



GEORGE S. HENRY ACADEMY COURSE OUTLINE



COURSE NAME

COURSE NAME	Biology College	GRADE	11
COURSE CODE	SBI3C	CREDIT VALUE	1.0
TEACHER		DEPARTMENT	Science
PREREQUISITE	Grade 10 Science, Academic or applied		

COURSE DESCRIPTION:	This course focuses on the processes that occur in biological systems. Students will learn concepts and theories as they conduct investigations in the areas of cellular biology, microbiology, genetics, the anatomy of mammals, and the structure of plants and their role in the natural environment. Emphasis will be placed on the practical application of concepts, and on the skills needed for further study in various branches of the life sciences and related fields.
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OVERALL EXPECTATIONS:	<ol style="list-style-type: none"> 1. demonstrate scientific investigation skills (related to both inquiry and research) 2. investigate the structures and functions of cells, and the factors that influence cellular activity, using appropriate laboratory equipment and techniques; 3. assess the effects of microorganisms in the environment, and analyse ethical issues related to their use in biotechnology; 4. demonstrate an understanding of the process of meiosis, and explain the role of genes in the transmission of hereditary characteristics. 5. analyse the social or economic impact of a technology used to treat systems in the human body, and the impact of lifestyle choices on human health; 6. analyse the roles of plants in ecosystems, and assess the impact of human activities on the balance of plants within those ecosystems;
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COMMUNICATION	Please direct all questions or concerns regarding student progress or program of study to the course teacher. Please call the main office to leave a message at 416-395-3240.
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CONCRETE LEARNING RESOURCES	DIGITAL LEARNING RESOURCES
Biology 11: College Preparation (replacement cost \$100)	My School Day App - An app that allows you to stay up-to-date with in-class tasks and receive reminders about upcoming evaluations.
	BrightSpace
	Gizmos:
	Khan Academy

GEORGE S. HENRY ACADEMY'S COURSE WORK POLICY
For each evaluation, the teacher will inform students of the due date and the ultimate deadline . The ultimate deadline is the last opportunity for students to submit an assignment for evaluation. Teachers may also use a variety of other methods for dealing with late and missed assignments at their discretion.

Strategies to assist students in meeting deadlines include:

- Peer tutoring
- Using the school app
- Using a personal agenda
- Seeking extra help from teachers
- Requesting for assistance with time management and organizational skills
- Getting help from parents/guardians
- Getting help from a caring adult in the school

ASSESSMENT AND EVALUATION OF STUDENT ACHIEVEMENT

Each course follows an achievement chart which enables teachers to make judgements about student work that are based on clear performance standards and on a body of evidence collected over time. Additional information can be found on the Ministry of Education website noted within the course description.

ACHIEVEMENT CHART CATEGORIES

Knowledge and Understanding (K & U): Subject-specific content acquired in each course (knowledge), and the comprehension of its meaning and significance (understanding)

Thinking (T): The use of critical and creative thinking skills and/or processes

Communication (C): The conveying of meaning through various forms

Application (A): The use of knowledge and skills to make connections within and between various contexts

COURSE WORK (70% of your overall grade)

Categories	%	Possible Assessments of Learning
K & U	30	<ul style="list-style-type: none"> • Knowledge of content (e.g., facts, terminology, definitions, safe use of equipment and materials) • Understanding of content (e.g., concepts, ideas, theories, principles, procedures, processes)
T	20	<ul style="list-style-type: none"> • Use of initiating and planning skills and strategies (e.g., formulating questions, identifying the problem, developing hypotheses, selecting strategies and resources, developing plans) • Use of processing skills and strategies (e.g., performing and recording, gathering evidence and data, observing, manipulating materials and using equipment safely, solving equations, proving) • Use of critical/creative thinking processes, skills, and strategies (e.g., analysing, interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence)
C	20	<ul style="list-style-type: none"> • Expression and organization of ideas and information (e.g., clear expression, logical organization) in oral, visual, and/or written forms (e.g., diagrams, models) • Communication for different audiences (e.g., peers, adults) and purposes (e.g., to inform, to persuade) in oral, visual, and/or written forms • Use of conventions, vocabulary, and terminology of the discipline in oral, visual, and written forms (e.g., symbols, formulae, scientific notation, SI units)
A	30	<ul style="list-style-type: none"> • Application of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) in familiar contexts • Transfer of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) to unfamiliar contexts • Making connections between science, technology, society, and the environment (e.g., assessing the impact of science on technology, people and other living things, and the environment) • Proposing courses of practical action to deal with problems relating to science, technology, society, and the environment

FINAL EVALUATION (30% of your overall grade)

Type	Description	%
Culminating Task(s)	Practical Lab Exam or Case Study	20
Exam	Written final exam held during formal exam week	10

UNITS OF STUDY/COURSE ROAD MAP (subject to change)**Cellular Biology**

Life processes are determined by the structures and functions of biochemical compounds, cell organelles, and body systems. Technological devices that support cellular functions and processes can be used to improve human health. Substances that are present in our everyday lives can affect cellular functions and processes in positive and negative ways.

Microbiology

Groups of microorganisms have common characteristics, and these characteristics enable them to interact with other organisms in the environment. Microorganisms can have both positive and negative effects on the environment. The technological use of microorganisms raises many ethical issues.

Genetics

Genetic research and biotechnology have social, environmental, and ethical implications. Variability and diversity of living organisms result from the distribution of genetic materials during the process of meiosis.

Anatomy of Mammals

Groups of organs with specific structures and functions work together as systems, which interact with other systems in the body. Technologies that are used to maintain human health have social and economic benefits and costs. Environmental factors, including natural factors and those resulting from human activity, can have a wide range of effects on human health.

Plants in the Natural Environment

Plants have specialized structures with distinct functions that enable them to respond and adapt to their environment. Plants are critical to the survival of ecosystems. Humans affect the sustainability of ecosystems when they alter the balance of plants within those ecosystems.

Lab Activities

In this course you will complete several labs, in addition to appropriate computer simulations, including:

- ✓ Microscopy and/or microslide
- ✓ Dissection
- ✓ Plant growth factors
- ✓ Factors affecting respiratory rate, heart rate etc.

GEORGE S. HENRY ACADEMY'S LATE & MISSED EVALUATION POLICY

It is the responsibility of the student to make arrangements with their teacher for any missed course material and/or assignments. Extenuating circumstances will be considered on a case-by-case basis.

GEORGE S. HENRY ACADEMY'S ACADEMIC DISHONESTY POLICY

Cheating and plagiarism will not be condoned. For more information, refer to the Academic Honesty Policy found in the Student Handbook. The Student Handbook can be found in the George S. Henry Academy app.

SPECIALIST HIGH SKILLS MAJOR (SHSM) REQUIREMENTS

GRADE 11 AND 12 CREDITS	ENVIRONMENT	HEALTH & WELLNESS	HOSPITALITY & TOURISM
Major Credits	4	4	4
English (<i>including a CLA*</i>)	2	1	1
Mathematics (<i>including a CLA</i>)	1	1	1
Science or Social Sciences and Humanities (<i>including a CLA</i>) (<i>May be substituted with 1 coop credit</i>)	-	1	-
Business Studies or Science (<i>including a CLA</i>) (<i>May be substituted with 1 coop credit</i>)			1
Cooperative Education	2	2	2
TOTAL	9	9	9

*Contextualized Learning Activity