

ISLA 345: Science & Civilization in Islam
MTR 12:35-13:25

I. Fazlıoğlu & S. P. Ragep
Winter 2011

Office Hours (Fazlıoğlu): WR 14:00-15:00; by appt. MH 024; ihсан.fazlioglu@mcgill.ca
Office Hours (Ragep): MT 14:00-15:00; by appt. MH 027; sally.ragep@mcgill.ca

Reading Material

A. The following books are available in the bookstore [B]:

Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine* (required)
J. L. Berggren, *Episodes in the Mathematics of Medieval Islam* (required)

B. A Packet of readings is available in the bookstore: [P]

C. The following are on reserve in the Islamic Studies library [R]:

J. L. Berggren, *Episodes in the Mathematics of Medieval Islam*
Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine*
George F. Hourani, *Averroes on the Harmony of Religion and Philosophy*
B. F. Musallam, *Sex and Society in Islam*
F. J. Ragep, *Naşır al-Dīn al-Ṭūsī's Memoir on Astronomy (al-Tadhkira)*
Franz Rosenthal, *The Classical Heritage in Islam*
A. I. Sabra, *The Optics of Ibn Al-Haytham*
Aydın Sayılı, *The Observatory in Islam*

D. Readings on the web are indicated by [E]; handouts indicated by [H]

Class Schedule

I. Jan. 4, 6, 10: Introduction to Islamic Science and Civilization

Readings: [P] Arabic transliteration and names [3-42]
[P] F. J. Ragep, "Islamic Culture and the Natural Sciences" [*Intro; The Historical and Cultural Background*], pp. 1-6 [43-48]
[B, R] Berggren, *Episodes*, pp. 1-28

ASSIGNMENT 1: Due Jan. 10 ["Islamic Science" website]

II. Jan. 11, 13: Rationality Homegrown: Religious Knowledge within Islam

Readings: [P] F. J. Ragep, "Islamic Culture and the Natural Sciences" [*The Theological (Kalām) Approach to the Phenomenal World*], pp. 23-26 [65-68]
[E] N. Heer, "A Lecture on Islamic Theology"
<http://faculty.washington.edu/heer/theology-sep.pdf>

III. Jan. 17, 18: The Meaning of Knowledge in Islamic Civilization (Classification of the Sciences)

Readings: [P] Sabra, "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam," pp. 222-243 [127-137]
[P] Rosenthal, *Classical Heritage in Islam*, pp. 52-82 [85-115], 114-16 [116-18]

IV. Jan. 20, 24, 25: Secular Knowledge in Islamic Civilization: Sources and Motivations

Readings: [P] 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. 6-12 [48-54]
[P, R] Rosenthal, *Classical Heritage*, pp. 1-23 [73-84]

ASSIGNMENT 2: Due Jan. 31 [think question]

V. Jan. 27, 31, Feb. 1: Secular Knowledge in Islamic Civilization: Doctrines and Champions

- Readings: [P] F. J. Ragep, "Islamic Culture and the Natural Sciences" [*The Natural Philosophy Tradition in Islam and Defenders and Practitioners of Natural Philosophy*], pp. 12-23 [54-65], 26-29 [68-71]
[P] Sabra, "Some Remarks on Al-Kindī..." [119-25]
[E] Jon McGinnis, "Arabic and Islamic Natural Philosophy and Natural Science," <http://plato.stanford.edu/entries/arabic-islamic-natural/>

VI. Feb. 3, 7, 8: Interactions of Science and Religion in Islam

- Readings: [H] "The Attack of al-Ghazzālī upon Philosophers and Response of Averroes" [4 pp]
[P] Averroes, "Decisive Treatise," in George Hourani, *Averroes on the Harmony of Religion and Philosophy*, pp. 50-62 [139-42]
[P] Ibn Khaldūn, *The Muqaddimah: An Introduction to History*, pp. 258-80 [147-58]
[E] Frank Griffel, "Al-Ghazali," <http://plato.stanford.edu/entries/al-ghazali/>

ASSIGNMENT 3: Due Feb. 14 [Science and Religion: cf. al-Ghazālī and Ibn Rushd]

