

HPSC30023 Science and Society

Credit Points:	12.50
Level:	3 (Undergraduate)
Commencement Date & Location:	2011, Parkville This subject commences in the following study period/s: Semester 1 - Taught on campus. Standard
Time Commitment:	Contact Hours: 2.5 Total Time Commitment: An average of 8.5 hours each week
Prerequisites:	None.
Corequisites:	None.
Recommended Background Knowledge:	Knowledge gained in 75 points of University study (6 subjects) from any area.
Non Allowed Subjects:	Students who have completed 'Science and Society' under one of the codes 136-398 or 136-216 are not permitted to enrol in this subject.
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements.
Subject Overview:	The central focus of this subject is the various ways the relationship between science and society was understood and analysed during the twentieth century. This will provide the means for thinking analytically and critically about the place and role of science in present day society. Science and its products are integral to our everyday lives providing benefits but also risks and ethical dilemmas. Understanding the relationship between science and society has never been more crucial. This subject offers students an introduction to theories and concepts in several analytic traditions useful in approaching the many and often difficult questions that are raised by science and its products in our contemporary world.

Students who successfully complete this subject should

Objectives:

- Develop a basic understanding of key theoretical approaches to science as a system of knowledge and practice that have been developed in the field of science and technology studies.
- Be able to apply these theoretical approaches to the analysis of historical and contemporary case-studies.
- Develop the capacity for critical analysis of theoretical approaches to examining science as a system of knowledge and practice and their application to historical and contemporary case-studies.

Assessment:

An essay of 2,000 words due mid-semester 50% and a 2 hour examination in the examination period 50%. This subject has a minimum hurdle requirement of 75% tutorial attendance. Regular participation in tutorials are required. Assessment submitted late without an approved extension will be penalised at 10% per day. In-class tasks missed without approval will not be marked. All pieces of written work must be submitted to pass this subject.

Prescribed Texts: A subject reader with key papers will be available from the Bookshop. Further texts will be available online.

HPSC30034 The Rise of Modern Science

Credit Points: 12.50

Level: 3 (Undergraduate)

Commencement Date & Location: 2011, Parkville
This subject commences in the following study period/s:
Semester 1 - Taught on campus.
Standard

Time Commitment: Contact Hours: 3 (2x 1 hour lectures and 1x 1 hour tutorial each week)
Total Time Commitment: An average of 9 hours each week

Prerequisites: None.

Corequisites: None.

Recommended A minimum of 75 points of first year study is necessary.

Background Knowledge:

Non Allowed Subjects: Students who have completed 136-217 or 161-350 Science: Revolutions and Evolutions are not permitted to enrol in this subject.

Core Participation Requirements:

For the purposes of considering request for Reasonable Adjustments under the disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements.

Between 1500 and 1750 science emerged as the central intellectual field to interpret the natural world in early modern Europe. This process has had a crucial role for the development of modern society.

Subject Overview:

It was intertwined with other fundamental changes in European culture, politics, and economy, such as the emergence of new forms of government, the protestant reformation, the invention of the printing press or the building of colonial empires. This subject examines the causes, the dynamics and the consequences of the processes that produced the social activity we call science. Focusing on a few paradigmatic cases, we will study the changes in scientific thought and practice - such as the introduction of the experimental method, the turn to mechanical philosophy and Copernican Astronomy - and their relation to social, political and religious developments. We will also discuss the way these processes have been analysed in the past and which explanations have been put forward, why science emerged in early modern Europe and not in other places or other eras. Students who complete this subject will gain an understanding into the processes that made science an integral part of modern society and the way historians can describe the development of science.

Students who successfully complete this subject will

Objectives:

- have a profound knowledge of important methods to analyse the historical development of science.
- understand the complex dynamics of epistemological and cultural factors contributing to changes in science.
- comprehend the historical dimension of their own knowledge.
- be able to examine critically intellectual positions and their development.

Assessment:

One 2000 word essay 50% (due during the semester) and a 20 minute oral examination 50% (during the examination period). This subject has a

minimum hurdle requirement of 75% tutorial attendance. Regular participation in tutorials is required. Assessment submitted late without an approved extension will be penalised at 10% per day. In-class tasks missed without approval will not be marked. All pieces of written work must be submitted to pass this subject.

Prescribed Texts: A Subject reader will be available from the University bookshop at the beginning of semester.

HPSC30028 Philosophy of Biology

Credit Points: 12.50

Level: 3 (Undergraduate)

Commencement Date & Location: 2011, Parkville
This subject commences in the following study period/s:
Semester 2 - Taught on campus.
Standard

Time Commitment: Contact Hours: 3 (2 x 1hour lectures and 1 x 1hour tutorial each week)
Total Time Commitment: An average of 8.5 hours each week.

Prerequisites: None.

