

# BIOLOGY - ACADEMIC UPGRADING (BIOL)

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**BIOL 0861 Upgrading Credits: 4****Biology 11 Part 1 Total Hours: 96**

This course provides an introduction to biology from an ecological perspective. Students study evolution; the origin of life; cell biology; viruses, bacteria, protists and fungi; local land and aquatic ecosystems, including native species identification. Field trips provide students with opportunities to explore local ecology and analyze and interpret data collected. Biology 0861 and Biology 0871 can be taken at the same time or in any order. Both Biology 0861 and Biology 0871 are required for completion of ABE Advanced level Biology.

**Pre-requisite(s):** MATH 0751, Foundations of Math & Precalculus 10 or equivalent; English 10 or equivalent

**BIOL 0871 Upgrading Credits: 4****Biology 11 Part 2 Total Hours: 96**

This course introduces students to the study plants and animals by examining their structures, functions, evolution and environments. Field trips provide students with opportunities to explore local ecology and analyze and interpret data collected. Biology 0861 and Biology 0871 can be taken at the same time or in any order. Both Biology 0861 and Biology 0871 are required for completion of ABE Advanced level Biology.

**Pre-requisite(s):** MATH 0751, Foundations of Math & Precalculus 10 or equivalent; English 10 or equivalent

**BIOL 0983 Upgrading Credits: 4****Biology 12 Part 1 Total Hours: 96**

This course introduces the student to the study of the cell. Students examine cell structure, metabolism and genetics. The course explores diets and family hereditary patterns, linking both to the blueprint of life itself, DNA. Topics addressed include basic chemistry, biochemistry, nutrition, immunology, cancer, the human genome, genetic engineering, and metabolic pathways. Both Biology 0983 and Biology 0993 are required for completion of ABE Provincial level Biology. Biology 0983 and Biology 0993 can be taken at the same time or in any order.

**Pre-requisite(s):** Biology 11 (BIOL 0861 & BIOL 0871 or equivalent); English 10 or an equivalent listed at <https://www.vcc.ca/applying/registration-services/english-language-proficiency-requirements/>; Math 10 (MATH 0750 & MATH 0751 or equivalent); Chemistry 11 (CHEM 0861 & CHEM 0871 or equivalent) is recommended; English 11 is strongly recommended

**BIOL 0993 Upgrading Credits: 4****Biology 12 Part 2 Total Hours: 96**

This course includes human anatomy and physiology, with emphasis on application to our own bodies. Students become subjects of laboratory sessions will cover: the senses, cardiovascular systems, and kidneys. Other topics explored include reproduction, brain and mind, medical aspects of organ physiology, digestion, muscles and bones, and human development. Both Biology 0983 and Biology 0993 are required for completion of ABE Provincial level Biology. Biology 0983 and Biology 0993 can be taken at the same time or in any order.

**Pre-requisite(s):** Biology 11 (BIOL 0861 & BIOL 0871 or equivalent); English 10 or an equivalent listed at <https://www.vcc.ca/applying/registration-services/english-language-proficiency-requirements/>; Math 10 (MATH 0750 & MATH 0751 or equivalent); Chemistry 11 (CHEM 0861 & CHEM 0871 or equivalent) is recommended; English 11 is strongly recommended