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BIOL 1071: Introductory Biology - Part 2

EFFECTIVE DATE

January 2018

DEPARTMENT

UT Sciences

DESCRIPTION

This class-based course is designed to study plants and the diversity of animals, including humans, and examine their structures, functions, evolution and environments, including our interactions with selected species. Field trips are an important part of this course. Both Biology 1061 and Biology 1071 are required for covering the biology topics contained in high school courses up to and including the Grade 11 level. Biology 1071 will include a minimum of four labs and two field trips. Field trips allow students to explore local ecology in order to meet intended learning outcomes such as - Conduct field procedures safely and ethically - Analyze and interpret data collected - Native species identification. While not required, it is strongly recommended that students have English 11. Biology 1061 and Biology 1071 can be taken at the same time or in any order.

CREDITS

3.0

YEAR OF STUDY

1st Year Post-secondary

PREREQUISITES

• English 10 or equivalent • Math 10 (VCC MATH 0750/0751, Foundations of Math & Precalculus 10, or equivalent)

COREQUISITES

None

COURSE LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

- Apply findings from all labs and field trips to biological classification and characteristics of life
- Experience local ecology through field trips and identify local flora and fauna using field guides
- Demonstrate familiarity with field equipment and its use during intertidal field trip
- Continue to develop microscope and slide preparation techniques
- Observe live hydra, planaria, algae, and examples of intertidal species

- Demonstrate dissection skills on examples from animal and plant phyla (e.g. earthworm, clam, sea star, fish, rat, ferns, and flowers)
- Demonstrate awareness of the diversity and interconnectedness of organisms
- Use scientific method to evaluate, interpret, and analyze information/ write a formal lab report
- Communicate about life sciences in their own words and cite references appropriately
- Work independently and also as part of a team, where appropriate
- Demonstrate an awareness of ethical issues relevant to biological sciences
- Conduct lab and field procedures safely and ethically / Collect and record data effectively

PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)

None

HOURS

Lecture: 60

INSTRUCTIONAL STRATEGIES

Class-based course uses a lecture-based model, but significant class time will be spent throughout the course on hands-on laboratory activities and field-work to complement the lectures.

GRADING SYSTEM

Letter Grade (A-F)

PASSING GRADE

D

EVALUATION PLAN

Type	Percentage	Assessment activity
Field Experience	15	formal lab report & classification assignment
Quizzes/Tests	20	
Assignments	65	3 tests plus a number of quizzes

COURSE TOPICS

- 1. Classification Systems and Major Taxonomic Groups
- 2. Levels of Biological Organization

3. Features of Animal Evolution, Variety of Reproductive Strategies

Marine & Intertidal Zone Ecology (Aquarium Field Trip, Low-Tide Field Trip, & Lab Examination of Living Organisms)

4. Identify structures, distinguishing characteristics & life processes for the following:

- Porifera, Cnidaria,
- Nematoda, Platyhelminthes, Annelida (worm labs - examine internal/external structures in various phyla)
- Molluscs, Arthropods, Echinoderms (labs include behavioural & structural examination)
- Chordates, Including Origin of the Vertebrates, Fish, Amphibians, Reptiles, Birds (field trip – observe birds in natural setting), & Mammals (lab – comparison of vertebrate skeletons), Origins of Humans

6. Evolution of Plants. Algae (lab - microscopic and other examination of algae), Bryophytes (lab – dissection and examination of moss), Ferns (lab – dissection and examination of ferns), Gymnosperms, and Angiosperms (cone, fruit and flower lab)

7. The Biosphere, Ecosystems, Communities, Populations

LEARNING RESOURCES

None

Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:
<https://www.vcc.ca/about/governance--policies/policies/>.
- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

Broadway campus

1155 East Broadway
Vancouver, B.C. Canada
V5T 4V5

Downtown campus

250 West Pender Street
Vancouver, B.C. Canada
V6B 1S9

Annacis Island campus

1608 Cliveden Avenue
Delta, B.C. Canada
V3M 6P1

604.871.7000

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