<table>
<thead>
<tr>
<th>HPSC</th>
<th>Title</th>
<th>Tutor</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Term 1 (Autumn)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GA01</td>
<td>Introduction to Science and Technology Studies</td>
<td>Dr Bill MacLehose</td>
<td>4</td>
</tr>
<tr>
<td>GA22</td>
<td>Early Modern Science</td>
<td>Dr Simon Werrett</td>
<td>4</td>
</tr>
<tr>
<td>GA25</td>
<td>Science in Antiquity</td>
<td>Prof Andrew Gregory</td>
<td>5</td>
</tr>
<tr>
<td>GA28</td>
<td>Knowledge, Explanation and Classification in Science</td>
<td>Dr Emma Tobin</td>
<td>5</td>
</tr>
<tr>
<td>GA44</td>
<td>Science, Media and Culture</td>
<td>Dr Rony Armon</td>
<td>6</td>
</tr>
<tr>
<td>GA45</td>
<td>Science Journalism</td>
<td>Dr Jean Baptiste-Gouyon</td>
<td>6</td>
</tr>
<tr>
<td>GA47</td>
<td>Responsible Science and Innovation</td>
<td>Dr Jack Stilgoe</td>
<td>7</td>
</tr>
<tr>
<td>GA59</td>
<td>Special Topics Seminar in Science, Technology and Society: Research Methods and Data Analysis in Science and Technology Studies</td>
<td>Prof Brian Balmer</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><strong>Term 2 (Spring)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GA24</td>
<td>Science in the Nineteenth Century</td>
<td>Prof Joe Cain</td>
<td>8</td>
</tr>
<tr>
<td>GA39</td>
<td>Special Topics Seminar in History and Philosophy of Science: Philosophy of Medicine</td>
<td>Mr Erman Sozudogru</td>
<td>9</td>
</tr>
<tr>
<td>GA40</td>
<td>Science in the Twentieth Century and Beyond</td>
<td>Prof Jon Agar</td>
<td>9</td>
</tr>
<tr>
<td>GA41</td>
<td>STS Perspectives on Security and War</td>
<td>Prof Brian Balmer</td>
<td>9</td>
</tr>
<tr>
<td>GA43</td>
<td>Curating Science and Technology</td>
<td>Dr Tim Boon</td>
<td>10</td>
</tr>
<tr>
<td>GA48</td>
<td>Engaging the Public with Science</td>
<td>Dr Simon Lock</td>
<td>10</td>
</tr>
<tr>
<td>GA49</td>
<td>Science Policy in the Era of Risk and Uncertainty</td>
<td>Dr Carina Fearnley</td>
<td>11</td>
</tr>
<tr>
<td>GA50</td>
<td>Political Economy of Science</td>
<td>Dr Tiago Mata</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td><strong>Term 3 &amp; Summer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GA98</td>
<td>Research Project</td>
<td>ALL</td>
<td>12</td>
</tr>
</tbody>
</table>

Module information and syllabi are available at: [http://www.ucl.ac.uk/sts/module-information/pg-modules](http://www.ucl.ac.uk/sts/module-information/pg-modules)
2017-18 Term 1

Introductory Module (Compulsory)

HPSCGA01 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 (2000 words) – 20% and 2-hour exam – 80%
Teaching Session: Term 1 – students attend 1 x 2 hour session per week
External Examiner: Dr Ian Kidd – University of Nottingham

HPS Themed Modules

HPSCGA22 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 1 – students attend 1 x 2 hour session per week
External Examiner: Dr Rebekah Higgit – University of Kent

Module information and syllabi are available at: http://www.ucl.ac.uk/sts/module-information/pg-modules
## HPSCGA25 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 Leader:** Prof Andrew Gregory
- **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

## HPSCGA28 Knowledge, Explanation and Classification in Science

In this course, students will examine some of the core topics in contemporary philosophy of science. There are 3 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 some of the other topics discussed in other courses, including models, representations, mechanisms, causality and evidence.

- **Module Leader:** Dr Emma Tobin
- **Credits:** 15 (contributing 15/180 to degree)
- **Assessment:** Coursework (1000 words) – 20% and Coursework (4000 words) – 80%
- **Teaching Session:** Term 1 – students attend 1 x 2 hour session per week, one hour is a lecture and the other hour is a seminar.
- **External Examiner:** Dr Rebekah Higgitt - University of Kent

## Modules with STS themes

### HPSCGA44 Science, Media and Culture

As much as culture is part of technoscience, science and technology are part of culture. They are even, arguably, one of the main determinant of contemporary culture in industrialised societies.
Similarly, media are cultural products, but they also participate in the production of culture. Studying how technoscience and the media interact enables us to understand the place of science and technology in culture and how it is constructed. This module will provide both a theoretical analysis and a practical understanding of the interface between science, the media and culture. Key tools and frameworks that enable us to better understand how science is covered in the media will be explored, as well as the role of science within wider culture. We will explore the theoretical foundations of science communication through the work of scholars in science studies and apply this scholarship to examples taken from various media from the Museum through television, through to the Internet. Additionally, two external interventions are planned, with people whose job it is to make science public. The assessment for the module will consist in one short oral presentation and an essay.

