



Newark Campus

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April 5, 2006

Dr. Peter S. Curtis, Chair
Evolution, Ecology, and Organismal Biology
267 Aronoff Laboratory
318 West 12th Avenue
Columbus, OH 43210

Dear Peter:

Enclosed is an honors embedded course proposal from Dr. Andy Roberts and Dr. Shauna Weyrach for Biology 101. If approved, this proposal will allow us to offer a more balanced slate of honors offerings across disciplines. Dean MacDonald has given his approval and your approval is also required before the proposal can go forward to your college honors director.

I'm sure Shauna or Andy would be happy to answer any questions you may have about the proposal. Thank you for considering this request.

Sincerely,

Dr. Paul D. Sanders
Associate Dean and Honors Director
The Ohio State University at Newark
(740)366-9416
sanders.102@osu.edu

C: Dr. Roberts and Dr. Weyrauch

Caroline,
Rich informed me that
this really should be
reviewed by the
College Curriculum
Committee, so we
(EEOB) are passing the
back onto you
Thanks - Tom



March 30, 2006

Dr. Paul D. Sanders
Honors Director and Associate Dean
The Ohio State University Newark

Dear Paul,

I am writing to request consideration for the adoption of a new, Honors Embedded Option, for Introductory Biology (Biology 101) at OSUN. The attached proposal was submitted to me by Dr. Shauna Weyrauch. I have reviewed the proposal and feel that it represents a solid honors experience and is a logical extension of the standard material discussed in Introductory Biology.

As I am sure you are aware, there is already an honors biology sequence described in the OSU Course Offerings Bulletin (H115/H116). Unfortunately, this option is not practical at the Newark regional campus. The sequence has been offered at OSUN, however enrollment was tragically low and it seems that we simply do not have enough Honors students to justify offering either course as described. The H115/H116 sequence is clearly designed for Honors students majoring in natural science or engineering fields and only a limited number of our Honors students require "majors biology" for their degree. The attached proposal offers a reasonable solution. Students from a multitude of majors are required to have at least one biology course with a lab, usually Introductory Biology, and offering an Honors Embedded option for this class would most certainly appeal to a wider range of students.

Dr. Weyrauch has designed an honors option for Introductory Biology that clearly provides many important additional experiences necessary for Honors students. This course will require students to think critically and develop firm opinions about important current topics in biology, opinions that are backed by research and actual data. It will improve writing skills and motivate students to become politically active and engaged in local, regional and national politics. Finally, and perhaps most importantly, the proposed Honors Embedded Option has a framework that can be easily adopted by other biology faculty, should they choose to do so.

Thank you for your consideration of what I feel is a valuable addition to the honors offerings at The Ohio State University Newark.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Roberts", with a long horizontal flourish extending to the right.

Dr. J. Andrew Roberts
Assistant Professor and Unit Budget Manager, EEOB

Proposal for Honors Embedded BIO 101 Course for Winter 2007

Enhanced Expectations and Experiences

All students in my BIO 101 course write a research report on a current news topic related to biology using recent newspapers, magazines, and peer-reviewed journal articles. The topics selected by students are typically controversial and have policy implications for the United States government. Recent topics have included the potential benefits of and ethical concerns surrounding stem cell research, causes and possible consequences of global warming, the teaching of intelligent design in science classes, and emerging diseases such as the avian flu. In addition to the standard research report required of all students, the honors students in the honors-embedded BIO 101 course will build upon what they have learned by developing position papers based on their research report. Honors students will then compose and submit letters to their elected representatives in the state and federal government as well as composing a letter to the editor of the local newspaper, expressing their views on the selected topics. The goals of this activity are not only to encourage critical analysis of important societal issues through examination of scientific literature, but also to encourage active and informed participation in government and society through thoughtful expression of well-researched opinions. I believe that the knowledge that they are taking positions based on fact and substantiated research will be empowering for these honors students, and hopefully will encourage a lifelong interest in the intersect between science and politics.

The honors students and I will have at least three arranged meetings outside of class to discuss their position papers in a small group setting and edit their letters before they send them to representatives and newspapers. During these group sessions, we can discuss ways to improve and target their writing for a specific audience, and ensure that their positions and conclusions are soundly supported by science.

