Course Information

Description
This course is designed to help you develop character traits, intellectual abilities, and basic literacy in the biological sciences; to learn to “think clearly, communicate effectively, and act wisely” as stewards and citizens in your home, community, and the world. (The Value of a General Education, byu)

Each chapter of Biology: Science for Life, 3rd Edition has been structured around a compelling story in which biology plays an integral role. Through the story you will not only learn the relevant biological principles, but you will also see how science can be used to help answer complex questions. As you learn to apply the strategies modeled by the text you will begin developing your critical thinking skills.

Texts and Materials

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<tr>
<th>Item</th>
<th>Vendor</th>
<th>Price (new)</th>
<th>Price (used)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGY: SCIENCE FOR LIFE BOOK ONLY W/ MYBIOLOGY 3E by Belk and Borden</td>
<td>BYU Bookstore</td>
<td>$146.40</td>
<td>$109.80</td>
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<tr>
<td>Edition 2 OR 3 (version 3 costs $8 online)</td>
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<td>ISBN: 9780321559593</td>
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<td>iClicker Required</td>
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<td>$40.00</td>
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<td>You will need an iClicker for this course. Please purchase one either at the Bookstore or on line or from some street vendor... just get one. Get it registered ASAP so you can begin immediately to accrue credits for your iClicker scores. iClicker scores = 1 exam so this is not trivial... unless getting a C is fine by you... probably not. There is an iClicker help center on campus (co-located in the SW corner of the HB Lee Library). Go there, find out, register, be ready! Procrastination is punishable by law - my law - so don't put off getting this NOW.</td>
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Attendance Policy

An important question some ask “Is attendance mandatory?”

It is interesting that throughout the world consumers demand the most for their money as they seek out the best buys for their dollar. In academia, however, some students demand the least for their investment as evidenced by the question I often get “do we have to come to class?” If classroom time weren’t a value-added feature of being a university student then online schools would rule the day. However, they don’t and studies have shown that those who attend their classes score the highest on their exams…on the whole. To help you be where you are supposed to be, I give iClicker quizzes daily and those quiz scores cumulatively add up to 100 points or 17% of your grade. This means that if you never came to class but scored perfect scores on your 4 exams and term paper you would have earned an 83% or a B. But of course those persons who score highly have good study habits and they don’t skip class; so those who could get the B and never come are always there and earn the highest grades. It’s those with the poor study habits I am trying to help.

Additionally, I take exam questions directly from material presented in class and found nowhere else….how much? you might ask…try 25% , so cutting class will get you two ways: for one, you’ll miss the iClicker points and for another you will miss exam questions. Be where you are supposed to be and you’ll do just fine.

BOTTOM LINE: IF YOU ARE LOOKING FOR AN EASY GRADE WITHOUT COMING TO LECTURE DO NOT TAKE THIS SECTION OF BIOLOGY 100. You’ll find that I am far more committed to you getting a good grade than you are to getting out of it so don’t try me in this regard.

Learning Outcomes

Acquire basic literacy and technical skills in science

Students will be able to:

1. Articulate and evaluate the strengths and limitations of science as a human endeavor.
2. Develop basic technical skills for effective analysis, interpretation, and synthesis of data.
3. Describe basic principles and concepts of biology using appropriate vocabulary.
4. Analyze and interpret data represented textually, numerically, and graphically, and infer a basic conclusion from the data.
5. Plan and perform a simple experiment, draw data-based conclusions, and effectively communicate results.

Accept responsibility for personal and public stewardship.

Students will be able to:

1. Integrate sound scientific analysis and interpretation with the reasoning patterns and methods used in other disciplines to more effectively address real-world biology-related issues and concerns.
2. Reflect on how literacy in biology and sound scientific analysis and interpretation integrate with the reasoning patterns and methods used by other disciplines to enhance their ability to act responsibly as stewards and citizens in their family, community, and the world.

Exercise sound scientific reasoning.

Students will be able to:

1. Evaluate scientific evidence and claims at the level of a well-informed layperson in order to make rational decisions on science-related public-policy and moral issues.
2. Develop intellectual abilities and character traits in order to strengthen the quality of their personal judgments and interpersonal interactions*.

3. Access reliable information for evaluating the credibility of scientific claims.

Develop intellectual character.

