



Biology 0010 2011-2012 Course Outline

Biology 0010 conforms to the Biology curriculum as outlined for Ontario High Schools.

Instructor: Dr. Michael. J. Butler. Brescia College room 301A and phone number 519-432-8353, and I also have an office in room 107 in the Collip Building on main campus; Phone 519-661-2111 ext 86782. Please do not leave voice messages on these phones.

Email mjbutler@uwo.ca. This is the most efficient way to communicate with me. Please note that in the interests of the safety and security of student privacy, I will not read or respond to any email sent to me by any student if it is not from the email address provided by Brescia College and The University of Western Ontario.

Office hours: After class on Tuesdays, as needed, during tutorial times on Wednesday, and at other times as arranged with students.

WebCT: The course is delivered through WebCT. The web site will provide course lecture notes, laboratory notes and other materials as required.

Textbook: The custom text needed for the course can be obtained at the UWO bookstore, and the ISBN is **0176327967**. The text will be found in the Biology courses location for the course Biology 1225 (which also uses this custom text), OR the bookstore may have placed these texts in a separate section for Brescia, I will update you in this when we first meet.

Lectures: 8.30 – 10.30 Tuesday at Brescia University College, room 14.

Laboratory/Tutorial: Wednesdays at 2.30 – 4.30 in room **2077** Biology and Geology building (second floor).

Student Evaluation: 30% of your course mark is allotted to the laboratory exercises which will include two online lab material tests each worth 7.5%. 10% of your mark will be allotted to two one hour online tests on lecture material worth 5% each. 30% of your course mark will come from a term exam in the Christmas exam period. The remaining 30% of your mark will come from a final exam given at the end of the winter semester. The Final exam is not cumulative; it only tests material covered in second semester. The online class tests are all multiple choice. The online lab material tests are of mixed question format. The written exams are a mix of question formats: multiple choice, fill in the blank, true or false, short answer (no more than a short paragraph).

Lecture topics:

Basic biological chemistry
The cell membrane; diffusion, active transport, osmosis
Cell structure and function
Cellular respiration
Photosynthesis
DNA structure and function, protein synthesis
Cell reproduction (mitosis and meiosis)
Mendelian genetics, including Human genetics
Evolution
Diversity of life, history of life on earth
Basic descriptive features of taxa of plants and animals, protists, bacteria etc
Plant structure, function and reproduction
Animal physiology, emphasising human systems
Environment and Ecology

Laboratory component:

Attendance is mandatory, and acceptable documentation must be provided if students do not attend a lab, marks will be deducted for undocumented absence from a lab. A passing mark in the laboratory component must be obtained for students to obtain a pass mark in Biology 0010 (at least 15 out of the 30 marks allotted to the laboratory component of the course). Laboratory notes will be provided through WebCT.

Laboratory exercises: Some or all of the following depending on weather and specimen availability

Microscopy and introduction to cells
DNA extraction
Photosynthesis
Mitosis
Plant ultrastructure
Survey of plants
Animal dissection (3 labs)
Survey of microbial life (bacteria, fungi, protista)
Survey of plants
Survey of animals

Note: Students will require a lab coat, this can be purchased at the UWO bookstore. Vinyl gloves and safety goggles will be provided as needed.

Dress Code for labs: A lab coat, long pants or dresses/skirts, socks and closed shoes are mandatory. Hair must be tied back, if necessary. No eating or drinking of any kind is allowed in the labs, and this includes chewing gum. Hand washing is mandatory before leaving the lab.

Tutorials

Lab exercises will generally alternate with tutorial sessions. In tutorial sessions there will be an opportunity for you to get help with the lab and lecture materials. Tutorial sessions will also be used to catch up on lectures (in the event of university closure due to bad weather etc). Tutorial sessions will also be used to give review sessions as needed.

Learning Objectives.

Biology 0010 will further the students understanding of biological processes, the diversity of life on earth, and the interrelationships of organisms with each other and with their environment.

Students will begin with a grounding in the nature of scientific thinking and the formulation of hypotheses, followed by an examination of evidence based deductive experimentation. This gives students a basis for critical thinking about the validity of opinions fostered in all of the different types of media, particularly those on the internet that often provide false viewpoints of biology (the origin and cause of disease, evolution, dietary issues, and environmental issues are examples). Students will gain an appreciation of why the particular type of thinking used in science can often result in misunderstandings with the public about biological and medical issues (such as the wide difference in the meaning of the word “theory” between scientists and the public).

Students will next study the cellular processes (cellular respiration, photosynthesis, DNA and protein synthesis) so that they are able to understand the larger scale properties of life, such as the structure and function of animals, plants, and microbes.

Study of the basic principals of Mendelian inheritance and the structure of DNA, will give students the ability to understand the patterns of inheritance of genetically based disease, and how a defective gene is identified. This allows an understanding of the currently wide gulf between the identification of a gene that causes a disease, and the ability to use that knowledge to cure or control that disease.

