Biology Department/York Federation of Students
Course Evaluation Questionnaire

Course: BIOL 4160 3.0 (Photosynthesis) (fall, 2013)  Instructor(s): Roger Lew
Tutorial/Lab Assistant: Chris Powe

Please answer all questions as accurately and honestly as you can. Write your additional comments in the space(s) provided. Do not sign this form. The instructor will ask a student representative to collect the forms. Circle only one response per statement. A rating of 1 represents the least positive response and a rating of 5 represents the most positive response.

Motivation:
1. I took this course because it was: **Required (3) ** Elective (15)

Rating of the Course:

<table>
<thead>
<tr>
<th></th>
<th>least</th>
<th>2( )</th>
<th>3(1)</th>
<th>4(3)</th>
<th>5(14)</th>
<th>mean</th>
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<td>2.</td>
<td>The course fulfilled the description given in the syllabus</td>
<td>1( )</td>
<td>1(2)</td>
<td>2(6)</td>
<td>3(4)</td>
<td>4(3)</td>
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<td>3.</td>
<td>The required textbook(s) were useful</td>
<td>1( )</td>
<td>1( )</td>
<td>2( )</td>
<td>3(1)</td>
<td>4(1)</td>
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<td>4.</td>
<td>The required readings were useful</td>
<td>1( )</td>
<td>1( )</td>
<td>2( )</td>
<td>3(1)</td>
<td>4(1)</td>
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<td>5.</td>
<td>The grading system was fair</td>
<td>1( )</td>
<td>1( )</td>
<td>2( )</td>
<td>3(1)</td>
<td>4(1)</td>
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<td>6.</td>
<td>I feel I learned a great deal taking this course</td>
<td>1( )</td>
<td>1( )</td>
<td>2( )</td>
<td>3(2)</td>
<td>4(5)</td>
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<td>7.</td>
<td>The course content was interesting</td>
<td>1( )</td>
<td>1( )</td>
<td>2(1)</td>
<td>3(1)</td>
<td>4(1)</td>
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<td>8.</td>
<td>Rate this course overall</td>
<td>1( )</td>
<td>1( )</td>
<td>2( )</td>
<td>3(2)</td>
<td>4(4)</td>
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Comments: What did you like most/least about the course?
• Most: Professor is animated; Least: Content is dry.
• Most: This course really fills in the blanks in my biology study; Least: Too many physics and chemistry related topics in the course, making it hard to understand when students don’t have strong background.
• Most: Great labs; they were fun and I feel I learned a lot; Least: Little bit dull, though perhaps that’s just because I’m not into plants, more human physiology.
• Most: The professor’s interest in the course and his well thought out explanations of difficult concepts.
• Most: Content, flexibility in regards to weighting, textbook isn’t that much use; Least: Isn’t a full year course.
• Most: Lecture notes are posted in depth.
• Most: There was no [Powerpoint] presentation and the grading scheme is very good.
• Most: Prof was excited to teach, which made the course interesting; Least: Too early in the morning.
• Most: --; Least: The 8 AM start time.
• Most: The style of his lectures: engaging, used the board, explained well; Least: The textbook.
• Most: The insights on the applications of enzymes of photosynthesis into the real world, such as measuring blood alcohol with NADPH; Least: The sometimes dry content.
• Most: Lectures / lecture notes were very informative and interesting.
• Most: Interesting material, knowledgeable instructor, made lectures interactive and more interesting; Least: Textbook was very boring, not very helpful.
• Most: Prof, TA, topic; Least: Labs were fun but it was a bit hard because the manual wasn’t as good.
• Most: I enjoyed pretty much all aspects of the course. The lectures and applications were amazing and the organization of the material was impeccable; Least: The lab was a little bit scattered at times, and slightly unfocussed as to what we were finding.
• Most: The insights on the applications of enzymes of photosynthesis into the real world, such as measuring blood alcohol with NADPH; Least: The sometimes dry content.
• Most: The lecture content and the explanations.

Comment on the Marking Scheme:
• It is very good to have a flexible marking scheme.

