

A. Required Books [B]

- Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine* (Georgetown Univ. Press, 2007) (available on Amazon and <http://press.georgetown.edu/book/georgetown/medieval-islamic-medicine>)
- J. L. Berggren, *Episodes in the Mathematics of Medieval Islam*: <https://link.springer.com/book/10.1007%2F978-1-4939-3780-6>

B. On reserve in Sawyer [R]

- Ahmad S. Dallal, *Islam, Science, and the Challenge of History: The Terry Lectures* <http://www.jstor.org/stable/j.ctt1nq893>
- Frank Griffel, *Al-Ghazālī's Philosophical Theology*
- Dimitri Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbāsīd Society (2nd-4th/8th-10th Centuries)* <https://ebookcentral.proquest.com/lib/willm/detail.action?docID=165398>
- George F. Hourani, *Averroes on the Harmony of Religion and Philosophy*
- Ibn Khaldūn, *The Muqaddimah: An Introduction to History*
- B. F. Musallam, *Sex and Society in Islam*
- Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine*
- F. J. Ragep, *Naṣīr al-Dīn al-Ṭūsī's Memoir on Astronomy (al-Tadhkira)* http://digitool.Library.McGill.CA:80/R/-?func=dbin-jump-full&object_id=108822&silolibrary=GEN01
- Franz Rosenthal, *The Classical Heritage in Islam*
- George Saliba, *Islamic Science and the Making of the European Renaissance* <http://www.jstor.org/stable/j.ctt5hhj73>

C. Readings in GLOW are indicated by [G]**D. Online materials are indicated by [O]****E. General Histories of Islam (for background):**

- *The New Cambridge History of Islam*, general editor Michael Cook. 6 vols. (Cambridge Univ. Press, 2011). <https://archive.org/details/TheNewCambridgeHistoryOfIslamVolume1>
- Daniel W. Brown, *A New Introduction to Islam* (Wiley-Blackwell, 2003)
- Ira M. Lapidus, *A History of Islamic Societies* (Cambridge Univ. Press, 2014)

F. MAPS: https://www.edmaps.com/html/islamic_world.html**Class Schedule****I. Sept. 7, 11: Introduction to Islamic Science and Civilization**

- [G, O] Ernest Renan, "Islam and Science" (L'islamisme et la science) https://www.mcgill.ca/islamicstudies/files/islamicstudies/renan_islamism_cversion.pdf
- [G, O] F. J. Ragep, "When Did Islamic Science Die? (And Who Cares?)" http://islamsci.mcgill.ca/Viewpoint_ragep.pdf
- [G, O, R] Dallal, *Islam, Science, and the Challenge of History*, ch. 4 (pp. 149-176)

Background reading:

- [G] F. J. Ragep, "Islamic Culture and the Natural Sciences" [*Intro; The Historical and Cultural Background*], pp. 27-33
- [O] *The New Cambridge History of Islam*, vol. 1, pp. 1-15, 173-225 <https://archive.org/details/TheNewCambridgeHistoryOfIslamVolume1>

II. Sept. 14, 18: Secular Knowledge in Islamic Civilization: Sources and Motivations

- [G] F. J. Ragep, “Islamic Culture and the Natural Sciences” [*The Translation of Greek Natural Philosophy into Arabic: Background and Motivations; Translators and Their Patrons*], pp. 34-40
- [G] Sabra, “The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam”
- [G, R] Rosenthal, *Classical Heritage*, pp. 1-23
- [R] Saliba, *Islamic Science*, pp. 1-19

ASSIGNMENT 1: Due Sept. 21 [The Translation Movement]

III. Sept. 21, 25, 28, Oct. 2: Astronomy

- [O] Berggren, *Episodes* (2nd ed), pp. 173-175, 197-208, 211-220
- [G] F. J. Ragep, “Astronomy” *Encyclopedia of Islam*, 3d ed.
- [G] Ibn al-Haytham’s Introduction to *Doubts Concerning Ptolemy*
- [O, R] F. J. Ragep, *Naṣīr al-Dīn al-Ṭūsī’s Memoir*, 90-112, 158-160, 194-204

ASSIGNMENT 2: Due in class, Sept. 25 [Astrolabe]

ASSIGNMENT 3: Due Oct. 2 [Astronomy]

NOTE: We’ll have an observing evening, probably Saturday, Sept. 23 or Sunday, Sept. 24, depending on the weather. You’ll have a chance to use your astrolabe in a real-life situation!

