Biology WI-393: Great Ideas in Medicine and Biology
Section B: Friday 10:00-11:50 AM
Spring 2011
Birck Hall 232

Instructor: Dr. Phil Novack-Gottshall
Office: Birck 332
E-mail: Blackboard mail preferred
(or pnovack-gottshall@ben.edu)
Office hours: T 11–1:30, W 11-1, R 11–12:30

Course Description
This course is designed to teach you to think like a scientist by studying some of the greatest writings in the history of biology and medicine. Some of the greatest scientific minds will speak for themselves directly to you. Learning strategies will be those employed in "Great Books" programs, which focuses on shared inquiry through class discussions. This is a writing intensive (WI) course and you will be graded on class discussion, weekly short writing assignments, and attendance.

Required course materials
3) Other readings on-line or as hand-outs, as required.

Prerequisites:
Sophomore standing or higher. This course serves as a required capstone course for those majoring in Health Science and the B.A. in Biology.

IDEA Objectives:
1) Developing skill in expressing yourself orally and in writing.
2) Learning to analyze and critically evaluate ideas, arguments, and points of view.

Grading Policies
There are no tests or lengthy ‘research papers’. You will be graded on the quality of your preparation for class, on your contribution to class discussion, on weekly writing assignments, and indirectly on your attendance. Writing assignments will be graded according to the class rubric on grammar, organization, and development of ideas as well as on scientific merits. Your grades will be assigned on a percentage scale, as follows:

≥90% = A; 80-89% = B; 70-79% = C; 60-69% = D; <60% = F

Weekly writing assignments 50%
Leadership 10%
Class discussions 40%
Writing Across the Curriculum
The Writing Program at Benedictine University subscribes to the Writing Across the Curriculum (WAC) philosophy: writing is central to students’ education and future success and belongs to every discipline. The program requires two writing-intensive (WI) courses of all students: one in the Humanities Cultural Heritage sequence (HUMN 250) and one in the major. WI courses are defined as not only requiring substantial writing, but as providing instruction in writing as well. One of the distinctive features of WI courses is a focus on writing process, including at least one draft critiqued by either instructor or peers. The course will also pay attention to grammar, style, structure, and higher order analytical skills, as well as other elements of good writing in the discipline.

Weekly writing assignments
As a writing-intensive course, it is critical that you write regularly to practice the essential craft of communicating your ideas into writing. For each class, you will be expected to write a formal, persuasive, and grammatically correct essay that is minimally two and no more than four typed pages in length. (700 words is a good goal.) The prompt for your reaction can be chosen from any of the "Application" or "Discussion" questions listed at the end of the readings. The grading rubric used to evaluate your assignments is found below.

Impromptu free-writing is also an important component of the writing process because it helps force your mind to develop your ideas. Thus, you will also be required to write your thoughts to various prompts during class. These in-class writing exercises will also be included in your writing assignment grade and have their own rubric (see below).

Your lowest weekly take-home and lowest in-class writing assignments will be dropped from your final grade.

Participation
Participation in class discussions is critical to this class! Although not everyone is equally comfortable talking publicly, civil discourse is an important goal of an educated citizenry. We will work hard in class to encourage a comfortable and democratic sharing of ideas. The goal of quality discourse is to actively listen to other’s ideas, to react to (by developing, by offering a different perspective, or by extending) other’s ideas, and to generally create an opportunity to discover ideas communally. (Note that quantity of discussion is not the same as quality! Dominating a discussion is as detrimental to shared inquiry as is not participating.) Participation for each class will be evaluated on a 6-point scale: 6 (above average), 5(average), 4( below average), or 0 (absent).

Discussion leadership
Each student will take the lead role in facilitating class discussion once. Assignments will be made during our first class meeting and leadership will be evaluated according to the rubric below. Each leader will have to propose a compelling essay prompt for the class to write a response to. The Application, Discussion, and those questions at the end of our text can serve as good examples.
Attendance

I will take attendance every class meeting. Although attendance is not graded, per se, you must be present in class to receive credit for participating in class discussions.

Lateness

Lateness must be avoided! Class discussion requires participation from all class members and lateness disrupts such intimate intellectual pursuits. Late attendance will decrease your participation score, with a 1-point penalty if less than 15 minutes late and a 2-point penalty if up to 30 minutes late. Arriving more than 30 minutes late is the same as being absent.

