

Biology 534

Mr. K. Rougeau

The purpose of the secondary V Biology program is to provide students with the basic understanding of the fundamental processes and molecules essential to living organisms. Students will also develop their critical thinking skills and laboratory techniques in order to fully integrate their understanding. Biology 534 will provide a foundation for introductory science courses in CEGEP. **This is course is a special interest option for students in secondary V.**

Textbook: Heath Biology or Addison-Wesley Biology

You will be assigned the Heath Biology textbook this year **OR** a photocopied version, if you prefer. Your textbook **must** be covered in order to prevent damage and ensure its longevity. Any textbook that is not returned will be charged to the student. Any textbook that contains damages (i.e.: pages missing, writing, graffiti) will be charged.

Materials: Bring all materials to **every** class.

- two-inch **binder**
- lined hole-punched paper
- pens (blue or black) and pencils
- calculator (when required)

Evaluation:

Unit End (Chapter) Examinations	35 %
Class Work	35 %
<ul style="list-style-type: none">- assignments- laboratory reports- homework checks- research projects (2 : one in Term 1 or 2 and one in Term 3)	
Midterm/Final Examination	30 %
Effort, Participation and Attendance	Discretionary

The *FINAL* Biology 534 mark will be determined as follows:

The course will be broken up into semesters. In the first semester, there will be a midterm based on the content from August – January. In the second semester, there will be a final exam based on the content from February – June. Term 1 will be worth 20%, Term 2 20% and Term 3 is worth 60% to determine the *final* Biology 534 mark.

Course Outline:

CHAPTER ONE - The Study of Life

The Diversity of Life, Biology, Society and You, Characteristics of Life, Studying Living Things

CHAPTER TWO – Methods and Tools of Biology

Nature of Science, Science Skills and Methods, Tools of Biology, Techniques in Biology

CHAPTER THREE – Introduction to Chemistry

Matter, The Structure of Matter, Reading the Periodic Table, Chemical Bonds and Reactions, Mixtures

CHAPTER FOUR – The Chemical Basis of Life

Organic Chemistry, Carbohydrates, Lipids, Proteins, Nucleic Acids

CHAPTER FIVE – The Structure and Function of Cells

Cell Theory, Parts of the Cell, Organelles, Cell Diversity, Crossing the Membrane

CHAPTER SEVEN – Cellular Reproduction

The Cell Cycle and Mitosis, Mitotic Cell Division and Cytokinesis, Control of Mitosis, Meiosis and Sexual Reproduction, The Phases of Meiosis, Meiosis and Evolution

CHAPTER FORTY-TWO - The Endocrine and Reproductive Systems

The Endocrine System, Endocrine Control, The Male Reproductive System, The Female Reproductive System, Fertilization, Development and Birth