IV. Oct. 5, 12, 16: Mathematics

- [O] Berggren, *Episodes* (2nd ed), pp. 1-56, 71-76, 121-129, 152-153, 155-163

MIDTERM: Oct. 19

V. Oct. 23: “Religious” Knowledge and Belief [Rationality Homegrown]

- [G] F. J. Ragep, “Islamic Culture and the Natural Sciences” [*The Theological (Kalām) Approach to the Phenomenal World*], pp. 53-57
- [O] N. Heer, “A Lecture on Islamic Theology”
<http://faculty.washington.edu/heer/theology-sep.pdf>

VI. Oct. 26: “Non-religious” Knowledge and Belief

- [G] F. J. Ragep, “Islamic Culture and the Natural Sciences” [*The Natural Philosophy Tradition in Islam; Defenders and Practitioners of Natural Philosophy; Transformations...*], pp. 40-53, 57-61
- [G] Sabra, “Some Remarks on Al-Kindī...”
- [O] Jon McGinnis, “Arabic and Islamic Natural Philosophy and Natural Science”
<http://plato.stanford.edu/entries/arabic-islamic-natural/>

VII. Oct. 30, Nov. 2: Interactions of the “Religious” and “Non-religious”

- [G, R] Rosenthal, *Classical Heritage in Islam*, vol. 1, pp. 52-82, 114-116
- [G] “The Attack of al-Ghazzālī upon Philosophers and Response of Averroes”
- [G, R] Averroes, “Decisive Treatise,” in George Hourani, *Averroes on the Harmony of Religion and Philosophy*
- [G, R] Ibn Khaldūn, *The Muqaddimah: An Introduction to History*, pp. 258-264
- [O] Frank Griffel, “Al-Ghazali” <http://plato.stanford.edu/entries/al-ghazali/>

ASSIGNMENT 4: Due Nov. 6 [Science and Religion/Knowledge and Belief]

VIII. Nov. 6: Medicine and Biology

- [B] Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine*
- [G, R] Musallam, *Sex and Society in Islam*, pp. 10-59

PAPER: Due Nov. 13 [on *Sex and Society*]

IX. Nov. 9, 13: Optics and Vision

- [G] Sabra, "Optics, Islamic," pp. 179-186
- [G] Sabra, *The Optics of Ibn al-Haytham*, pp. 3-6, 63-70, 113, 126-138, 200-206

Assignment 5: Due Nov. 16 [Ibn al-Haytham's Vision]

X. Nov. 16, 20: Institutions and Post-Classical Islamic Intellectual History

- [G] "Madrasa," *Encyclopedia of Islam*, 2nd ed. (part 1 only: "The Institution in the Arabic, Persian and Turkish lands")
- [G, O] I. Fazlioglu, "The Samarqand Mathematical-Astronomical School"
<http://islamsci.mcgill.ca/Fazlioglu.pdf>
- [G] Sally P. Ragep, "The Teaching of Theoretical Astronomy in Pre-modern Islam"
- [G] A. Sayılı, *The Observatory in Islam*, pp. 306-312
- [G] F. Charette, "The Locales of Islamic Astronomical Instrumentation," pp.123-138

Background reading:

- [O] *The New Cambridge History of Islam*, vol. 3, pp. 1-17, 128-200
https://archive.org/stream/TheNewCambridgeHistoryOfIslamVolume1/The_New_Cambridge_History_of_Islam_Volume_3#page/n0/mode/2up

XI. Nov. 27, 30, Dec. 4: Student presentations

Information on presentations and term papers will be given in class.

