Instructor Information
Instructor: Prof. Jacqueline Feke
Office: HH-326
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Email: jfeke@uwaterloo.ca
(Please allow a few days for replies to email.)

Course Description
Responding to their naked-eye observations of the world and divergent philosophical commitments, ancient Greek philosophers and mathematicians constructed competing theories of the cosmos’ composition and structure. This course examines the variety of cosmological theories advanced by ancient Greek philosophers and mathematicians as well as their reception from the medieval Islamic tradition to early modern Europe. Analyzing texts by Plato, Aristotle, Epicurus, Cleomedes, and Ptolemy in English translation, students will familiarize themselves with the content and range of ancient Greek cosmologies as well as their relation to various epistemological and metaphysical theories. In addition, students will examine these cosmologies’ reception by Ibn Tufayl, Copernicus, and Galileo, who responded to earlier cosmologies in light of their own philosophical commitments and, in the case of Galileo, the observation of phenomena inaccessible before the invention of the telescope.

Required Books
- Epicurus, The Epicurus Reader: Selected Writings and Testimonia, ed. Brad Inwood and Lloyd Gerson (Hackett) 0872202410
- Ibn Tufayl, Hayy Ibn Yaqzân: A Philosophical Tale, trans. Lenn Evan Goodman (Univ. of Chicago Press) 0226303101
- Galileo Galilei, Discoveries and Opinions of Galileo, trans. Stillman Drake (Anchor) 0385092393
Note that it is imperative that you acquire the edition assigned. Translations, even different editions by the same scholar, vary dramatically and offer distinct interpretations of the text. These books are available for purchase at the UW Bookstore and are on reserve at the Dana Porter Library.

Readings Available on LEARN
- Sabetai Unguru, “On the Need to Rewrite the History of Greek Mathematics” (recommended only)
• Herbert Butterfield, “Introduction” in The Whig Interpretation of History (recommended only)
• Aristotle, Physics 8
• Aristotle, Metaphysics Lambda
• Selections from Cleomedes’ The Heavens
  Selections from Ptolemy’s corpus
  Selection from Copernicus’ De Revolutionibus

Course Requirements and Assessment

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<tr>
<th>Assessment</th>
<th>Date of Evaluation</th>
<th>Weighting</th>
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<tr>
<td>Class Participation</td>
<td>Class meetings</td>
<td>15%</td>
</tr>
<tr>
<td>Short Papers</td>
<td>Weeks 2-10</td>
<td>10%</td>
</tr>
<tr>
<td>Presentation</td>
<td>TBD</td>
<td>25%</td>
</tr>
<tr>
<td>Research Paper</td>
<td>Friday, Dec. 11</td>
<td>50%</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100%</strong></td>
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Class Participation
Everyone is responsible for participating in class. This means you must have read the assigned text(s) before class, completed any assignments given for the class meeting, and come to class with questions or specific issues you would like to discuss. You should also bring the text under discussion to the class meeting. In class, it is expected that you’ll ask thoughtful questions as well as posit potential answers. Making thoughtful comments is important, but listening carefully is equally important. Collaboration and criticism can be equally constructive, so try to do some of both, and always criticize in a sensitive way.

Participation will be evaluated according to the following guidelines:

80-100: The student is fully engaged and highly motivated. This student is well prepared, having read the assigned texts, and has thought carefully about the texts’ relation to issues raised in class. This student’s ideas and questions are substantive (constructive and/or critical), insightful, and they stimulate class discussions. This student listens and responds to the contributions of other students.

70-79: The student participates consistently in discussion. This student comes to class well prepared and contributes quite regularly by sharing thoughts and questions that demonstrate familiarity with the material. This student refers to the texts discussed and shows interest in other students' contributions.

60-69: The student meets the basic requirements of class participation. This student is usually prepared and participates once in a while but not regularly. This student’s contributions do not help to build a coherent or productive discussion.

59 and below: Failure to fulfill satisfactorily any of the above criteria.

Short Papers
Students must write nine one-page, double-spaced papers, due weeks 2-10. Each paper should analyze some particular concept from the readings assigned for that day. It should have a thesis and an argument. Each will be graded out of 10 points. All papers must be submitted in two ways. Students
must upload them to the LEARN dropbox as a doc or pdf by noon on the day of class, and students must bring hard copies to class. Students may miss one of the short papers without penalty. If a student writes all nine, then the paper with the lowest grade will be dropped.