The benefits of the enhanced honors activity include:

- Experience researching a topic and drawing conclusions relevant to society based on scientific evidence and historical policy perspectives
- Learning to be active and informed participants in society, science and government by expressing opinions based on sound evidence
- Improving writing skills
- Experience critiquing the writing of others
- Learning through participation in small discussion groups

Dr. Shauna L. Weyrauch
Visiting Assistant Professor
Department of EEO Biology

I anticipate honors students to spend, on average, an additional 2 to 4 hours per week in order to complete the added writing assignments and participate in after-class meetings for this course.

Enhanced student/faculty interaction

Honors students will meet at least 3 times during the quarter outside of class, as a group, with Dr. Weyrauch. During these sessions, we will discuss how to evaluate their research and draw valid conclusions, and we will work on editing their letters to representatives or to newspapers. It is also my intent to invite faculty members of other disciplines, such as Political Science, English, and History, to provide a variety of perspectives on each subject.

Grading

In addition to the 880 points accumulated in the regular course, honors students' grades will be calculated including an additional 150 points, earned through writing a position paper and two letters (letters to a representative at the local, state, or federal level, and a newspaper editorial), and participating in the discussion/editing meetings outside of class. The syllabus for my Winter 2006 BIO 101 class is attached as representative of the syllabus that will be used in Winter 2007, but with an addendum addressing the honors embedded assignments.

❧ Biology 101 ❧

Winter 2006
The Ohio State University at Newark

Instructor: Dr. Shauna Weyrauch

e-mail: weyrauch.2@osu.edu

Office: 2030D FH

Phone: 366-9163

Office Hours: 11:00-1:00 Mondays and Tuesdays, and by appointment

Lectures: Mondays and Fridays 1:00-2:48 in FH 0101

Laboratories: Wednesdays at 1:00-2:48 in FH 2126

Textbook (required): *Essential Biology*, by Campbell, Reece, & Simon. 2004.

Lecture Schedule

Week #	Monday	Friday
1		<u>Jan. 6: Ch. 1</u> Introduction, Biological Organization, Science as a Process
2	<u>Jan. 9</u> Film: <i>Prisoners of Silence</i>	<u>Jan. 13: Ch. 2 & 3</u> Basic Chemistry
3	<u>Jan. 16:</u> No Classes Martin Luther King day	<u>Jan. 20: Ch. 4 & 5</u> Cells
4	<u>Jan. 23: Ch. 6 & 7</u> Quiz 1 (Ch. 1-5) Cellular Respiration & Photosynthesis	<u>Jan. 27: Ch. 8</u> Cellular Basis of Reproduction
5	<u>Jan. 30: Ch. 9</u> Inheritance	<u>Feb. 3: Ch. 10 & 11</u> Quiz 2 (Ch. 6-9) Molecular Biology
6	<u>Feb. 6: Ch. 12</u> Midterm Exam (Ch. 1-9)	<u>Feb. 10: Ch. 12</u> DNA Technology

7	<u>Feb. 13:</u> Film: <i>Cracking the Code Of Life</i>	<u>Feb. 17: Ch. 13</u> Evolution of Populations
8	<u>Feb 20. Ch. 14 & 15</u> How Biodiversity Evolves Evolution of Microbes	<u>Feb. 24: Ch. 16</u> Evolution of Plants & Fungi
9	<u>Feb. 27: Ch. 17</u> Quiz 3 (Ch. 10-15) Evolution of Animals	<u>March 3: Ch. 17</u> Evolution of Animals, cont'd Film: <i>The Four Billion Year Warr</i>
10	<u>March 6: Ch. 18 & 19</u> Population Ecology Communities & Ecosystems	<u>March 10: Ch. 20</u> Quiz 4 (Ch. 16-19) Human Impacts on Environment Film: <i>What's Up with the Weather?</i>
11	FINAL EXAM (Chapters 10-20): Wednesday, March 15, 2:00-4:00	