Module Leader: Dr Rony Armon  
Credits: 15 (contributing 15/180 to degree)  
Assessment: Coursework (1500 words) – 30%, Coursework (2000 words) – 40% and Presentation – 30%  
Teaching Session: Term 1 – students attend 1 x 2 hour session per week  
External Examiner: Dr Declan Fahy - University Of Dublin

**HPSCGA45 Science Journalism**

A practical course in communicating science based around three core tasks: (1) writing science news articles on current topics, (2) writing feature articles suitable for *New Scientist* or the science pages of the ‘quality’ press, and (3) producing multi-media features that include interviewing, story-building, editing and production. Issues in public understanding of science and public engagement are examined from the view of communication practitioners. This module has additional timetabling requirements.

Module Leader: Dr Jean-Baptiste Gouyon  
Credits: 15 (contributing 15/180 to degree)  
Assessment: Portfolio (5000 words) – 100%  
Teaching Session: Term 1 – students attend 1 x 2 hour session per week  
External Examiners: Dr Declan Fahy - University Of Dublin

**HPSCGA47 Responsible Science and Innovation**

Science and innovation have huge potential for benefit and harm. With power should come responsibility, but history is littered with countless cautionary tales that suggest that innovation is a form of ‘organised irresponsibility’. Should we expect more from scientists? Should we hold them responsible for the policy or technological failure? 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 how these change when they are ‘in public’, as experts, innovators or communicators. The course will look back at case studies of technological failure and scientific misdemeanour, while looking ahead to emerging issues such as geo-engineering and human...
enhancement. We will use ideas from ethics, sociology of science, philosophy of technology and science policy studies.

Module Leader: Dr Jack Stilgoe & TBC
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 Jane Calvert – Edinburgh University

### HPSCGA59 Special Topics Seminar in Science, Technology and Society

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: Prof Brian Balmer
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 Jane Calvert – Edinburgh University

### 2017-18 Term 2

#### Modules with HPS themes

### HPSCGA24 Science in the 19th Century

The 19thC experienced a tremendous expansion of science. This module explores that expansion

Module information and syllabi are available at: [http://www.ucl.ac.uk/sts/module-information/pg-modules](http://www.ucl.ac.uk/sts/module-information/pg-modules)
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: Professor Joe Cain
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

HPSCGA39 Special Topics Seminar in History and Philosophy of Science: Philosophy

This course is designed to provide students, at MSc level, with an introduction to different perspectives in the field of social epistemology. The aim of this course is to examine how scientific knowledge is shaped by social relationships and institutions as well as understanding the role of scientific knowledge in broader society. This course is divided into two. In part one we will focus on debates on whether science is/should be value free, the aims of science, and how different values shape scientific knowledge. In the second half we will investigate the role of scientific knowledge in broader society, focusing on particular case studies from science and medicine. The teaching will be mixture of lectures where students are introduced to the core content followed by seminars where students can discuss the reading material.

Module Leader: Mr Erman Sozudogru
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 Ian Kidd – University of Nottingham

Modules with STS theme

HPSCGA40 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: Prof Jon Agar  
Credits: 15 (contributing 15/180 to degree)  
Assessment: Coursework (2500 words) – 50%, Coursework (2500 words) – 50%  
Teaching Session: Term 2 – students attend 1 x 2 hour session per week  
External Examiner: Dr Rebekah Higgitt - University of Kent

**HPSCGA41 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: Prof 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 Jane Calvert – University of Edinburgh

**HPSCGA43 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-up access to the Science Museum’s galleries, reserve collections and curators, revealing the ways that the history of science and technology are preserved, researched, and displayed in a national museum. The module commences with a consideration of collections ‘in the raw’, as kept at the Museum’s West London store, and with general museological questions about how to use objects in historical work. The remainder of the course discusses how different topics and kinds of objects feature in the museum’s work, from acquisition through to being placed on display.

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
HPSCGA48 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 Coursework (2000 words) – 40%
Teaching Session: Term 2 – students attend 1 x 2 hour session per week
External Examiner: Dr Declan Fahy - University Of Dublin

HPSCGA49 Science Policy in the Era of Risk Uncertainty

This module aims to bring together key thinkers, debates, and cutting-edge research on how society has, currently, and may engage with environmental uncertainty and risk. In addition a number of relevant research methodologies and interdisciplinary skills will be applied in a series of practicals to demonstrate the challenges we face in these large, global complex problems. This module aims to discuss the challenges of integrating interdisciplinary data sets, and the role of more deliberative and participatory engagement for stakeholders. The module will consist of lectures and seminars and will adopt a problem-based learning approach, whereby a topic of interest can be selected so to apply the knowledge learnt to the selected case study. Two contemporary case studies will be explored throughout the course.

Module Leader: Dr Carina Fearnley
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 Jane Calvert – University of Edinburgh

HPSCGA50 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 2 – students attend 1 x 2 hour session per week
External Examiner: Dr Jane Calvert – University of Edinburgh

**Term 3 and Summer**

**HPSCGA98 Research Project (Compulsory)**

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: HPSCGA01 – Introduction to Science and Technology Studies
Module Leader: All 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 1 and Term 2 – Fortnightly meetings with their Dissertation Supervisor including 5 workshops.
External Examiner: All STS External Examiners

Module information and syllabi are available at: [http://www.ucl.ac.uk/sts/module-information/pg-modules](http://www.ucl.ac.uk/sts/module-information/pg-modules)