Students will be able to:

1. Expand their existing knowledge, experience, and intellectual ability regardless of potential intellectual discomfort (Intellectual Humility).

2. Appraise and appreciate the value of other people’s interpretations, positions, models, and theories without necessarily agreeing with or accepting them (Intellectual Empathy).

3. Explore, analyze, interpret, develop, and apply one’s own knowledge, beliefs, and character in strict conformity to high ethical standards even in the face of obstacles, unpopularity, or opposition (Intellectual Integrity).

4. Hold in abeyance a final resolution to a problem or issue or accept provisionally a conclusion or position pending additional information or insight (Intellectual Patience).

5. Assist others in their intellectual development while consistently applying intellectual knowledge, skill, and effort for the eternal and temporal benefit of humankind (Intellectual Charity).

Grading Scale

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<th>Grade</th>
<th>Percent</th>
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<tr>
<td>A</td>
<td>93% to 100%</td>
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<tr>
<td>A-</td>
<td>90% to 92%</td>
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<tr>
<td>B+</td>
<td>87% to 89%</td>
</tr>
<tr>
<td>B</td>
<td>83% to 86%</td>
</tr>
<tr>
<td>B-</td>
<td>80% to 82%</td>
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<tr>
<td>C+</td>
<td>77% to 79%</td>
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<tr>
<td>C</td>
<td>73% to 76%</td>
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<tr>
<td>C-</td>
<td>70% to 72%</td>
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<tr>
<td>D+</td>
<td>67% to 69%</td>
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<tr>
<td>D</td>
<td>63% to 66%</td>
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<td>D-</td>
<td>60% to 62%</td>
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<td>E</td>
<td>0% to 59%</td>
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Grading Policy

This course has been structured to provide many opportunities for students to demonstrate their understanding of the course material. Your course grade will be based on:

**Exams - 66% of your grade (400 points towards final grade).**

**In Class iClicker Quizzes - 17% of your grade (100 points towards final grade).**

**Term Paper – 17% of your grade (100 points towards final grade).**
Your final grade will be based on your total earned points/600. Let's say you earned 545 points. Your final grade % will be 545/600 = 90.8% or, based on the scale provided, an A- for the class. Clearly some extra credit points (added directly to your final total) will be useful.

**Classroom Procedures**

I have found the most engaging and successful way of conducting this course is 1/3 lecture, 1/3 in class exercises, 1/3 quizzes and interaction. I don't always stick to it but that's the formula.

**Study Habits**

This will be the easiest course of your fall semester if you incrementally do the assignments and come to class. The more you deviate from this formula for success you write, instead, the formula for disaster! Believe me, many have tried and have found this to be true. Study a little each day and you'll find this course's grade is high and easily obtained. Cram for your exams and you'll find drudgery and poor scores. Follow the syllabus and you'll do well... hold to the (syllabus) rod or, if you insist, explore the mists of darkness but if you haven't read the Book of Mormon I'd suggest you do now and see where those people ended up. Spoiler Alert For Those Who Have Not Read 2nd Nephi and Lehi's Dream - things don't end well for the mists of darkness wanderers.

**Teaching Philosophy**

My philosophy is that we learn best when we are attentive and engaged. I tend to enjoy the lectures, students, materials. I laugh a lot but please don't mistake my levity as an indicator of the exam's rigor. I test to see if you've learned and if you haven't you'll do poorly. You study the text, I hit the highlights and add more to the material, we interact with Q&A and in-class activities, we learn together. It's that easy.

**University Policies**

All of us must adhere to the policies of Brigham Young University with regard to sexual harassment, students with disabilities, and academic honesty. You can review honor code policy in depth at [http://honorcode.byu.edu/](http://honorcode.byu.edu/). Any questions, concerns, or issues with any of these policies should be brought to my attention, or that of my teaching assistant, as soon as possible.

Let's be clear: talking about your exam to anyone after taking it is a breach of the honor code. If a person asks "Should I study the material on the Krebs Cycle?" you should answer "Just go by what was directed in class and the study guide" rather than "Oh, it's on the test - you'd better be familiar with it." Similar questions "Was the lecture on Climate Change included on the exam?" are also a breach of the honor code policy. Take the exam then don't talk with anyone about it. That's the honest and right thing to do.