LABORATORY SCHEDULE

<u>Week#</u>	<u>Date (Wednesday)</u>	<u>Topic</u>
1	Jan. 4	NO LABS
2	Jan. 11	Using Microscopes; Osmosis & Diffusion
3	Jan. 18	Plant and Animal Cells; Photosynthesis
4	Jan. 25	DNA Structure and Function
5	Feb. 1	Genes and Inheritance
6	Feb. 8	Biotechnology: Gel Electrophoresis
7	Feb. 15	Evolution: Natural Selection & Genetic Drift
8	Feb. 22	Structure and Diversity of Plants
9	March 1	Structure and Diversity of Animals
10	March 8	Environmental Science: Eutrophication

Grading

Exams: There will be two exams, including the final. The final is not cumulative, but covers all material after the midterm. The exams will be worth 200 points each, and the format will be multiple-choice and true/false. Total Points = 400

Quizzes: There will be four quizzes, two before each exam. Quizzes are worth 60 points each, and your lowest quiz score will be dropped. The format is multiple-choice and true/false. Total Points = 180

Labs: Nine weekly lab assignments will be worth 25 points each. Your lowest lab score will be dropped. Total Points = 200

Lecture Attendance & Bonus Points: I will periodically offer bonus points for participation in lecture activities and/or attendance. Bonus activities will not be announced ahead of time, and cannot be made up.

Cell Phones and Other Electronic Devices in Class: Please turn off your cell phone before entering the classroom, as they can be disruptive. You should bring a calculator to class. Although math problems in this class will only require a basic knowledge of algebra, calculators may be necessary to solve some problems, and you may use them during tests. You will not be permitted to use computers and cell phones during tests.

Biology in the News Project: During the quarter, your assignment will be to regularly read the New York Times Online (nytimes.com) and/or other newspapers. The goal is for you to find a timely topic that relates to biology, and to research and learn more about that topic. Here are the steps to successfully completing the Biology in the News Project:

- (1) **Find a biology-related news article.** When you find an article that interests you, come see me to sign up for that topic, because no more than three students can research the same topic (the sooner you sign up, the more likely you'll get a topic you like!). You should find your topic within the first 2-3 weeks of class, to make sure you have enough time to research and write your report.
- (2) **Research your topic.** Now that you have found a topic that interests you, do some more research. Look for additional newspaper articles, magazine articles, and books relating to your topic. In addition, find at least one article from a peer-reviewed scientific journal that deals directly with your topic. More information on how to locate journal articles will be provided in lecture. When you find a journal article, bring it to me to make sure it is from an appropriate source. You must have at least 5 references, including the newspaper article and the article from the scientific journal. Include hard copies of your newspaper and peer-reviewed journal articles with your report.
- (3) **Write your report.** Your report should be type-written, double-spaced with 1" margins and 12 pt font. Include a cover page with the title of your research report, course name and section (day and time), and your name. Your paper should be 3-4 pages long, not including your cover page and bibliography. Be sure to check your report for proper spelling and grammar. A common problem with this assignment occurs when students write their papers in a conversational tone, using language they would use when talking to their friends. This is a scientific research paper, and should be written as such. Points may be deducted for poor grammar, or for not meeting the length requirements (i.e. papers that are either too short or too long).

In your report, you should introduce your topic in a well formulated introduction. Then you should develop the topic. Here are some questions you may ask yourself as you research and write your report: What is the history of this subject? What is the current status of our understanding of this topic? What research is currently being done to help us better understand this topic? Finally, summarize your article by addressing questions such as: Why is this topic important to society? What have we learned, and what do we still need to learn about this topic? What direction might future research on this topic take?

- (4) **Citing References and Constructing your Bibliography.** Within your text, it is critical that you properly cite any references from which you obtain information. You must also include a bibliography at the end of your report, providing complete citations for each of your references.

A note about writing research reports: Be sure to put in quotes any material you copy directly from another source, and be sure to properly cite your sources. Whenever you include information from another source, even if you do not directly quote it, you must cite the source. It is VERY IMPORTANT that you give credit to the references you use in your report. If you incorporate information, or copy text from another source without citing it or quoting it as necessary, this is considered plagiarism. Plagiarism is a form of academic misconduct, and I am required by university regulations to report any suspected instances of academic misconduct. If you do not understand what constitutes plagiarism, or how to properly cite a reference, play it safe and check with me first.

