

## BIOLOGY 484

*Topics in Evolution:*

*Exploring the nature of science and the interface between scientists and the public  
in the era of the intelligent design movement*

**Time: Wednesdays, 4:00-5:50pm**

**Place: Hitchcock 320**

**Website: <http://faculty.washington.edu/kerrb/biol484/home484.shtml>**

### **Syllabus:**

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#### **Week 1**

**March 29:** *Course overview and a brief exploration of the ID debate*

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#### **Week 2**

**April 5:** *Ideology, strategy and politics in the culture wars (special guest lecture by Ken Clatterbaugh, Philosophy Department: "A Philosopher looks at Intelligent Design")*

*Readings:*

- Scott, E. 1996. Creationism, ideology and science. *Annals of the New York Academy of Sciences* **775**
- The "Wedge" document, an internal manifesto from the Discovery Institute's CRSC leaked in 1999
- Communiqué Interview: Phillip E. Johnson. 1999. *Communiqué: A Quarterly Journal*
- Pennock, R. T. 2003. Creationism and intelligent design. *Annual Review of Genomics and Human Genetics* **4**: 143-163.

*Library Focus Group for Undergraduates (optional after class: food provided)*

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#### **Week 3**

**April 12:** *Creationism, scientism, and the nature of science*

*Readings:*

- Pigliucci, M. 2002. Scientific fundamentalism and the true nature of science. (Chapter 4 from "Denying Evolution: Creationism, Scientism and the Nature of Science" by M. Pigliucci, pp. 113-155)
- Pigliucci, M. 2002. Creationist fallacies. (Chapter 5 from "Denying Evolution: Creationism, Scientism and the Nature of Science" by M. Pigliucci, pp. 156-188)  
**\*only read pp. 156-177** (save the last section "Fallacy 11: Science is Religion" for Week 10)
- Pigliucci, M. 2002. Scientific fallacies. (Chapter 7 from "Denying Evolution: Creationism, Scientism and the Nature of Science" by M. Pigliucci, pp. 233-250)
- *Optional Reading:* Asimov, I. 1981. The 'threat' of creationism. *The New York Times Magazine* **14**

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#### **Week 4**

**April 19:** *Flavors of naturalism (metaphysics vs. methodology)*

*Readings:*

- Johnson, P. E. 1990. Evolution as dogma: the establishment of naturalism. *First Things* **6**: 15-22 (reprinted in "Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives" 2001, pp. 59-76, ed. R. Pennock)
- Pennock, R. T. 1996. Naturalism, evidence and creationism: the case of Phillip Johnson. *Biology and Philosophy* **11**: 543-549 (reprinted in "Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives" 2001, pp. 77-97, ed. R. Pennock)
- Johnson, P. E. 1996. Response to Pennock. *Biology and Philosophy* **11**: 561-563 (reprinted in "Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives" 2001, pp. 99-101, ed. R. Pennock)
- Pennock, R. T. 1996. Reply: Johnson's *Reason in the Balance*. *Biology and Philosophy* **11**: 565-568 (reprinted in "Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives" 2001, pp. 103-107, ed. R. Pennock)

*Chris Thompson (Neurobiology & Behavior program) speaks on the decision in Dover (optional after class)*

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## Week 5

### April 26: Irreducible complexity (and the “IC” reaction)

#### Readings:

- Behe, M. J. 1998. Molecular machines: Experimental support for the design inference. *Cosmic Pursuit* **1**: 27-35. (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 241-256, ed. R. Pennock)
- Orr, H. A. 1996. Darwin v. intelligent design (again). *Boston Review*
- Brauer, M. J. and D. R. Brumbaugh. 2001. Biology remystified: the scientific claims of the new creationists. –in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 289-334, (ed. R. Pennock)  
**\*only read pp. 314-327**
- Lenski, R. E., C. Ofria, R. T. Pennock, and C. Adami. 2003. The evolutionary origin of complex features *Nature* **423**: 139-144.

#### Video Clips (optional after class):

- Michael Behe (23 minutes)
- Kenneth Miller (23 minutes)

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## Week 6

### May 3: Information arguments (investigating CSI)

#### Readings:

- Dembski, W. A. 1997. Intelligent design as a theory of information. *Perspectives on Science & Christian Faith* **3**: 180-190. (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 553-573, ed. R. Pennock)
- Godfrey-Smith, P. 2001. Information and the argument from design. –in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 575-596, (ed. R. Pennock)
- Dawkins, R. 1998. The ‘information challenge’. *The Skeptic* **18**: 22-25. (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 617-631, ed. R. Pennock)
- *Optional Reading*: Fitelson, B., C. Stephens, and E. Sober. 1999. How not to detect design—critical notice: William A. Dembski, The Design Inference. *Philosophy of Science* **66**: 472-488. (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 597-615, ed. R. Pennock)