All take-home assignments will be deducted 10% per 24-hour period late (excluding weekends). Thus, handing an assignment in after Friday at 10 AM starts results in a 10% penalty, which remains in effect until 9:59 AM Monday. The penalty rises Monday at 10 AM to 20%, continuing likewise until our next class. Assignments not submitted within two weeks of the due date will not be accepted and will have earned a grade of 0%.

In-class writing assignments cannot be made up and will earn a grade of 0%.

Withdrawing from class

The last day to withdrawal from class is Sunday, April 17. If you are considering withdrawing, please speak with me first. I want to help you do the best you can in this class. You may be doing better than you fear!

Blackboard and technology requirement

The Blackboard site will serve as a repository for additional readings, outline discussion forums, grades, and important announcements. You can get to the course site using http://www.ben.edu/blackboard. Once there, log-in and click on the course site. If you have problems logging in or locating the site, just follow the links.

A note on my office hours

The best science teachers also practice scientific research. Although I do research throughout the week, I reserve Mondays for uninterrupted research. I will not regularly be available to meet with you on this day except for exceptional circumstances. You are still welcome to e-mail me with questions and concerns during this time, and I will make every effort to respond in a timely manner. However, an e-mail response cannot be guaranteed until the next work day. On other days, you’re welcome to call me on campus (630-829-6514), stop by my office or lab, or e-mail me (pnovack-gottshall@ben.edu). I don’t accept phone calls at my home.

Academic honesty policy

The university faculty and student representatives have agreed to the following uniform statement of academic honesty. The search for truth and the dissemination of knowledge are the central missions of a university. Benedictine University pursues these missions in an environment guided by our Roman Catholic tradition and our Benedictine heritage. Integrity and honesty are therefore expected of all members of the university community including students, faculty members, administration and staff. Actions such as
cheating, plagiarism, collusion, fabrication, forgery, falsification, destruction, multiple submission, solicitation, and misrepresentation are violations of these expectations and constitute unacceptable behavior in the university community. The penalties for such actions can range from a private verbal warning, all the way to expulsion from the university. The university’s Academic Honesty policy is available at http://www.ben.edu/AHP and students are expected to read it.

Giving information to another student about the contents of a test or receiving such information is considered cheating, regardless of whether the action was intentional or consequential. Using cheat notes on a test is cheating. Copying from or looking at another student’s test or allowing someone to see or copy from your test is also cheating. In-class cheating is a very serious offense. **In the Biology department, the first infraction on an assignment will result in a zero for that task. The second infraction will result in an F in the course.** According to university policy, the Provost will be notified of all incidents of cheating and you will be subject to the penalties imposed by that office which may include expulsion from the university. (See Student Handbook for details on academic honesty policies.)

**Cell phones, calculators, and laptops**

Please turn off your laptops, cell phones, iPods, Blackberries, and other electronic devices before coming to class.

**Policy on academic accommodations for religious obligations**

A student whose religious obligation conflicts with a course requirement may request an academic accommodation from the instructor. Students must make such requests in writing by the end of the first week of the class. Upon receiving such a request, the instructor will offer reasonable accommodations whenever feasible, and communicate this to the student. However, the course requirements listed in the syllabus remain in effect if accommodations cannot be offered.

**Disability support**

If you have a documented learning, psychological, or physical disability, you may be eligible for reasonable academic accommodations or services. To request accommodations or services contact the Student Success Center, Room Krasa 012A (630-829-6512). All students are expected to fulfill essential course requirements. The university will not waive any essential skill or requirement for a course or degree program.

**What if I miss a class?**

See above.

**What if I come late to a class?**

See above.

**Will extra credit be available?**

No. Your grade will be based solely on your performance on items in the Grading Policy and on this syllabus. Make the most of every opportunity throughout the semester.
I. **Take-home writing exercises**

**Prompt:** React to one “Application” of “Discussion” prompt of your choosing from the week’s readings.

**Mechanics:** Paper should be at least two (no more than four) complete pages in length (~ 700 words), using standard academic formatting (double‐spaced, Times New Roman or comparable serif font, 12-point font size, 1-1.5 inch margins, etc.).

**How points are assigned:**
- 10%: You chose a relevant prompt to react to.
- 10%: Your essay is of a sufficient length.
- 10%: You have a clear opinion on the reading, and your essay has a single, clearly stated focus.
- 10%: You provide sufficient context to demonstrate that you read and comprehended the week’s reading.
- 20%: Your argument is compelling, rational, and well developed.
- 20%: You provide concrete and appropriate textual or external evidence to support your argument.
- 20%: You have correct grammar, spelling, punctuation, citing of outside references (if applicable).

