**InformNet Course Description Outline**

* **Course Title:**

BIO40S

* **Course Summary:**

BIO40S is divided into 2 parts: Genetics and Biodiversity

PART 1 - GENETICS

Unit 1 – Understanding Biological Inheritance

*Students explore various patterns and modes of inheritance. Through studying the concept of heredity from basic to complex genetic inheritance students will learn to predict, analyze, and explain the outcome of combining genes. Chromosomal mutations and aberrations are researched and discussed throughout this module.*

Unit 2 – Mechanisms of Inheritance

*Students study the role of DNA as the molecule of heredity. Examination of the Biology’s central dogma (progression of information from DNA to protein) is the central theme of this unit. Students will learn the impact of genetic mutations on DNA instructions as well as current developments in the field of biotechnology.*

PART 2 – BIODIVERISTY

Unit 3 – Evolutionary Theory

*Students will study the progression of biological evolutionary theory with emphasis on Charles Darwin’s contributions to this field. Students will be able to describe evolutionary change using comparative time scales and through measurement of changes in genetic frequencies.*

Unit 4 – Organizing Biodiversity

*Students appreciate the role of the evolutionary process in establishing the diversity of life on the planet. Students learn that various types of life are categorized based on similar characteristics and that alternative sampling and identification techniques are used to differentiate between these groups.*

Unit 5 – Conservation of Biodiversity

*Students will research the significance of maintaining biodiversity. Through the exploration of local species, students will develop of plan to support the conservation of these species in our environment.*

* **Number of Modules and Tests:**

There are 14 modules and 4 Unit tests (some modules are tested together).

Unit tests are released according to the course calendar with dates announced well in advance. These tests are available for 4 days to allow for student completion at a time that is convenient for them. The purpose of this protocol is to allow for a timely progression through the course will simultaneously remaining respectful of student time management.

* **What materials/software are needed for the course?**

Students are encouraged to track their own learning and progression through module work through keeping either a digital or paper notebook. Assignments should be submitted via either a .doc/.docx/.xls file in the appropriate portal on the course page. Students are expected to keep current knowledge as to which browser best supports InformNet. This information is typically communicated through email and course announcements.

* **List of Assignments/Projects:**

There are numerous assignments associated with curricular content throughout the course. Students should expect ***at least*** one per module but depending on the amount of content within the module it may be reasonable to expect 3-5 assignments. Assignments are listed under the “Assignment” tab on the course page. ***There are due dates associated with BIO30S assignments.*** The purpose of these dates is to provide students with a timeline of the expected progression through the course. Due dates correlate with unit test dates with assignments due BEFORE the test. However, unlike unit test dates, assignment due dates are more flexible. Please ask your instructor if you require more clarification regarding assignment due dates.

* **What should students expect for the course?**

There is a final exam at the end of the course. The date of the exam is communicated well in advance and students will have to schedule a block of time on that day to ensure completion of this major assessment. Format and length of the exam will be announced to help students in their planning.

The teacher of this course also reserves the privilege to set due dates of the final exam/final assignment submissions/ final test days based on the progression of the course. Students will be required to maintain awareness of course announcements, emails, and the course calendar to keep current of these dates.