Rating of the Instructor:

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<th>least</th>
<th>2( )</th>
<th>3(1)</th>
<th>4(1)</th>
<th>5(16)</th>
<th>mean</th>
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<td>9.</td>
<td>The instructor's command of the course material was extensive</td>
<td>1( )</td>
<td>2( )</td>
<td>3(1)</td>
<td>4(1)</td>
<td>5(16)</td>
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<td>10.</td>
<td>The instructor's presentations were well organized</td>
<td>1( )</td>
<td>2( )</td>
<td>3(1)</td>
<td>4(2)</td>
<td>5(15)</td>
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<td>11.</td>
<td>The instructor explained difficult or abstract concepts well</td>
<td>1( )</td>
<td>2( )</td>
<td>3(1)</td>
<td>4(1)</td>
<td>5(12)</td>
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<td>12.</td>
<td>Graded material was returned promptly</td>
<td>1( )</td>
<td>2( )</td>
<td>3( )</td>
<td>4(1)</td>
<td>5(18)</td>
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<td>13.</td>
<td>The instructor was available and willing to answer questions</td>
<td>1( )</td>
<td>2( )</td>
<td>3( )</td>
<td>4(1)</td>
<td>5(17)</td>
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14. The instructor was able to stimulate interest in the course \( \text{Score: } 4.83 \)

15. Considering all factors, rate the instructor \( \text{Score: } 4.89 \)

Comment on the abilities of the instructor:
- Very good instructor, always trying to engage the class.
- Should stop scaring students by using [standing on] a chair to point at slides—Use a laser pointer!
- He should continue teaching the class this way because he makes it interesting.
- Awesome!
- Good job.
- Very good professor! Gets you thinking outside of the box.
- Awesome!
- Dr. Lew is perhaps the best lecturer I have seen, with an enthusiasm and presentation skills matched by few.

Laboratory:
16. The laboratory assistant was an effective teacher \( \text{Score: } 4.78 \)

17. The lab was an effective learning experience \( \text{Score: } 4.50 \)

Comment: What did you like most/least about the laboratory experience?
- Most: TA is very helpful; Least: Purpose of experiments was not clear.
- Most: The labs focus on something that I will never explore in molecular biology; Least: Most of the time, I don’t get good results…
- Most: TA was great, experiments were new and apparatus worked (for the most part)’ Least: Repetitive in isolation of spinach chloroplasts.
- Most: Was able to use equipment that was never used previously; Least: Could have experimented with species other than spinach.
- Most: Learned how to do chloroplast isolations—I do them in my dreams now; Least: Relevance to course material wasn’t noticeable.
- Most: The new techniques that we learned; Least: We mostly used spinach; I would prefer to use a wider range of plants.
- Most: The labs were well organized and easy; Least: The pictures for the lab report were hard to distinguish (too many graphs).
- Most: Hands on which was useful in helping understand the course; Least: Lots of labs had waiting times and sometimes might not work out due to technical difficulties (aka, computer programs).
- Most: Mirrors what is learned in lecture; Least: Protocols could be more clear in some aspects.
- Most: Organization; Least: Lab tech, computer equipment.
- Most: It allowed us to apply the principles learned in lecture to understand first-hand what occurs in the photosynthetic processes.
- Most: Flexibility to “experiment” in different ways (by choosing different starting materials); Least: Large group sizes. Prefer 2 people per group if possible—more “hands-on”.
- Most: Very helpful TA.
- Most: TA.
- Most: The environment was relaxed and provided a great opportunity to learn and interact with concepts, as well as talk to the prof and TA; Least: The results were always a bit off from the expectations, which would not have been so bad except the expectations for the lab were not always very clear.
- Most: Restriction enzyme digestions.

Retake:
18. Ignoring any degree or professional requirements, would you have enrolled in this course knowing what you now know? \( \text{Score: } 4.83 \)

Advice to Prospective Students Thinking About Taking the Course?
From the students:

- Keep up with readings. So much more to photosynthesis than you think. Professor and TA are both awesome.
- Please reconsider your knowledge background before taking this course. Not recommended if you are just from a pure molecular biology background.
- Understand the material! Don’t worry about memorizing; it won’t help you if you don’t have a good grasp of the underlying principles.
- Read notes and make sure you understand all diagrams and you will succeed.
- An understanding of the knowledge is required for this course. Examine previous tests as they display the nature of the questions. Memorization is key, understanding is essential.
- Read notes in depth.
- Mixture of biology and chemistry but it is an easy course if you work hard.
- This is not your typical York University course. This is a course that requires you to think outside of what you normally would, and apply what you learn. If you want to learn a new way of seeing photosynthesis, biochemical pathways, and a new understanding of scientific progress, as well as have a great lecturer, this course is for you.
- Other students should enroll.