This seminar studies the transfer of scientific knowledge from the ancient Greco-Roman world to an Arabic context from the ninth century onward and a Western Christian context from the eleventh century to the eve of the Renaissance. We will examine how and why centres of learning, such as Alexandria and Baghdad or southern Italy and Spain, brought both continuity and change to the scientific tradition. By studying geography, astronomy, physiology, contagious diseases, and pharmacology, we will explore the ways in which Muslim, Jewish and Christian views of knowledge influenced each other in the formation of a scientific method and spirit of inquiry into the natural world based on a pagan past. How did the different sciences, such as medicine, geography, astrology, and mathematics, connect with each other and with philosophy and theology? We will also consider the Western spread of scientific knowledge out of the learned Latin-speaking world to a broader audience through translations into the European vernaculars.

### Basic course information

<table>
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<tr>
<th>Moodle Web site</th>
<th><a href="https://moodle-1819.ucl.ac.uk/course/view.php?id=7481">https://moodle-1819.ucl.ac.uk/course/view.php?id=7481</a></th>
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<tr>
<td>Assessment:</td>
<td>Research essay, 5000 words</td>
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<td>Timetable:</td>
<td><a href="http://www.ucl.ac.uk/sts/hpsc">www.ucl.ac.uk/sts/hpsc</a></td>
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<td>Prerequisites:</td>
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<td>Required texts:</td>
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</tr>
<tr>
<td>Course tutor(s):</td>
<td>Dr Bill MacLehose</td>
</tr>
<tr>
<td>Contact:</td>
<td><a href="mailto:w.maclehose@ucl.ac.uk">w.maclehose@ucl.ac.uk</a> t: 020 7679 2929</td>
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<tr>
<td>Web:</td>
<td><a href="http://www.ucl.ac.uk/silva/sts/staff/maclehose">www.ucl.ac.uk/silva/sts/staff/maclehose</a></td>
</tr>
<tr>
<td>Office location:</td>
<td>22 Gordon Square, Room 3.2</td>
</tr>
<tr>
<td>Office hours:</td>
<td>T 12-1, F 12-1 and by appointment</td>
</tr>
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## Schedule

<table>
<thead>
<tr>
<th>UCL Week</th>
<th>Topic</th>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>20</td>
<td>Reorientating the history of science</td>
<td>8 Jan</td>
<td>Sa‘id al-Andalusi; Lindberg 1991</td>
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<tr>
<td>21</td>
<td>Transmission of scientific knowledge: East and West</td>
<td>15 Jan</td>
<td>Meyerhof; Guy de Chauliac; Burnett</td>
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<tr>
<td>22</td>
<td>The body considered: Anatomy and the use of corpses</td>
<td>22 Jan</td>
<td>Park; Savage-Smith; Meyerhof</td>
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<tr>
<td>23</td>
<td>Sex, desire and physiology</td>
<td>29 Jan</td>
<td>De coitu; Trotula; Jacquet and</td>
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<td>24</td>
<td>Magic and alchemy</td>
<td>5 Feb</td>
<td>Linden; Olsan</td>
</tr>
<tr>
<td>25</td>
<td>Reading Week</td>
<td>12 Feb</td>
<td></td>
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<tr>
<td>26</td>
<td>Blurred boundaries: Religion and science</td>
<td>19 Feb</td>
<td>Lindberg 1995; Condemnations; Perho</td>
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<tr>
<td>27</td>
<td>What’s in the Stars: Astronomy and astrology</td>
<td>26 Feb</td>
<td>Saliba; Maimonides; French 1994</td>
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<tr>
<td>28</td>
<td>Geography and the Image of the World</td>
<td>5 Mar</td>
<td>Woodward; Gaudio; Beeston</td>
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<tr>
<td>29</td>
<td>Artisans, architecture and artillery: Medieval</td>
<td>12 Mar</td>
<td>Gimpel; Saliba; Villard online; al-Jazari online</td>
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<td></td>
<td>technologies</td>
<td></td>
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<tr>
<td>30</td>
<td>Epidemics and infectious disease: Medieval responses</td>
<td>19 Mar</td>
<td>Horrox; Touati; Dols</td>
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## Assessments

### Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Deadline</th>
<th>Word limit</th>
<th>Deadline for Tutors to provide Feedback</th>
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<tr>
<td>Preliminary plan for research essay</td>
<td>1 Mar 2019</td>
<td>5000 words</td>
<td>15 Mar 2019</td>
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<tr>
<td>Research essay</td>
<td>20 Mar 2019</td>
<td></td>
<td>4 Apr 2019</td>
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### Assignments

The research essay will consist of a topic of the student’s choosing (pending the instructor’s approval) which fits within the parameters of the module, i.e. between approximately 500 and 1500 AD, and related to the history of science, technology and medicine of the Islamic and Christian worlds. It consists of two required parts: the first is a formative, unmarked outline and preliminary bibliography, and the second is the final version.

Essays must be submitted via Moodle.

In order to be deemed ‘complete’ on this module students must attempt both the outline/bibliography and the research essay.
Specific Criteria for Assessment for this Module:

The departmental marking guidelines for individual items of assessment can be found in the STS Student Handbook.

Aims & objectives

The assignment will allow the student to work with both primary and secondary sources to study a topic of his or her own choosing. Essays must be submitted via Moodle.

In order to be deemed ‘complete’ on this module students must attempt to develop a research topic (to be approved by the lecturer), a bibliography and write an analytical essay of 5000 words. The student must also meet the UCL guidelines for attendance.

Reading list

Week 1: Reorientating History of Science

Week 2: Transmission of Scientific Knowledge: East and West
Meyerhof, Max. ‘Sultan Saladin’s Physician on the Transmission of Greek Medicine to the Arabs.’ BHM 18 (1945) 169-178. ***
Guy de Chauliac, Surgery, selection from Grant, Source Book. ***
‘From Noah to Galen’ (unpublished text, class handout)
Young, M.J.L., J.D. Latham and R.B. Serjeant. Religion, Learning and Science in the ‘Abbasid Period.


**Week 3: The Body Considered: Anatomy and the use of corpses**


**Week 4: Sex, desire and physiology**


Maimonides. On Cohabitation. In *Medical Writings of Maimonides*.


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**Week 5: Magic and alchemy**

Linden, Stanton J., ed. The Alchemy Reader: From Hermes Trismegistus to Isaac Newton. CUP, 2003. (selections) ***


Pereira, Michela. ‘Alchemy and the Use of Vernacular Languages in the Late Middle Ages.’ Speculum 74 (1999) 336-356.


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**Week 6: Blurred Boundaries: Religion and science**


Condemnations of 1277. Online resource. ***


Week 7: Astronomy and Astrology in society, science, and medicine


Duham, Pierre. Medieval Cosmology: Theories of Infinity, Place, Time, Void and the Plurality of Worlds.


Goldstein, Bernard. 'Theory and Observation in Medieval Astronomy.' Isis (1972) 39-47.


Saliba, George. 'Greek Astronomy and the Medieval Arabic Tradition.' American Scientist 90 (2002) 360-67


Week 8: Geography and travel accounts


Al-Idrisi’s map of the world: http://memory.loc.gov/cgi-bin/query/h?ammem/gmd:@field(NUMBER+@band(g3200+ct001903))


Week 9: Artisans, Architecture and Artillery: Medieval Technologies

Villard de Honnecourt. Sketchbooks. *** http://commons.wikimedia.org/wiki/Villard_de_Honnecourt
Grant, Edward and John Murdoch. Mathematics and its Application to Science and Natural Philosophy in the Middle Ages. 2010

Week 10: Epidemics and infectious diseases: medieval responses
Arrizabalaga, Jon. ‘Facing the Black Death: Perceptions and Reactions of University Medical Practitioners.’ In Practical Medicine from Salerno to the Black Death, pp. 237-88. ***

Reference literature on medieval science in the Islamic and Christian worlds:
The following is a brief list of introductory and reference materials that may be helpful in preparing for the essays:


Saliba, George. *Islamic Science and the Making of the European Renaissance*.

