

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.	Level:	University
	Credit Value:	1.00
	Pre-requisite:	SNC2D or SNC2P
	Department:	SCIENCE
Course Fees:		None

Textbooks & Resources: <ul style="list-style-type: none"> · <i>The Ontario Curriculum, Grades 11 and 12 Science, Revised 2008</i> · <i>Growing Success: Assessment, Evaluation and Reporting in Ontario Schools, First Edition, Covering Grades 1 to 12, 2010</i> · <i>Biology 11</i>, Annab, A., O’Connell, K., Winkleman, M., published by McGraw-Hill Ryerson, 2012

Course Evaluation: Student Evaluation consists of three components...

1) Learning Skills & Work Habits: Students are evaluated on 6 Learning Skills & Work Habits and are evaluated on a scale of Excellent (E), Good (G), Satisfactory (S) & Needs Improvement (N) and reported on the report card.	The skills and habits consist of:		Skills and work habits are not included in the student’s final mark unless specified in the curriculum expectations.
	<ul style="list-style-type: none"> · Responsibility · Organization · Independent Work · Collaboration · Initiative · Self-Regulation 		
2) Term Mark (Assessment of Learning): <i>It is the student’s responsibility to submit evidence of the term’s learning in a complete and timely manner.</i> Student performance standards for knowledge and skills are described in the curriculum Achievement Chart. The curriculum expectations in science are grouped in three categories as follows: 1. Understanding Basic Concepts 2. Developing Skills of Investigation and Communication 3. Relating Science to Technology, Society, and the Environment	The term evaluation consists of:		70%
	Knowledge	30%	
	Inquiry	15%	
	Communication	15%	
	Application	10%	
3) Final Evaluation (Assessment of Learning): The written exam will be administered during the school’s final exam schedule. The final evaluation accounts for 30% of the final mark.	The final evaluation consists of:		30%
	<ul style="list-style-type: none"> · Written Exam 		

Final Mark = 70% Term Mark + 30% Final Evaluations

For a detailed description on Course Evaluation, see “How Did I Get That Mark!” at www.satec.on.ca

Course Conduct Policies: See Student Agenda.

Please retain this page in the front of your notebook for future reference.



Scarborough Academy for Technology,

Course Outline:			
Unit	Description	Approximate Length	Major Unit Evaluation
Cellular Biology	B1. evaluate the impact of environmental factors and medical technologies on certain cellular processes that occur in the human body; B2. investigate the structures and functions of cells, and the factors that influence cellular activity, using appropriate laboratory equipment and techniques; B3. demonstrate an understanding of the basic processes of cellular biology.	4 weeks	Unit Test
Microbiology	C1. assess the effects of microorganisms in the environment, and analyse ethical issues related to their use in biotechnology; C2. investigate the development and physical characteristics of microorganisms, using appropriate laboratory equipment and techniques; C3. demonstrate an understanding of the diversity of microorganisms and the relationships that exist between them.	4 weeks	Unit Test
Genetics	D1. evaluate some social, ethical, and environmental implications of genetic research and related technologies; D2. investigate the process of meiosis, and analyse data related to the laws of heredity; D3. demonstrate an understanding of the process of meiosis, and explain the role of genes in the transmission of hereditary characteristics.	3 weeks	Unit Test
Anatomy of Mammals	E1. 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; E2. investigate, through laboratory inquiry or computer simulation, the anatomy, physiology, and response mechanisms of mammals; E3. demonstrate an understanding of the structure, function, and interactions of the circulatory, digestive, and respiratory systems of mammals.	3 weeks	Unit Test
Plants in the Natural Environment	F1. analyse the roles of plants in ecosystems, and assess the impact of human activities on the balance of plants within those ecosystems; F2. investigate some of the factors that affect plant growth; F3. demonstrate an understanding of the structure and physiology of plants and their role in the natural environment.	4 weeks	Unit Test
Scientific Investigation Skills & Career Exploration	A1. demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating); A2. identify and describe careers related to the fields of science under study, and describe the contributions of scientists, including Canadians, to those fields.	Present in each unit.	
Note:	All of the above units will include tests, quizzes, labs, and assignments.		
Note: The order in which units are delivered may change due to student needs and resources available during the course.			

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<p>General Information:</p> <p><u>1 – As per SATEC school policy students are expected to come to class:</u></p> <ul style="list-style-type: none"> a) in uniform and, b) with cell phones, mp3 players etc... unseen and not in use during class time. <p><u>2- To be successful in science, students are expected to:</u></p> <ul style="list-style-type: none"> a) come to class prepared with pen/pencil, paper, binder and resources for your particular science course, b) demonstrate academic honesty with their own work and when working with others, c) complete assignments in a timely manner and, d) follow necessary safety rules and procedures of a science lab. <p><u>3- To seek extra help:</u></p> <ul style="list-style-type: none"> a) speak to your Science Teacher and schedule a time to meet, b) use the school's homework club to access peer tutors and/or, c) speak to your guidance counsellor to arrange for a tutor. 	<p>Science Department deadlines and plagiarism policy.</p> <ul style="list-style-type: none"> • Each assignment will have a due date. Handing in an assignment after the due date may result in a deduction of marks at the discretion of the teacher. • Students must be in class on dates of any major evaluations. IF you miss a major evaluation (i.e. unit test, exam, presentation) you must give your teacher a note written and signed by your doctor or parent stating the health reasons that kept you from class. Without a doctor's note, you will receive a mark of zero for that missed major evaluation • If you know ahead of time that you will have an appointment, field trip, game, etc at the same time as the major evaluation, you must either arrange with your teacher to complete the evaluation before the scheduled date, or cancel your other plans so you can attend the evaluation. • Plagiarism includes: copying another student's work; buying essays; copying and pasting Web info and calling it your own work; using information from print or Internet media without identifying the source. • To avoid plagiarism: Do not cheat; Do not copy. Keep your eyes on your own paper during tests and exams. Do not steal intellectual property. Reference information properly (MLA) We only need to <u>suspect</u> cheating to penalize you. There will be no warnings, only marks of zero.
<p>This course meets Environment and ICT SHSM program requirements.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	