



**University Canada West**  
**BIOL 102 – Modern Biology**  
**Course Outline**

**Course Instructor:**                      **Contacts:**                                      **Office:**  
**TBA**    Work:  
    Home:  
    Fax:  
    E-mail: faculty.member@server.ca

**1. Course Objective**

The objectives of Biology 102 are to provide students with an introduction to basic biological concepts and the ability to integrate this knowledge. The course will promote an appreciation of the intricacies of biological systems. The topics will focus on evolution, biodiversity, and physiology; the course will thus address some of the biological processes that govern life. The lectures will first address principles of evolution that have influenced organisms and led to the diverse groups of extant organisms, then provide students with a comprehensive overview of this biodiversity, and lastly, examine how some of these organisms function. Student evaluations of selected topics in evolution and biodiversity will contribute to the opportunities for students to apply and integrate their knowledge.

**2. Underlying Principles**

1. Scientific concepts emerge from observations and experimental evidence
2. Interpretation of scientific evidence requires careful evaluation
3. Biological concepts can be related to everyday life and to the unifying theme of evolution

**3. Course Outcomes**

During the course you should

1. participate actively in learning about biological concepts and their applications
2. acquire a framework of key biological concepts
3. gain personal practice with science as a process

By the end of the course you should

1. understand the process of science and appreciate how scientific concepts emerge from observations and experimental evidence
2. understand and be aware of biological principles
3. be able to relate biological concepts to everyday life and to the unifying theme of evolution
4. be able to apply concepts you have learned to social and environmental issues
5. be able to connect biological concepts from different biological disciplines to each other
6. be able to research topics in biological disciplines, and summarize and critically evaluate your findings clearly, comprehensively, and concisely

**4. Evaluation and assignments**

Term Test 1 (date TBA)	15%
Term Test 2 (date TBA)	15% (non-cumulative)
Term Paper 1 (due date TBA)	15%
Term Paper 2 (due date TBA)	15%
Communication	10%
Final Exam (exam period)	30%

## 5. Textual

---

**Text:** The text is *Biology – Concepts and Connections*, Fifth Edition, (2005), by Campbell, Reece, Mitchell and Taylor, Benjamin Cummings, San Francisco.

---

## 6. Schedule:

Week	Module	Topic	Pages
1		Introduction	
2	1	Concepts of Evolution	254-264; 275-277
3	2	The Origin of Species	278-295
4	3	Phylogeny and Systematics	304-312
5	4	The Origin and Evolution of Microbial Life: Prokaryotes and Protists	314-341
6	5	Plants, Fungi, and the Colonization of Land	342-347; 354-365
7	6	The Evolution of Animal Diversity	366-397
8	7	Animal Structure and Function	412-427; 505-507
9	8	Nutrition and Digestion	428-451
10	9	Respiration and Circulation	452-483
11	10	Integration of Information: From Sensory Input to Movement	564-575; 588-603; 613-616
12		Summation and review	

<http://www.campbellbiology.com> (web site also offers Web Links, News Links, News Archives, Further Readings, and videos)  
Student CD-ROM