האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

From Copernicus to the Enlightenment: an Intellectual History of Western Science: part A - 39392

Last update 28-09-2022

HU Credits: *2*

Degree/Cycle: *1st degree (Bachelor)*

Responsible Department: *History*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *Mt. Scopus*

Course/Module Coordinator: *Dr. Raz Chen-Morris*

Coordinator Email: *raz.chen-morris@mail.huji.ac.il*

Coordinator Office Hours: *Wednesday 10-12*

Teaching Staff:
Prof Raz Chen-Morris

Course/Module description:
The course follows after the various developments and trends of scientific thinking in early modern Europe, emphasizing their divergent intellectual, cultural and political contexts. The course will pay special attention to the relationship between thought and practice and between scientific thought and historical discursive formations.

Course/Module aims:
Acquainting the major ideas of the various sciences of early modern Europe. Understanding the general framework of European intellectual history of this period.

Acquainting the major historiographical approaches in the history of science of this period.

Learning outcomes - On successful completion of this module, students should be able to:
To critically understand the main issues involved in the history of European science in early modern Europe

Attendance requirements(%):
80%

Teaching arrangement and method of instruction: lectures

Course/Module Content:
1. introduction
a. The scholastic worldview
b. Theology and natural philosophy
c. Where does the observer stand?
d. The limits of human knowledge
2. The Copernican Revolution
a. Transparency lost
b. The Copernican tradition in Germany and England
c. Tycho Brahe and Giordano Bruno and the danger of a chaotic world
d. Kepler and the universe's mathematical language
3. the telescope

a. New modes to observe the world; the camera obscura
b. Galileo's telescope and the princely court
c. A world with no observer
d. The world as a representation
4. Anatomy and the self
a. Cutting carcasses from Leonardo to Vesalius
b. Discovering the circulation of blood
c. The body as a machine
d. The material world: medicine and Chymistry
5. Reading the book of Nature
a. Interpreting the Holy Writ and Interpreting Nature - Catholics and Protestants
b. Francis Bacon and the interpretation of experiments
c.How to read natural philosophy's mathematical characters - Galileo and Descartes

d. From a world of contemplation to a world of instruments
6. Science in a global World
a. Jesuits in China
b. Natural History and princely collections
c.Knowledge and the Spanish Empire
d. Natural history and global economy
7. Scientific knowledge and authority
a. Science and the Church: The trail of Galileo
b. Science and the Puritan Revolution in England
c. Robert Boyle and the Royal Society
d. Louis XIV and the Académie française
8. Newton, Leibniz and the dawn of the Enlightenment
a. The Newtonian sybthesis
b. Towards a new theology
c. Mind and passions
d. Science, Technology and the beginnings of the Industrial Revolution

Required Reading:
Steven Shapin, The Scientific Revolution

Additional Reading Material:
TBA

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 20 %
Project work 50 %

Assignments 30 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:
History Department
Hebrew University of Jerusalem, Mt. Scopus