Grading the *Biology in the News* report: Your report will be worth 100 points. Grading will be based on quality of your research, structure of your report (does it have a nice introduction, body, and conclusion?), grammar and formatting.

TOTAL POINTS FOR CLASS = 880

Grading Scale:

A = \geq 93%	A- = 90-92%	
B+ = 87-89%	B = 83-86%	B- = 80-82%
C+ = 77-79%	C = 73-76%	C- = 70-72%
D+ = 67-69%	D = 60-66%	
E = < 60%		

An Important Notice About Making Up Work:

Your attendance in lecture and lab is expected. Your lowest quiz and lab score will be dropped, so if you miss an assignment, it will be your "drop grade." Only one quiz and one lab are dropped, so if you miss one, you must be extra careful not to miss another! Make-up labs are not permitted, so if you miss more than one lab, no matter what the reason, you will receive a "0" for each additional missed lab.

If you miss more than one quiz or an exam, this is the procedure for making it up:

- (1) Contact me within 3 days of the absence, to let me know that you desire to make up a quiz or exam. If you wait longer than 3 days to contact me, you will not be permitted to make up the quiz or exam.
- (2) The make-up quiz or exam must be taken immediately following the final exam (in other words, immediately after you turn in your final, I will give you a copy of your make-up quiz or exam).
- (3) All make-up quizzes or exams are composed of fill-in-the-blank and essay style questions.

Honors Embedded BIO 101 Addendum

For your “Biology in the News” project, it is especially important that you select a topic that is timely and has policy implications for our society and government (for example, global warming, stem cell research, or the avian flu). In addition to writing a strictly factual research report, you will build upon your research by writing a **3-4 page position paper** on your topic (**75 points**). Here, you will take a stance on your issue and recommend some governmental or societal action based on sound, scientific evidence. You will then compose two letters:

- 1) a letter to an elected representative at the local, state, or federal level, expressing a desire for some governmental action concerning your topic (**300 word limit; 25 points**), and
- 2) a letter to the editor of a local newspaper, expressing your concern about your issue, and your desire for some political or societal response to the issue (**250 word limit; 25 points**).

We will have at least three arranged meetings outside of class to discuss your research and how to best express your views in your letters. The dates and times of these meetings will be determined during the second week of class. Active participation in these discussion sessions will be worth an additional **25 points**.

Total points possible for honors embedded BIO 101: 1030

HONORS EMBEDDED COURSES: UNIVERSITY GUIDELINES

In order to facilitate the offering of more honors experiences to honors students in all colleges at the Ohio State University, the following guidelines will apply to the creation and monitoring of honors experiences embedded within current non-honors courses.

This is not intended to be a replacement for offering honors courses, rather, an option that faculty may voluntarily offer to students. General guidelines are below, followed by instructions for faculty wishing to propose adding an honors embedded experience to a non-honors course (September 15, 2005)

General:

- The Honors Embedded (HE) experience will be limited to no more than 12 honors students enrolled within a non-honors course. In cases where the demand for an honors embedded experience is greater than 12 honors students, departments are encouraged to offer a regular honors section. Additionally, embedded honors experiences can not be offered in courses where honors sections already exist. Individual colleges and faculty may decide to set further limits on the HE option.
- In general, the HE component will be taught by regular faculty.
- An HE student evaluation form should be used for all honors embedded courses (see page 5), with the option to add questions specific to the college or unit offering the course. The University Honors & Scholars Center will also elicit feedback on the effectiveness of these honors experience from the faculty who teach them at the end of each quarter.
- Faculty who teach honors embedded courses may request Pressey Enrichment funds of up to \$500 from the University Honors & Scholars Center to cover costs of honors enrichment activities (e.g., field trips).

Registration:

- Students should carry an Honors designation to qualify for enrollment in the embedded honors option, but non-honors students have the option of obtaining special permission to enroll.
- Under the current student information system, honors embedded courses will have a prefix of "E" and student's transcript will have a translation of "honors embedded." Under the eventual new student information system, courses will be designated as "HE."
- Honors embedded courses will have a separate call number from the regular course. A code to designate "Enrollment by permission only" will be listed for these sections as well so that students cannot add the course without instructor approval.