Course Information

1. Office Hrs: MR 4:00-5:00pm or by appointment. [Hollander 215; please email or call 597-2659]
2. Generally, readings should be completed by the beginning of the week in which they are assigned.
3. Make-up of an examination, or late submission of papers, will be permitted without penalty only in cases of serious illness or emergency (such as a death in the family); approval for such a make-up exam or late essay submission must be obtained in advance in all but highly exceptional cases.
4. Late submissions of assignments or papers (unexcused) will be accepted but will be penalized a half letter-grade (or 5 points on a 100 scale) for every day it is late, up to a maximum of 50% penalty. Missed exams (other than the final) that are unexcused may (and should) be made up; they will be given 50% credit.
5. Williams is committed to providing reasonable accommodation for all students. Students with disabilities of any kind who may need accommodations for this course are encouraged to contact Dr. G. L. Wallace (Director of Accessible Education) at 597-4672. Also, students experiencing mental or physical health challenges that are significantly affecting their academic work or well-being are encouraged to contact us and to speak with a dean. The deans can be reached at 597-4171.
6. At Williams, we operate under the course unit system (rather than the credit hour system) as the metric required by many employers, granting organizations, graduate schools, and federal agencies. In addition to the 3 hours we spend together during our class meeting time, you should expect to spend (on average) at least 10 hours per week on the academic and creative work related to class. If you find that you are spending considerably more (or considerably

less!) time to engage with this course academically, please contact us so that we can determine the best course of action as you approach the materials. Should you have any additional questions about the relationship of course units to credit hours, refer to the Office of the Registrar, which explains our course unit equivalency in greater detail.

7. Permission from the instructors is needed for taping of Lectures.
8. Instructor generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the College under the Code of Student Conduct and Disciplinary Procedures.
9. Williams College values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Williams College Honor Code Code (see https://web.williams.edu/wp-etc/acad-resources/survival_guide/Integrity/HonorCode.php for more information). If you have any questions about how the honor code applies to your work, and for questions regarding please come talk with us. We are always happy to have those conversations.
10. Regarding collaborative work: Students can exchange broad ideas or general approaches toward assignments with other students, but may not engage in any joint writing or step-by-step problem solving/writing. One way to be sure you are not violating the honor code is to refrain from writing/typing/crafting your response to the assignment with others. Rather, save the writing until you are on your own and working independently.
11. Title IX. Williams College is committed to providing a safe learning environment for all students that is free of discrimination, sexual harassment (including comments that create an unwelcoming or hostile environment), sexual assault, domestic violence, dating violence, and stalking. Further details are explained in the college's Title IX regulations. If you (or someone you know) experiences a Title IX violation, know that Williams has staff trained to support you. Williams faculty members are "responsible employees," which means that if you tell me about a Title IX violation, we must share that information with the Title IX Coordinator. Still, you will control how your case is handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need including, if you wish, confidential sources on campus who are not subject to the mandatory reporting requirement (listed at bottom of this link <http://titleix.williams.edu/>).
12. In the event of extraordinary circumstances beyond the College's control, the content and/or evaluation scheme in this course is subject to change.

13. Grading:

Midterm exam (Oct. 19)	15%
Assignment 1 (due Sept. 21)	7%
Assignment 2 (due Sept. 25)	7%
Assignment 3 (due Oct. 2)	7%
Assignment 4 (due Nov. 6)	8%
Assignment 5 (due Nov. 16)	7%
Paper (on <i>Sex and Society</i>) [ca. 6-8 pages] (due Nov. 13)	15%
Presentations (Nov. 27-Dec. 4) and Term Paper (due Dec. 16)	25%
The remaining 9% of the grade will be discretionary, being based upon class attendance and participation in discussions.	9%