Corequisites: None.

Recommended Background Knowledge: Knowledge gained in 75 points of university study (6 subjects) in any area.

Non Allowed Subjects: Students who have completed 'Philosophy of Biology' under any of the codes 136-207, 136-307, 672-326 or HPSC30025 are not permitted to enrol in this subject.

Core Participation Requirements: For the purposes of considering request for Reasonable Adjustments under the disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements.

Subject Overview: Is biology a unique and autonomous science? Or are biological issues and

theories adequately dealt with by using the framework developed for the physical sciences? Do Kuhnian revolutions occur in the biological sciences? How are the functionalist biological sciences that study physiology and cellular processes linked to and/or distinct from the historical or evolutionary biological sciences? These are some of the questions considered in this subject. Discussion of such general issues is pursued through case studies which might include study of the work of Robert Brown - an early 19th century taxonomist. consideration of the procedures adopted by the mid twentieth century metabolic biochemist, Hans Krebs and the conditions that led to the rise of molecular biochemistry and genomics in the second half of the twentieth century.

Students who successfully complete this subject should:

- Objectives:**
- Develop new appreciation of biological concepts through recognising the historical and philosophical circumstances of their emergence
 - Develop the capacity for critical analysis of a theoretical approach to examining biological sciences as systems of knowledge and practice.

Assessment: A 2000 word essay 50% (due mid-semester) and a 2-hour exam 50% (in the examination period). This subject has a minimum hurdle requirement of 75% tutorial attendance. Regular participation in tutorials is required. Assessment submitted late without an approved extension will be penalised at 10% per day. In-class tasks missed without approval will not be marked. All pieces of written work must be submitted to pass this subject.

Prescribed Texts: A subject reader with key texts will be available from the bookshop.

HPSC30019 Minds and Madness

Credit Points: 12.50

Level: 3 (Undergraduate)

Commencement Date & Location: This subject is not offered in 2011.

Standard

Time Commitment: Contact Hours: 3 (2x 1 Hour Lectures and 1x 1 hour tutorial each week.)
Total Time Commitment: An average of 8.5 hours each week.

Prerequisites: None.

Corequisites: None.

Recommended Background Knowledge: Knowledge gained in the completion of at least 75 points of first year subjects.

Non Allowed Subjects: Students who have completed 'Minds and Madness' under the codes 136-260, 136-360, 672-329 or HPSC30002 are not permitted to enrol in this subject.

Core Participation Requirements: For the purposes of considering request for Reasonable Adjustments under the disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements.

Subject Overview: What is the mind? What does it mean for the mind to malfunction? And how should it be treated when this occurs? "Minds and Madness" provides an historical over-view of responses to these questions by patients, medical practitioners and society as a whole. Once considered the seat of the soul, the human mind has been captured by science, reduced to a brain "a hard-wired" neural network. Metaphysical explanations of madness (theological and magical) have been superseded by scientific theories (neurological and material), thus reshaping our understanding and experience of madness. Therapies have been transformed accordingly. In exploring these important issues, the lectures will visit the spaces and places of "Minds and Madness", including: the ship of fools, Bedlam, the asylum, the psychiatrist's couch and the GPs rooms, the battlefield, the dissection table, the operating theatre, and the padded cell. It will introduce students to a cast of thousands, including: the fool (from King Lear and elsewhere), Descartes ("Cogito Ergo Sum") and Spinoza, Gall and Spurzheim (the founders of phrenology), Freud, Jung and many other psychiatrists, psychologists and therapists. It will analyse and critique changing conceptions of mental health diagnosis. And finally, it will delve into the new world of the brain where the neurological sciences, artificial intelligence and philosophy have merged into the discipline of Cognitive Science.

Students who successfully complete this subject will

Objectives:

- demonstrate a general knowledge and understanding of the major themes in the histories of psychology, psychiatry and philosophy of the mind.
- show an appreciation of the chief scientific paradigms that have defined perceptions of the mind, and the empirical observations and conceptual developments by which they have been underpinned.
- develop an awareness of the role of broader context, including social, economic, religious and political factors in the formulation of views of the mind and mental malady.
- demonstrate an ability to grapple with both the conflicting interpretations of different historians and with primary source material, including scientific texts, philosophical analyses, fiction and autobiography.

Assessment:

Written work totalling 4000 words comprising a tutorial assignment of 1500 words 35% (due mid-semester) and an essay of 2500 words 65% (due at the end of semester). This subject has a minimum hurdle requirement of 75% tutorial attendance. Regular participation in tutorials is required. Assessment submitted late without an approved extension will be penalised at 10% per day. In-class tasks missed without approval will not be marked. All pieces of written work must be submitted to pass this subject.

Prescribed Texts:

- **Madness: A Brief History** (R Porter) *Oxford University Press* 2003