**Allocation of points for each criterion:**
- 100%: Excellent; well substantiated by textual evidence; flawless, lacking any criticisms or errors.
- 90%: Very good; no major flaws; very few minor flaws.
- 75%: Good; one major flaw or few minor flaws; under-developed; evidence that read but not fully comprehended; too short.
- 60%: Some major flaws or many minor flaws; very poorly developed; frequently illogical; unclear opinion and/or focus; lacking evidence that comprehended reading; much too short.
- 50%: Attempted, but poor.
- 0%: Not attempted, or lacking entirely.

**Not stapled:** 5% penalty

**Late:** 10% per 24-hour period late.

II. **In-class writing exercises**

**Prompt:** React to classroom writing prompt. Evaluated primarily on (1) evidence that reading was read, (2) presence of a thoughtful argument, and (3) evidentiary reasoning. Grammatical penalties only occur if they hinder legibility.

**Rubric:**
- 100%: Excellent; well substantiated by textual evidence; flawless, lacking any criticisms or errors.
- 85%: Good; one major flaw or few minor flaws; poorly developed; evidence that read but not necessarily comprehended.
- 70%: Some major flaws or many minor flaws; very poorly developed (too short); frequently illogical; lacking significant evidence that read.
- 60%: Attempted, but poor.
- 0%: Not present.

III. **Group leadership of discussion**

**Prompt:** Leadership and management of group discussion, involving command of reading(s); ability to initiate class discussion and keep discussion on topic; encouragement of interactive and engaging participation by all members (and not dominating the discussion); and preparation of a compelling writing prompt that requires critical and insightful to react to.

**Rubric:**
- 100%: Exceptional group management; very strong question(s) that provide detailed and nuanced insight, engaging participation, discussion leads to relevant synthesis of broader topics.
- 95%: Very good organization, management, preparation, and strong question(s). Discussion mostly on-topic.
- 90%: Good organization, management, preparation, strong question(s). Discussion occasionally veers off-topic and/or leader tends to dominate discussion.
- 85%: Satisfactory organization, management, preparation, good question(s). Discussion veers off-topic multiple times or leader dominates discussion.
- 80%: Frequently confusing, awkward, or domineering group management; lacking direction or insight.
- 75%: Attempted, but lacking leadership and organization.
- 0%: Absent during leadership date.
<table>
<thead>
<tr>
<th>Date</th>
<th>Readings*</th>
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<tbody>
<tr>
<td>Jan. 21</td>
<td>Introduction to the course (pp. xi-19)</td>
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| Jan. 28 | Aristotle—*On the Parts of Animals* [350 BCE]  
| | Lucretius—*The Way Things Are* [-58 BCE] |
| Feb. 4 | Bacon—*Novum Organum* [1620] |
| Feb. 11 | Darwin—Selections from *On the Origin of Species* [1859] (pp. 55-67) and Ayala (2009)* |
| Feb. 18 | Darwin—Selections from *Descent of Man* [1871] (pp. 68-??) |
| Feb. 25 | Mendel—*Experiments in Plant Hybridization* [1865]  
| | Watson—*The Double Helix* [1968] |
| Mar. 4 | Dawkins—*The Selfish Gene* [1989] |
| Mar. 11 | Harvey—*On the Motion of the Heart and Blood in Animals* [1628] (Pp. 1-52) |
| Mar. 18 | Harvey—*On the Motion of the Heart and Blood in Animals* [1628] (Pp. 52-91)  
| | Bernard—*An Introduction to the Study of Experimental Medicine* [1865] |
| Mar. 25 | **Spring Break! (no classes)** |
| Apr. 1 | Lorenz—"*Ecco Homo!*" [1963] & "*Rats*" [1963] |
| Apr. 8 | Eiseley—"*The snout*" [1950]  
| | Carson—*Silent Spring* [1962] |
| Apr. 15 | Colinvaux—"Why big fierce animals are rare" [1978]  
| | Wilson—*The Diversity of Life* [1992] |
| Apr. 22 | **Easter Break! (no classes)** |
| Apr. 29 | Gould—"*Just in the middle*" [1985] & "*Nonoverlapping magisteria*" [1997]* |
| Dec. 6 | Margulis—"*Life from scum*" [1998] |

*Additional readings available on Blackboard*