**Instructor Consultation**

Nearly all BYU faculty members are not only course instructors but also scientists with ongoing research projects. I am currently conducting polar bear research in northern Alaska, involved in Rocky Mountain and Desert bighorn research in Utah, working on black bear research here in Utah and investigating a variety of concerns related to bear-human conflict. Our value as faculty members to the University is rated on performance in 3 areas: teaching, research, and participation in a variety of University-level duties. For instance, I serve on BYU's Institutional Animal Care and Use Committee (IACUC). This assignment requires me to review research proposals, provide written comments regarding them, and participate in monthly meetings. I have a number of research papers in various degrees of completion and must work daily to move them along. To prepare for class instruction takes many hours of uninterrupted study. Needless to say, for me to be effective in these 3 important areas, I have allocated time during which time students may drop by for consultation. However, I am available for consultation by appointment only. Please write me a note via email (posted at the top of this document) and we'll find a time that works for you. You can just drop by my office but your chances are not good of catching me there. My office is located in the Widstoe Building and is room 451. My lab is room 448, just across the hall. You may also write, call, or drop by and visit with the course teaching assistant or leave a message pinned to the corkboard outside my door. Email is best, however, to set up a meeting time.
A final note - please don't whine, gripe, grouse, grumble, moan, sob, wail, whimper or complain about me having to occasionally be gone from class for research-related activities. Having professors actively engaged in cutting-edge research in their various specialties is why BYU has a very good teaching program. It's for your good so take your medicine and please be quiet.

Extra Credit
I provide a few opportunities for extra credit. However, all extra credit assignments must be submitted by April 6th so please do not procrastinate! You can receive up to a maximum of 30 extra credit points by completing a combination of the following extracurricular assignments. Thirty points can make a big difference in your grade, raising it a half step in most instances (e.g., B+ to A-).

1. Seminar attendance – The College of Life Sciences and each department within the college provide a variety of seminar presentations where prominent BYU and non-BYU faculty present their ideas and research. After the seminar, submit a 1-page summary of the presentation, the date, the time, and the location. Each summary is worth 5 points for up to 30 points. I will post seminar dates on Blackboard.

2. Reading Assignments – Read one or both of the following short works on reserve in the library: “Mormons and Science, Setting the Record Straight” by R. J. Brown or “Mormonism and Evolution: The Authoritative LDS Statements” by W. E. Evenson and D. E. Jeffery. For credit, please write a 1-page summary of the book including your personal evaluation. If you identify other books you would like to read, check with your TA or myself for approval. Each summary is worth 10 points for up to 20 points if you read both books and comment on them.

3. Extra credit assignments provided by TAs during their tutorial hours – There will be a number of extra-credit assignments (5 pts each) that can only be gotten from TAs during their tutorial hours. These short assignments will be completed with the TA during their hours. You can see how many are available by carefully scanning the Course Schedule and looking for the BLUE entries.

4. Term paper steps 1 through 4 - Each step (see below) is worth 5 points of credit and is optional. If you are a new student then learning how about the library’s resources would be time well spent regardless. I highly recommend you go to these activities as they will benefit you throughout your college education.

5. Extra Credit Movie Nights – I will schedule several movie nights throughout the semester you can attend for extra credit (5 points each). You must, however, write a short (1 page more or less) summary of your impressions and submit them to your TA for credit. Movies are biologically themed (of course!) and are educational and enjoyable. For you cheapskates this is the ultimate cheap date (where else do you get 5 points for going on a date?). You can also bring food…. stand by for announcements.

Term Paper
Term Paper: You will be required to write a term paper on a biology-related topic about which you would like to learn more. Specifically:

• The body of the paper must be 6-8 pages in length (NOT including references and title page)
• The entire paper must be double spaced with 1” margins all around.
• The paper must cite at least 6 sources which does not include internet web sites, magazines, news articles (see Chapter 1 in Science for Life, Section 4 “Primary Sources” for a more complete discussion).
• The paper must conform to the example posted on Blackboard for this course. This means that you should download this example, substitute your name, date, title, but keep the formatting and organization. Note especially that your manner of citing literature in text must be consistent with this example. There are many ways to format a paper… in this case please follow this example as it makes grading easier for us and takes the guesswork out of putting the paper together for you.
• This must be original work. If you are confused about what constitutes plagiarism and what does not please consult with me, a TA or the web. Here is my definition of plagiarism: writing that has been copied from someone else and is presented as being your own work. Avoid direct quotation but reference others’ work with in text citations (see example). You will have to submit your work to Turnitin prior to submitting it for a grade. To learn more about Turnitin and how to submit your work, go to the
University’s main web page (byu.edu) and type Turnitin into the “Search BYU” field in the upper right.

