



Immaculate Conception High School

CSEC Biology Course Outline for the Academic Year 2024/2025

Department	Science
Grade Level	10
Title of Course	Biology CSEC
Duration	September 2024 – June 2025
Description of the Course	<p>Biology is the discipline in science which seeks to understand the organization of the organic world through an exploration of the structure and function of life forms at the molecular, cellular, organismal and ecosystem levels, as well as the complex interactions and interdependencies which occur at each of these levels. The CSEC Biology course outline has been redesigned with a greater emphasis on the application of scientific concepts and principles. It recognizes the need for an understanding of some of the basic principles of Chemistry, Physics and Mathematics, and, therefore seeks to strengthen the inter-relationship with these subjects. It also recognizes the inter relatedness among the topics in Biology, and social and environmental issues.</p>
Course Prerequisites	<p>Students should have been exposed to at least three (3) years of science at the secondary level. This would introduce basic physical and biological principles.</p>
Course Objectives	<p>This course outline aims to: -</p> <ul style="list-style-type: none">● Develop an understanding of fundamental biological principles and concepts, based upon practical and theoretical knowledge of living organisms and the environment.● Make accurate observations of biological material and phenomena, both in the field and in the laboratory.● Develop the ability to appraise information critically, identify, patterns, cause and effects, stability and change and evaluate ideas.● Develop the ability to work independently and collaboratively with others when necessary.

	<ul style="list-style-type: none"> ● Apply biological knowledge for further studies as well as in everyday life situations. ● Acknowledge the social and economic implications of biology. ● Integrate information communication and technology (ICT) tools and skills.
<p>Student Learning Outcomes</p>	<p>Students' should perform adequately (75% and over) in the following profiles and should be able to:</p> <p>a) Knowledge and Comprehension –</p> <ol style="list-style-type: none"> i. Identify, remember, and grasp the meaning of basic facts, concepts and principles. ii. Select appropriate ideas, match, compare and cite examples of facts, concepts and principles in familiar situations. <p>b) Use of Knowledge –</p> <ol style="list-style-type: none"> i. Use facts and apply concepts principles and procedures in familiar and novel situations. ii. Identify and recognize the component parts of a whole and interpret the relationship among those parts. iii. Make necessary and accurate calculations and recognize the limitations and assumptions inherent in the collection and interpretation of data. iv. Combine component parts to form a new and meaningful whole. Make predictions and solve problems. v. Make reasoned judgements and recommendations based on the value of ideas, information and their implications. <p>c) Experimental Skills –</p> <ol style="list-style-type: none"> i. Use techniques, apparatus and materials safely and effectively. ii. Record observations, measurements, methods and techniques with due regard for precision, accuracy, and units. iii. Present data in an appropriate manner, using the accepted convention of recording errors and uncertainties.

	<ul style="list-style-type: none"> iv. Report accurately and concisely using scientific terminology and conventions as necessary. v. Make predictions, develop hypotheses and devise means of carrying out investigations to test them. vi. Plan and execute experimental procedures and operations in an appropriate sequence. vii. Take into account possible sources of errors and precaution in the design of an experiment. viii. Select and use appropriate equipment and techniques.
<p>Topical Outline of the Course Content</p>	<p>The following topics are what are intended to be covered during the academic year: -</p> <ul style="list-style-type: none"> ● Introduction to lab skills ● Ecology I ● Ecology II ● Cells ● Mitosis and Meiosis ● Movement of Particles ● Photosynthesis ● Introduction to Planning and Designing ● Man’s Impact on the Environment ● Nutrition in Animals ● Digestion ● Enzymes
<p>Guidelines/Suggestions for Teaching Methods and Student Learning Activities</p>	<ul style="list-style-type: none"> ● <u>Lectures</u>: Provide contextual background and detailed analysis of each topic. ● <u>Group Discussions</u>: Facilitate discussions on primary source documents and historical interpretations. ● <u>Field Trips</u>: Visits to local museums or historical sites, where applicable. ● <u>Differentiated Instruction</u>: Tailoring instruction to meet the needs, strengths, and interests of each student. ● <u>Peer Teaching</u>: Students teach their peers, which can reinforce their own learning and enhance their understanding.

	<ul style="list-style-type: none"> ● <u>Socratic Method</u>: Teaching by asking thought-provoking questions to challenge assumptions and encourage critical thinking.
Guidelines/Suggestions for Methods of Student Evaluation	<ul style="list-style-type: none"> ● <u>Quizzes and Tests</u>: Regular assessments to check understanding of key concepts. ● <u>Classwork</u>: Assignments completed during class that help monitor ongoing student progress and understanding. ● <u>Class Participation</u>: Assessment based on engagement in discussions and activities. ● <u>Presentations</u>: Students present their research findings to the class. ● <u>Group Projects</u>: Team assignments that assess collaborative and interpersonal skills along with individual contributions. ● <u>Reflections</u>: Written insights by students on their learning experiences, often discussing what they learned and areas for improvement. ● <u>Online Quizzes and Exams</u>: Digital tests that make use of technology to assess students' understanding in a more flexible or remote setting. ● <u>Final Exam</u>: A comprehensive exam covering all course material.
Suggested Readings, Text, Objects of study	<ul style="list-style-type: none"> ● Biology for CSEC by Nelson Thorne ● Collins Biology Workbook for CSEC by Anne Tindale ● CXC/CSEC Biology Syllabus
Additional Readings	<ul style="list-style-type: none"> ● Collins Concise Revision Course – CSEC Biology by Anne Tindale ● Biology for CSEC – A Caribbean Examinations Council Study Guide by Nelson Thorne
Bibliography of Supportive Texts and Other Materials	<ul style="list-style-type: none"> ● <i>Caribbean Examinations Council: CSEC Biology Syllabus by Macmillan Publishers Limited</i> ● <i>Course Outline Template by Natalie Bailey</i> ● <i>Immaculate Conception High School Book List: Science Department</i>

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Prepared by: Ms. Danielle Francis

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