**Presentation**
Students must give a conference-style presentation of their research paper toward the end of the semester (the scheduling is dependent upon enrollment). The research paper itself will still be a work-in-progress at this point, but the presentation will allow for questions and feedback that should inform the final version of the paper. The presentation can be in any style suitable to a conference—talking, reading, with a handout, with a PowerPoint presentation, etc.—and should contain the ideas that will be expounded in the research paper.

**Research Paper**
Students must compose one research paper on a topic related to philosophy and cosmology in the ‘Western’ world from Greek antiquity through the seventeenth century. Students must bring a one-page proposal to class on Wednesday, Nov. 4. The final paper must be submitted to the LEARN dropbox by Friday, Dec. 11. Undergraduate papers should be 10-15 pages in length. Graduate students’ papers should be 15-20 pages in length. Papers should be double-spaced with one-inch margins and 12-point Times New Roman font.

**Schedule of Readings**

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sept. 16</td>
<td>Introduction</td>
<td>Recommendation to read Unguru, “On the Need...” and Butterfield, “Introduction”</td>
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</tbody>
</table>
| 2    | Sept. 23 | Plato’s *Republic* | *Republic* 6: pp. 176-207  
*Republic* 7: pp. 208-237  
Selection from *Republic* 10: pp. 319-326 |
| 3    | Sept. 30 | Plato’s *Timaeus* | *Timaeus*: pp. 1-88                                                        |
| 4    | Oct. 7   | Aristotle        | *Physics* 8;  
*Metaphysics* Lambda                                                        |
<p>| 5    | Oct. 14  | Epicurus         | The extant letters: pp. 5-31                                               |
| 6    | Oct. 21  | Cleomedes        | Selections from <em>The Heavens</em>                                             |
| 7    | Oct. 28  | Ptolemy          | Selections from the <em>Almagest</em> and the <em>Harmonics</em>                         |
| 8    | Nov. 4   | Ibn Tufayl       | <em>Hayy Ibn Yaqzân</em>: pp. 93-166                                             |
| 9    | Nov. 11  | Copernicus       | Selection from <em>De Revolutionibus</em>                                          |
| 10   | Nov. 18  | Galileo          | TBA                                                                         |
| 11   | Nov. 25  | Galileo or Student Presentations: TBD | TBA                                                                         |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
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<tbody>
<tr>
<td>12</td>
<td>Dec. 2</td>
<td>Student Presentations</td>
<td>No reading</td>
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**Late Work**

Each short paper turned in late will be marked down 1 point out of 10 for every 24-hour period (or part thereof) after the deadline. If the research paper is turned in late it will be marked down 3 points out of 100 for every 24-hour period (or part thereof) after the deadline. Revisions of papers will not be accepted for re-evaluation. If a student experiences a serious medical problem, emergency, or other event outside of her control which prevents her from completing an assignment on time, she must get in touch with the instructor as soon as possible and submit documentation of the event. Travel plans and work load are not sufficient excuses for missing deadlines.

**Information on Plagiarism Detection**

No technological mechanism for plagiarism detection will be used in this class, but plagiarism remains a serious academic offense.

**Electronic Device Policy**

Cell phones are not permitted in class. They must be turned off or put on silent. If you must use your phone, leave the classroom to do so and return when you are done. The use of laptops and tablets are permitted but highly discouraged due to the abundance of studies showing that their use impedes student learning. If you do elect to use a tablet or laptop in class, you may not use it in ways that are distracting to me or to the other students. Furthermore, you must remain engaged in the classroom discussion. This means no social networking, no email, and in general no distractions.

**Attendance Policy**

Students are permitted one absence, no questions asked, and are encouraged to reserve this absence for an emergency, sickness, or other event outside of their control which prohibits their attendance in class. Attendance and participation in eleven of the twelve class meetings is required.

**Etiquette**

-Please call me “Jackie.” Alternatively, you may call me “Prof. Feke” or “Dr. Feke.”
-With a three-hour class, I will incorporate breaks, but please come back from break in a timely manner.
-Snacks are permitted as long as they are not distracting to me or to the other students.

**Institutional-required statements for undergraduate course outlines approved by Senate Undergraduate Council, April 14, 2009**

**Cross-listed course**

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

**Academic Integrity**
**Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility.

**Discipline:** A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline.

**Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4.

**Appeals:** A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals.

**Other sources of information for students**

Academic integrity (Arts) Academic Integrity Office (uWaterloo)

**Accommodation for Students with Disabilities**

*Note for students with disabilities:* The AccessAbility Services office, located in Needles Hall Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.