VII. Feb. 10, 14, 15: Institutions

- Readings: [E] "Madrasa," *Encyclopedia of Islam*, 2nd ed. (part 1 only: "The Institution in the Arabic, Persian and Turkish lands")
http://www.brillonline.nl/subscriber/uid=1417/entry?entry=islam_COM0610
[E] Fazlıoğlu, "The Samarqand Mathematical-Astronomical School"
<http://islamsci.mcgill.ca/Fazlioglu.pdf>
[P, R] Sayılı, *The Observatory in Islam*, pp. 306-345 [219-238]
[P] Charette, "The Locales of Islamic Astronomical Instrumentation," pp.123-138 [239-254]

MIDTERM EXAM: Feb. 17

STUDY WEEK: FEB. 21-25

VIII. Feb. 28, March 1, 3, 7: Medicine and Biology

- Readings: [B] Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine*
[P] Musallam, *Sex and Society in Islam*, pp. 10-59 [159-183]

PAPER: Due March 10 [on *Sex and Society*]

IX. March 8, 10, 14: Optics and Vision

- Readings: [H] Sabra, "Optics, Islamic," pp. 179-186
[P, R] Sabra, *The Optics of Ibn al-Haytham*, pp. 3-6, 63-70, 113, 126-206 [185-217]

X. March 15, 17, 21: Mathematics

- Readings: [B, R] Berggren, *Episodes*, pp. 29-48, 63-67, 99-108, 124-125, 127-135

ASSIGNMENT 4: Due March 24 [Mathematics]

XI. March 22, 24, 28, 29, 31: Astronomy

- Readings: [B, R] Berggren, *Episodes*, pp. 141-143, 165-173, 176-186
[E] F. J. Ragep, "Astronomy" *Encyclopedia of Islam*, 3d ed.
http://www.brillonline.nl/subscriber/uid=1417/entry?entry=ei3_COM-22652
[H] Ibn al-Haytham's Introduction to *Doubts Concerning Ptolemy*
[P, R] F. J. Ragep, *Naṣīr al-Dīn al-Ṭūsī's Memoir* [255-273]

ASSIGNMENT 5: Due April 4 [Astronomy]

XII. April 4, 5, 7, 8: Transmission, Mutual Influence, and Modern Repercussions

- Readings: [P] F. J. Ragep, "Copernicus and His Islamic Predecessors," pp.65- 81 [275-291]
[E] F. J. Ragep, "When Did Islamic Science Die? (And Who Cares?)"
http://islamsci.mcgill.ca/Viewpoint_ragep.pdf

Course Information

1. Fazlıođlu's Office Hrs: WR 14:00-15:00 and by appointment. [Morrice Hall 024]
2. Ragep's Office Hrs: MT 14:00-15:00 and by appointment. [Morrice Hall 027]
3. Generally, readings should be completed by the beginning of the week in which they are assigned.
4. 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.
5. Late submissions of assignments or the paper 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.
6. McGill is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. It would be helpful if you contact the Office for Students with Disabilities at 398-6009 (online at <http://www.mcgill.ca/osd>) before you do this. For the policy regarding examinations, please see: <http://www.mcgill.ca/studentrecords/exam/sd/>.
7. "McGill University recognizes and respects the diversity of its members, including diversity of religious faiths and observances." For McGill's policy for the Accommodation of Religious Holy Days, please see <http://www.mcgill.ca/student-records/dates/holydays/>.
8. In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.
9. Permission from the instructor is needed for taping of Lectures.
10. Grading:

Mid-term exam (Feb. 17)	15%
Final Exam	25%
Presentation/paper [ca. 6-8 pages]	15%
(scheduled individually; paper due within week after presented)	
Paper (on <i>Sex and Society</i>) [ca. 6-8 pages] (due March 10)	15%
Five assignments: due Jan. 10, Jan. 31, Feb. 14, March 24, April 4	22%
The remaining 8% of the grade will be discretionary, being based upon class attendance and participation in discussions.	8%

11. Academic Integrity:

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see <http://www.mcgill.ca/integrity/> for more information).

12. In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.
