Course Code: HUMA 5692

Course Title: The Scientific Revolution (1450 to 1750)

Course Offered in: Fall 2024

Course Instructor: Dr. Marco Caboara

Course Description:

This postgraduate course explores the scientific revolution in early modern Europe, examining the cultural and intellectual framework in which new discoveries were made, the shift towards a mathematic vision of the world, and the development of new experimental techniques. Through the comparison with other intellectual traditions, especially the Chinese scientific tradition, students will gain a deeper understanding of the scientific revolution and its impact on modern science and the modern world. The course aims to develop students' analytical and communication skills, as well as their understanding of early modern intellectual history.

Course Intended Learning Outcomes (ILOs):

	On successful completion of the proposed course, students will be able to:
1	Identify the most important changes that took place in science in the early modern period, their causes, and their historical context
2	Gain a complex understanding of the global context of exchange and discovery leading to the Scientific Revolution
3	Familiarize with the scholarly debates about the Scientific Revolution, its definition, timing and significance
4	Evaluate past sources about the Scientific Revolution
5	Effectively and appropriately communicate their understanding of the Scientific Revolution in written papers and oral reports
6	Analyze the impact of science in larger socio-cultural context

Course Outline:

Week	
1	The scientific revolution Shapin, 2018 ch. 1 Poskett 2022 Introduction Cañizares-Esguerra 2017
2	New and old worlds- Humanism and discoveries Poskett 2022 ch. 1 Grafton 1995, ch. 5 Chow 2007
3	The Scientific Revolution and Aristotelian natural philosophy Dear 2009, ch. 1-2 Grant 1978 Copenhaver 1990 (McGrew et al. 2009, readings 1.5-1.9)
4	Heaven and Earth- From Ptolemy to Copernicus Poskett 2022 ch. 2 Heninger 1977, ch. 1-2 Westman 1986 (McGrew et al. 2009, readings 2.1-2.3)
5	Revolution in Astronomy Hall 2014, ch. 5 Heninger 1977, ch. 3 Kuhn 1977 (McGrew et al. 2009, readings 2.4-2.7)
6	Galileo and the Church Koyre 1978 part 3 van Helden 1994 Wilding 2016

7	Descartes and mechanism Dear 2009 ch. 5 Dear 1998 Westfall 1977 ch. 3 and 7 (McGrew et al. 2009, readings 3.2-3.3)
8	New Places for Natural Knowledge Dear 2009 ch. 6 Westfall 1985 Lux 1991
9	Progress of experimentation Dear 2009 ch. 7 Shapin 1984 Findlen 1993 (McGrew et al. 2009, readings 3.1, 3.4)
10	Medicine and Alchemy Ackerknecht 2016, ch 9-10 Debus 1988 Cook 1990
11	Natural History Findlen 1996 Introduction and Ch. 1 Ashworth 1990 Cook 1993
12	Newton Dear 2009 ch. 8 Cohen 1985 Poskett 2022 ch. 3 (McGrew et al. 2009, readings 2.14-2.18)
13	Scientific Societies and Industrial Revolution Jacob 1997 Iliffe 1992 Poskett 2022 ch. 4

Planned Assessment Tasks:

Presentations:	25%
Final written assignment (3500 words):	50%
Course participation/ reading comprehension:	25%

Bibliography

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