Read on, write on, turn in a nice clean paper... right on.

The term paper has associated with it 4 extra credit assignments, with each assignment aimed at helping you produce an excellent paper. These assignments will also help you to develop valuable writing skills that will serve you throughout your college education and life. You earn 5 points for each assignment that is completed on time. Remember that these are extra credit points. If you’re English major or are an experienced writer and know how to effectively use the HBLL’s valuable resources then you can opt to not attend.

**Term Paper Assignment 1:** Library Resource Training. You may attend a library resource training seminar presented by Life Sciences library staff. These are ‘drop in’ sessions held every Friday from 1 to 3 PM at the Harold B. Library in room 2232. The first hour is a lecture regarding the resources at the library and how to use them; the second hour is an open lab during which time you can work on your papers with staff there to assist you. You can leave at any time and come back successive weeks. This is the BEST WAY to get this paper completed efficiently.

**Due Date for Assignment 1:** September 5, 2012. **5 points credit for attending this orientation.** There are no late attendance opportunities for this assignment.

**Term Paper Assignment 2:** Title and Thesis Statement

Now that you have learned how to locate information for writing a paper, you are will need to develop a thesis statement. A thesis statement is a single sentence that presents your idea or argument for your paper to the reader. The rest of the paper will present evidence that persuades the reader of the logic of your thesis statement. Your thesis statement should be concise, focused, and explicit in stating the purpose of the paper. You must present both your selected topic and thesis statement to your TA for approval and to get credit. Please do this during their posted hours.

**Due Date for Assignment 2:** September 12, 2012. **5 points credit for completing this on time.**

**Term Paper Assignment 3:** Writing and Review

Search the literature to produce a well organized paper that follows the guidelines described previously. You should use the provided rubric (see below) as a guide while you write. Once you have an acceptable first draft you will turn your draft into your teaching assistant for review.

**Due Date for Assignment 3:** October 8, 2012. **5 points for the timely submission of your draft.**

**Term Paper Assignment 4:** Term paper revision and consultation at the BYU Writing Center (4026 JKB). Either before or after you incorporate your edits from the peer review assignment, bring your paper to the Writing Center where a Writing Center TA will meet with you and provide suggestions and feedback. You need to submit a signed form from the Writing Center to your BIO 100 TA to receive 5 points of extra credit.

**Due Date for Assignment 4:** October 24, 2012. **5 points for completion of this assignment.**

**Term Paper Assignment 5:** Term Paper Final Draft

Please submit your final revision to your TA on paper along with your Turnitin score sheet. TAs find it easier to grade paper copies so please hand your final paper into them on paper, not electronically. Your TA will grade your paper and return it with a grade and comments. As BYU students you have access to Turnitin a plagiarism detecting/scoring software program which evaluates the originality of your work. You must run your paper through Turnitin and attach the output file to the end of your term paper.... saves us time and saves you embarrassment, believe me.

**Due Date for Assignment 5:** November 7, 2012.
There are NO EXTRA CREDIT POINTS FOR TIMELY SUBMISSION. But there are points deducted for every day late – 2% up to a maximum of 10 points total for late submissions. Any paper submitted after April 9th will not receive credit. So let's say – for whatever reason – you miss the deadline of November 7th and work on your paper for the following week and submit it on the 12th. The paper is 5 days late and 5 X 2 = 10 point deduction. In short – please be on time! If the paper is not received by November 26th then you have failed the assignment and likely the class. But then why mention this because you would NEVER fail to submit an assignment in a timely manner. Shame on me for even bringing this up!

In summary, you can earn up to 20 extra credit points for the timely completion of each of the deadlines above. You may earn up to 100 points for the term paper you have submitted. Teaching Assistants will grade your paper by following the grading rubric provided so please pay special attention to it in order to submit a successful paper.