

Philosophy of Biology (PHIL 3364)

Monday-Friday, 9:30AM–Noon, 1 PM–3:00PM, SMU IN TAOS.

Professor Justin Fisher.

Office: Hyer Hall 210D. (Will have to figure out something different for Taos!)

Meetings: After class or by appointment.

Email: fisher@smu.edu (This is the best way to reach me.)

Course Description:

We'll consider both some classic issues in philosophy of biology (including evolution versus creation, fitness, units of selection and adaptationism) and some issues involving the evolution of human cognition (including evolutionary psychology, socio-biology and cultural evolution).

When taught at SMU in Taos, this course will involve a special emphasis on examples involving the natural and cultural history of New Mexico and the American Southwest, including a nature hike to look at relevant examples in nature and a field trip to Albuquerque.

This course will draw heavily on work by philosophers and biologists, as well as some work in psychology and anthropology. Students will demonstrate the ability to use inter/multi-disciplinary approaches for understanding complex issues.

Student Learning Outcomes:

Philosophy, Religious Inquiry and Ethics

1. Students will demonstrate the ability to critically reflect on or apply methods, theories, or principles from philosophy via a focus on a specific area or set of issues.

Ways of Knowing

2. Students will demonstrate knowledge of more than one disciplinary practice.
3. Students will explain how bringing more than one practice to an examination of the course topic contributes to knowing about that topic.

Oral Communication

4. Students will select, organize and use appropriate evidence or information to suit a specific or targeted audience.
5. Students will use appropriate vocal and visual cues to deliver a presentation to a specific or targeted audience.

Readings:

All required readings will be made available online. Some are drawn from the following books, so if you enjoy having physical books in hand and being able to follow links to topics in other chapters, these are recommended.

1. Kim Sterelny & Paul Griffiths. *Sex and Death: An Introduction to the Philosophy of Biology*
2. Elliot Sober. *Philosophy of Biology*.
3. Peter Godfrey Smith. *Philosophy of Biology*.
4. Peter Richerson and Robert Boyd. *Not by Genes Alone*.
5. Jesse Prinz. *Beyond Human Nature*.

Evaluation:

Attendance and Classroom Participation (10%)
Homework and Quizzes (20%)
Debates and WriteUps (20%)
Midterm Exam (25%)
Final Exam (25%)

Attendance, and Classroom Participation.

You are expected to attend class regularly, and to contribute regularly to in-class activities and discussions. It is essential that you come to each class meeting having carefully read the assigned material. If you do not attend regularly, it will be virtually impossible to do well in the course. **If you have 3 or more half-days of unexcused absences (e.g., missing both morning and afternoon is 2 half-days), then I will significantly penalize your grade and it would be highly advisable to drop the course.**

Homework and Quizzes.

For some meetings, I may give a short (usually no more than 2 pages) homework assignment or quiz to help ensure that you will be well prepared. In some cases this homework may involve preparing a short presentation to give in class, or it may involve posting on an online discussion board for the class.

Debates:

I will assign you to a team of 2-4 students. You will be given a claim before each debate. At the time of the debate, a coin-flip will determine whether you will be PRO (arguing for that claim), or CON (arguing against it). The two sides (starting with PRO) will make 3-minute introductory statements, then each will make a 3-minute argument, and then each will make a 3-minute concluding statement. This will be followed by a Q&A discussion with the audience.

Debate grades will reflect the understanding you display regarding the relevant material, and your capacity to muster effective arguments for your side of the debate. A portion of the debate grade may be determined on the basis of ratings by the audience.

The total number of debates that your team will participate in (2-4) will be determined once the final enrollment for the course is determined.

Debate Write-Ups:

These will typically be about 6 pages, and will be turned in by your group on the day of the debate. Detailed instructions for these write-ups will be distributed beforehand.

At the end of the semester, each group will submit a report regarding the division of labor within the group (e.g., that two members each did 30% of the work, while the third member did 40% of the work). These reports will be used to allocate grades to individuals for group work. I encourage your group to talk about your division of labor throughout the semester, and then to reach a final consensus regarding what your report will say. In the event where no consensus can be reached, individuals may submit minority reports.

Exams:

The exams may involve a variety of formats, including multiple choice, matching, short answer, and essay. Sample questions will be distributed prior to the exams.

Grade Appeals:

Grade appeals must be submitted in writing within two weeks of the return of graded material and within 3 weeks of the final exam, whichever comes first. Your written appeal should include a clear explanation for why what you submitted merits a higher grade. (That you have gotten high grades in other courses and/or that it would please your parents or a scholarship committee to have a higher grade are generally not reasons that your work in this course merits a higher grade.)

Academic misconduct:

Plagiarism and other forms of academic misconduct (e.g., cheating on exams) will not be tolerated. Be sure to acknowledge other people's words and ideas, whenever you use them!

Disabilities, Religious Commitments, and Extracurricular Activities:

Please let me know right away if I can help to accommodate your disabilities or religious commitments. Here are some official university policies:

- **Disability Accommodations:** Students needing academic accommodations for a disability must first register with Disability Accommodations & Success Strategies (DASS). Students can call 214-768-1470 or visit <http://www.smu.edu/Provost/ALEC/DASS> to begin the process. Once registered, students should then schedule an appointment with the professor as early in the semester as possible, present a DASS Accommodation Letter, and make appropriate arrangements. Please note that accommodations are not retroactive and require advance notice to implement.
- **Religious Observance:** Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)
- **Excused Absences for University Extracurricular Activities:** Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)

Tentative Schedule (subject to revision – see course webpage):

<p>Wed, Aug 7</p>	<p>Introduction, Evolution and Creationism, Evolution Activity. Adams video, Sober Ch 2, Tyson video.</p>
<p>Thurs, Aug 8</p>	<p>Fitness, fitness presentations, Debate Workshop: Fisher; Rosenburg and Bouchard.</p>
<p>Fri, Aug 9</p>	<p>Adaptation, Function, Future Evolution, and Climate Change: Sterelny&Griffiths Ch 10, Allen.</p>
<p>Mon, Aug 12</p>	<p>Are individuals or genes units of selection? Debate(s). Godfrey-Smith Ch5, S&G Ch3.</p>
<p>Tues, Aug 13</p>	<p>Group and Multi-Level Selection? Debate(s). Sober Ch 4.</p>
<p>Weds, Aug 14</p>	<p>Nature Hike, MIDTERM EXAM</p>
<p>Thurs Aug 15</p>	<p>Evolutionary Perspectives on Humans, presentations: Cosmides & Tooby, Prinz Excerpts.</p>
<p>Fri Aug 16</p>	<p>Nature/Nurture debates: Prinz Ch2.</p>
<p>Mon Aug 19</p>	<p>Evolution of Cultural Transmission, Debate(s): Richerson&Boyd Ch4-5.</p>
<p>Tues Aug 20</p>	<p>Gene-Culture Co-evolution, Field Trip: Fisher, Richerson&Boyd Ch6.</p>
<p>Wed Aug 21</p>	<p>Explanations for human traits, case study Sex and Marriage Debate(s): Prinz Ch 13</p>
<p>Thurs Aug 22</p>	<p>Wrap up, review, FINAL EXAM</p>