- Once approval for the HE course is obtained, HE will be listed as an option for the course in the online University Course Bulletin and eventually the printed Course Bulletin (deadline for revisions typically in February).
- Students will register for the honors embedded course at the time of registration. If they wish to drop the honors embedded part of the course (and transfer to the regular course), they will need to do so by the usual withdrawal deadline (end of third week of quarter).

Proposal Components:

- A cover letter with a rationale for offering the honors embedded course.
- A description of how the course will offer honors students enhanced student/faculty interaction.
- A description of the enhanced expectations and experiences, which need to be more rigorous and enriching in ways that constitute honors content, and not simply additional work. Proposals should give the approximate amount of additional hours expected of the student per week.

Additional honors experiences may involve, but not be limited to:

- A related research project
 - A special in-class presentation
 - Presenting at an out-of-class activity related to the course
 - Developing a teaching tool related to the course or assisting a faculty member in course improvement/development
 - Enhance laboratory experience
 - Differential assignments/learning experiences based on the honor student's honors program
 - Interaction with other students pursuing the HE option.
 - College-wide enrichment experiences, such as an open-forum debate on a topic related to curricula in the College, a field trip to a research facility or industry location, or a prominently known guest speaker sharing research.
 - Delving more deeply into the methodology, structure, and/or theory; addressing more sophisticated questions; and satisfying more rigorous standards than are generally expected.
- A description of the grading. The student's grade should reflect all of the student's work in the course, including work done in common with other students, as well as work done for the honors element. An agreement on grading procedures needs to be established in advance of the beginning of the course.
 - The syllabus for the regular course and the honors embedded addendum.

- Completed signature page (see page 4).

Process for Approval:

Faculty should request approval of a course for the honors embedded option by submission of the proposal for departmental review, as well as college honors review. Proposals should then be submitted to the University Honors & Scholars Center via sub-committee of the Honors Faculty Advisory Committee at least one quarter in advance of the offering. Approved proposals will be forwarded to the Office of Academic Affairs.



- The colleges and the University Honors & Scholars Center will maintain a list of courses approved for embedded experiences in a manner accessible to both students and faculty, e.g., college and H&S web sites, honors handbooks. Other means of publicizing honors embedded courses will include college and University Honors & Scholars Center listservs to the honors community, course fliers, and Honors Scheduling events to publicize next quarter honors offerings.
- Approval of a course for honors embedded experience does not obligate faculty to offer such an experience each time the course is offered.
- College Honors Committees and the University Honors Faculty Advisory Committee will review these guidelines periodically.

Miscellaneous:

- No more than two honors embedded courses will count for the six course honors/upper division/graduate-level course requirement over the first two years, with the exception of the regional honors programs, which may petition to use a different combination of honors, honors embedded, and upper division courses.
- The University Honors & Scholars Center will report annually to the Council on Academic Affairs on honors embedded courses approved and offered, including number, enrollments, and student and faculty feedback.

Honors Embedded Course Approval Signatures

(As needed. All signatures in ALL CAPS must be completed)

<hr/> <i>Academic Unit Undergraduate Studies Committee Chair</i>	<i>Printed Name</i>	<i>Date</i>
	J. Andrew Roberts	3/30/06
<hr/> <i>School/College Undergraduate Curriculum Committee</i>	<i>Printed Name</i>	<i>Date</i>
	William L. MacDonald	4-3-06
<hr/> REGIONAL CAMPUS DEAN/DIRECTOR	<i>Printed Name</i>	<i>Date</i>
<hr/> ACADEMIC UNIT CHAIR / SCHOOL DIRECTOR	<i>Printed Name</i>	<i>Date</i>
<hr/> COLLEGE HONORS DIRECTOR	<i>Printed Name</i>	<i>Date</i>
<hr/> UNIVERSITY HONORS & SCHOLARS CENTER	<i>Printed Name</i>	<i>Date</i>
<hr/> <i>Office of International Education (Study Tour Only)</i>	<i>Printed Name</i>	<i>Date</i>
<hr/> ACADEMIC AFFAIRS	<i>Printed Name</i>	<i>Date</i>