Once students have studied the molecular basis of life, they will begin a detailed examination of the physiological systems of plants and animals. This will include animal dissection exercises in the laboratory that will examine digestive, circulatory and reproductive systems in particular, so that students will be able to properly evaluate their own health issues.

BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS

1. POLICY REGARDING MAKEUP EXAMS AND EXTENSIONS OF DEADLINES

When a student requests academic accommodation (e.g., extension of a deadline, a makeup exam) for work representing 10% or more of the student's overall grade in the course, it is the responsibility of the student to provide acceptable documentation to support a medical or compassionate claim. All such requests for academic accommodation **must** be made through an

Academic Advisor and include supporting documentation. Academic accommodation on medical grounds will be granted only if the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete her academic responsibilities. Appropriate academic accommodation will be determined by the Dean's Office in consultation with the student's instructor(s). Please note that personal commitments (e.g., vacation flight bookings, work schedule) which conflict with a scheduled test, exam or course requirement are not grounds for academic accommodation.

If supporting documentation is from a family physician, Hospital Urgent Care Centre or Emergency Department, or a walk-in clinic a UWO Student Medical Certificate (SMC) is **required**. To download an SMC go to <https://studentservices.uwo.ca/secure/index.cfm> and follow the link under "Medical Documentation". Documentation should be obtained at the time of the initial visit. If it is not possible to have an SMC completed by the attending physician, the student must request documentation sufficient to demonstrate that her ability to meet academic responsibilities was seriously affected. Please note that under University Senate regulations document-ation stating simply that the student "was seen for a medical reason" or "was ill" is **not** considered adequate to support a request for academic accommodation. All documentation is to be submitted to an Academic Advisor.

Whenever possible, requests for academic accommodation should be initiated in advance of due dates, examination dates, etc. Students must follow up with their professors and Academic Advisor in a timely manner.

The full statement of University policy regarding extensions of deadlines or makeup exams can be found at <http://www.westerncalendar.uwo.ca/2011/pg117.html>.

2. ACADEMIC CONCERNS

If you feel that you have a medical or personal problem that is interfering with your work, contact your instructor and Academic Advisor as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. Retroactive requests for academic accommodation on medical or compassionate grounds may not be considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult an Academic Advisor. If you consider reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines (refer to the Registrar's website, www.registrar.uwo.ca, for official dates). You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. *Note that dropping a course may affect OSAP eligibility and/or Entrance Scholarship eligibility.*

The Dean may refuse permission to write the final examination in a course if the student has failed to maintain satisfactory academic standing throughout the year or for too frequent absence from the class or laboratory.

3. ABSENCES

Short Absences: If you miss a class due to a minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate. Contact the course instructor if you have any questions.

Extended Absences: If you have an extended absence, you should contact the course instructor and an Academic Advisor. Your course instructor and Academic Advisor can discuss ways for you to catch up on missed work and arrange academic accommodations, if appropriate.

4. POLICY ON CHEATING & ACADEMIC MISCONDUCT

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Students are urged to read the section on Scholastic Offences in the Academic Calendar. Note that such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. Students are advised to consult the section on Academic Misconduct in the Western Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Student Services Centre, or the Registrar. A claim that "you didn't know it was wrong" is not accepted as an excuse.

The penalties for a student guilty of a scholastic offence (including plagiarism) include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

Plagiarism:

Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the

service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com.

Computer-marked Tests/exams:

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. Software currently in use to score computer-marked multiple-choice tests and exams performs a similarity review as part of standard exam analysis.

5. PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS

All appeals of a grade must be directed first to the course instructor. If the student is not satisfied with the decision of the course instructor, a written appeal signed by the student must be sent to the Department Chair. If the response of the department is considered unsatisfactory to the student, she may then submit a signed, written appeal to the Office of the Dean. Only after receiving a final decision from the Dean may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office, or you can consult an Academic Advisor. Students are advised to consult the section on Academic Rights and Responsibilities in the Western Academic Calendar.

6. PREREQUISITES AND ANTIREQUISITES

Unless you have either the prerequisites for a course or written special permission from your Dean to enroll in it, you will be removed from the course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Similarly, you will also be deleted from a class list if you have previously taken an antirequisite course unless this has the approval of the Dean. These decisions may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course because you have taken an antirequisite course.

7. SUPPORT SERVICES

The Brescia University College Registrar's website, with a link to Academic Advisors, is at

http://www.brescia.uwo.ca/academics/registrar_services/index.html.

The University of Western Ontario Registrar's website is at

<http://www.registrar.uwo.ca/index.cfm>

Portions of this document were taken from the Academic Calendar, the Handbook of Academic and Scholarship Policy and the Academic Handbook of

Senate Regulations. This document is a summary of relevant regulations and does not supersede the academic policies and regulations of the Senate of the University of Western Ontario.