Sir John A. Macdonald Collegiate Institute Course Brief

Course Name	Grade 11 University Biology	**Grade**	11
Course Code	SBI3U1	**Credit Value**	1.0
Pre-Requisite	SNC2D1 **Or Recommended Pre-Requisite**		
Type of Course	University		

TEXTBOOK: Biology 11 (McGraw-Hill Ryerson) REPLACEMENT COST (if lost or damaged): $97.00

Course Description

This course furthers students' understanding of the processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biodiversity; evolution; genetic processes; the structure and function of animals; and the anatomy, growth, and function of plants. The course focuses on the theoretical aspects of the topics under study, and helps students refine skills related to scientific investigation.

Curriculum Strands

Animals: Structure and Function

- analyse the relationships between changing societal needs, technological advances, and our understanding of internal systems of humans;
- investigate, through laboratory inquiry or computer simulation, the functional responses of the respiratory and circulatory systems of animals, and the relationships between their respiratory, circulatory, and digestive systems;
- demonstrate an understanding of animal anatomy and physiology, and describe disorders of the respiratory, circulatory, and digestive systems.

Genetic Processes

- evaluate the importance of some recent contributions to our knowledge of genetic processes, and analyse social and ethical implications of genetic and genomic research;
- investigate genetic processes, including those that occur during meiosis, and analyse data to solve basic genetics problems involving monohybrid and dihybrid crosses;
- demonstrate an understanding of concepts, processes, and technologies related to the transmission of hereditary characteristics.

Evolution

- analyse the economic and environmental advantages and disadvantages of an artificial selection technology, and evaluate the impact of environmental changes on natural selection and endangered species;
- investigate evolutionary processes, and analyse scientific evidence that supports the theory of evolution;
- demonstrate an understanding of the theory of evolution, the evidence that supports it, and some of the mechanisms by which it occurs.

Diversity of Living Things

- analyse the effects of various human activities on the diversity of living things;
- investigate, through laboratory and/or field activities or through simulations, the principles of scientific classification, using appropriate sampling and classification techniques;
- demonstrate an understanding of the diversity of living organisms in terms of the principles of taxonomy and phylogeny.

Plants: Anatomy, Growth and Function

- evaluate the importance of sustainable use of plants to Canadian society and other cultures;
- investigate the structures and functions of plant tissues, and factors affecting plant growth;
- demonstrate an understanding of the diversity of vascular plants, including their structures, internal transport systems, and their role in maintaining biodiversity.

Assessment and Evaluation of Student Achievement

Unit	Unit Title	Evaluation Task	Achievement Chart Focus
Unit 1	Animals: Structure and Function	Systems Quiz(zes) Systems Lab(s) Teacher's Choice Systems Assignment Unit Test	K, A and/or T T, C and A T and/or C and/or A T and/or C and/or A K, A and/or T
Unit 2	Genetic Processes	Genetics Quiz Genetics Problem Set(s) Genetics Lab(s) Teacher's Choice Genetics Assignment Unit Test	K, A and/or T C and A T and/or C and/or A T and/or C and/or A C and T K. A and/or T
Unit 3	Evolution	Evolution Quiz Evolution Lab(s) Teacher's Choice Evolution Assignment Unit Test	K, A and/or T C and/or T and/or A T and/or C and/or A C and A K, A and/or T
Unit 4	Diversity of Living Things	Dichotomous Key Activity Diversity Lab(s) Teacher's Choice Diversity Assignment Unit Test	T and C T and/or C and/or A T and/or C and/or A C and A K. A and/or T
Unit 5	Plants: Anatomy, Growth, and Function	Plant Quiz(zes) Plant Tissue Lab Teacher's Choice	K, A and/or T A and C T and/or C and/or A

****Assessments and Evaluations are subject to change****

Levels of Achievement

For Grades 9 to 12, a student's achievement of the overall curriculum expectations will be evaluated in accordance with the achievement charts in the provincial curriculum and will be reported using percentage marks.

Achievement Level	Percentage Mark Range	Achievement Description
HL4/L4+ L4 LL4/L4-	95 – 100 87 – 94 80 – 86	Level 4 identifies achievement that surpasses the provincial standard. The student demonstrates the specified knowledge and skills with a high degree of effectiveness.
HL3/L3+ L3 LL3/L3-	77 – 79 73 – 76 70 – 72	Level 3 represents the provincial standard for achievement. The student demonstrates the specified knowledge and skills with considerable effectiveness. Parents of students achieving at level 3 can be confident that their children will be prepared for work in subsequent grades/courses
HL2/L2+ L2 LL2/L2-	67 – 69 63 – 66 60 – 62	Level 2 represents achievement that approaches the provincial standard. The student demonstrates the specified knowledge and skills with some effectiveness. Students performing at this level need to work on identified learning gaps to ensure future success.
HL1/L1+ L1 LL1/L1-	57 – 59 53 – 56 50 – 52	Level 1 represents achievement that falls much below the provincial standard. The student demonstrates the specified knowledge and skills with limited effectiveness. Students must work at significantly improving learning in specific areas, as necessary, if they are to be successful in the next grade/course

Students who achieve below 50% have not met curriculum expectations; a credit will not be granted.

Learning Skills	**Assessment of Learning Skills**
Responsibility Organization Independent Work Collaboration Initiative Self-Regulation	Excellent (E) Good (G) Satisfactory (S) Needs Improvement (N)

Weighting by Strands/Categories			
Knowledge and Understanding	34%	Communication	22%
Thinking	22%	Application	22%

Assessment and Evaluation Strategies: the following is a list of potential A/E strategies used within the course; the list may not be exhaustive and is subject to change

- Paper & pencil quizzes & tests
- Formal examination
- Practical lab performance
- Written assignment/projects
- Research presentations
- Library/Internet research projects
- Formal lab reports
- Scientific illustration
- Graphical analysis & presentation
- Portfolio assessment

Calculation of Final Mark

FINAL MARK
→ 70% for evaluations conducted throughout the course → 30% culminating activities