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## Week 7

### May 9: SPECIAL SEMINAR: Eugenie Scott speaks in the Biology Department Seminar 4-5pm in Physics-Astronomy A102

### May 10: Science education

#### Readings:

- Pennock, R. T. 2001. Why creationism should not be taught in the public schools. –in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 755-777, (ed. R. Pennock)
- Plantinga, A. 2001. Creation and evolution: a modest proposal. –in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 779-791 (ed. R. Pennock)
- Pennock, R. T. 2001. Reply to Plantinga’s ‘modest proposal’ –in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 793-797, (ed. R. Pennock)
- Alters, B. J. and C. E. Nelson. 2002. Teaching evolution in higher education. *Evolution* **56**: 1891-1901

#### Movie (optional after class):

- “Inherit the wind” (127 minutes)
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## Week 8

**May 16: SPECIAL SEMINAR:** Bruce Alberts speaks in the Biology Department Seminar 4-5pm in Physics-Astronomy A102

**May 17:** *Political fundamentalism in the U. S. (special guest lecturer David Domke, Communications Department)*

Readings:

- Jensen, R. 2005. Intelligent-design debate reveals limits of religion and science. *Hindustan Times*
- Domke, D. 2004. Religion, politics, and the Bush administration. –in “God Willing? Political Fundamentalism in the White House, the ‘War on Terror’ and the Echoing Press.” D. Domke, pp. 1-29.
- Coe, K. and D. Domke. 2006. Petitioners or prophets? Presidential discourse, God, and the ascendancy of religious conservatives. *Journal of Communication* **56**: 1-22.

Assignment:

- Turn in one-page proposal

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## Week 9

**May 24:** *Philosophical issues in the ID debate*

Readings: TBA

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## Week 10

**May 31:** *Religion and science*

Readings:

- Provine vs. Johnson debate
- Johnson, P. E. 1993. Creator or blind watchmaker? *First Things* **29**: 8-14 (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 435-449, ed. R. Pennock)
- Murphy, N. 1993. Phillip Johnson on trial: a critique of his critique of Darwin. *Perspectives on Science & Christian Faith* 45: 26-36. (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 451-469, ed. R. Pennock)
- Gould, S. J. 1997. Non-overlapping magisteria. *Natural History* (reprinted in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 737-749, ed. R. Pennock)
- *Optional Reading:* Peacocke, A. 2001. Welcoming the ‘disguised friend’—Darwinism and Divinity. –in “Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives” 2001, pp. 779-791 (ed. R. Pennock)
- *Optional Reading:* Father G. V. Coyne. 2006. Text of the talk by Vatican Observatory director entitled ‘Science Does Not Need God. Or Does It? A Catholic Scientist Looks at Evolution’

Assignment:

- Turn in final paper
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## **Grading:**

<b>Activity</b>	<b>Percent of Grade</b>
Epost critique	10%
Epost reactions	30%
Class participation	20%
Paper proposal (May 17)	10%
Final paper (May 31)	30%

**10%** of your grade will come from a single Epost critique of assigned reading

During the first class period, you will sign up to critique one week's readings on the Epost. The Epost critique must be posted by midnight of the Sunday before class (the link to Epost is found at <http://faculty.washington.edu/kerrb/biol484/home484.shtml>). These critiques should be centered on the readings (offering comments, questions, criticism, etc.), but you are encouraged to find and discuss material that was not assigned (e.g., journal articles, book chapters, web information, media pieces, blogs, etc.). Critiques should be 5-10 paragraphs in length.

**30%** of your grade will come from weekly Epost reactions

Starting with Week 2 (and for all weeks in which you are not posting a critique), you will be expected to post your reaction to the readings and posted critiques by midnight of the Tuesday before class (the link to Epost is found at <http://faculty.washington.edu/kerrb/biol484/home484.shtml>). Reactions should be 1-3 paragraphs in length. Given the sensitive nature of the subject matter, I expect everyone to remain respectful of others on this Epost (and to focus arguments on the material, not one another). You will be granted a one week 'bye' where you do not have to post a reaction (although if you post a reaction every week, you will be granted extra credit).

**20%** of your grade will come from class participation

This is a seminar course and you will be expected to come to class ready to participate. It will be essential that you have read the assigned material and glanced through the Epost before coming to class. You should be coming regularly with questions and comments.

**10%** of your grade will come from the proposal of your final paper

A one-page proposal of the topic on which you plan to write your final paper is due **May 17**. This topic can be anything related to subject matter of this course (the nature of science, history of the creation-science debate, science education, the politics surrounding the current ID movement, philosophical positions in the controversy, etc.)

**30%** of your grade will come from your final paper

The final paper on the topic you proposed is due the last day of class, **May 31**. This paper should be around 10-20 pages and should draw upon at least some material outside of the assigned readings.

## **Contact Information:**

*Instructor:* Ben Kerr

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*Office:* 404 Kincaid

*Office Hours:* Fridays, 11:00-12:30am (or by appointment)