Course Outline

COLLEGE PREPARATION PROGRAM

BIOL 025F
Biology 25
Fall, 2012

6 CREDITS
6 HOURS PER WEEK

Maureen Clarke, Instructor   Date

Reviewed and approved by:

Margo Vermillion, Chair   Date

Guy Harmer, Dean   Date
Instructor: Maureen Clarke

Office Hours: Monday 2:00 – 2:50
Tuesday 2:00 – 2:50

Office Phone: 697 – 3767
Home Phone: 697 – 3923

E-mail: maureen.clarke@keyano.ca
mauclarke@yahoo.com

Course Hours: Monday 11:30 – 12:20
Tuesday 11:30 – 12:20
Wednesday 11:30 – 12:20
Thursday 11:30 – 12:20
Friday 10:30 – 11:20 11::30 – 12:20

Location: Room 114

Hours of Instruction: 6 50-minutes classes per week.

Credits: 6

Length of Course: 16 weeks

Co-requisite: English 010 or 013 or permission of Program Chair

Text: Biology; Miller & Levine; Prentice Hall
New Jersey
ISBN 0-13-166255-4

Important Dates for Academic Schedule:

- Sept. 3 College closed – Labor Day
- Sept. 4 Orientation Day
- Sept. 5 First day of class
- Sept. 11 Last day to add classes
- Sept. 11 Fall semester fees due
- Sept. 18 Last day to drop course(s) for academics
- Oct. 8 College closed – Thanksgiving
- Oct. 12 Last day to withdraw from course(s) with 50% refund of tuition fees
- Oct. 26 Last day to withdraw from course(s) without academic penalty
- Nov. 12 College closed – Remembrance Day
- Dec., 13 Last day of class
- Dec. 1-18 Final Exams
Course Description:

Topics studied include: cells, protein synthesis, DNA, genetics, principles of classification and ecology

Course Outcomes:

At the completion of the course, students will be able to:

- Understand that the scientific method is used to solve problems
- Understand that all living organisms share certain characteristics
- Understand that biologists use many tools and techniques to study life
- Know that water is necessary for life to exist
- Understand that mass and volume define matter
- Understand the importance of DNA and its relationship with RNA and how heredity affects life
- Understand that the genetic code is universal in nature
- Understand that living organisms are composed of cells which are organized at varying levels of complexity and must divide in order for organism to grow
- Understand that genes are factors that control heredity.
- Understand that evolution is used to explain both the diversity and unity of life
- Understand that in natural selection, only the organisms whose characteristics are well-suited for their environment survive and reproduce
- Appreciate the relationships between humans and the natural world
- Foster an enjoyment of biology

Biology 025 consists of the following material:

UNIT 1 THE NATURE OF LIFE Sept. 5 -- 11

Chapter 01 The Science of Biology pp. 2 - 33
Chapter 02 The Chemistry of Life pp. 34 – 61

UNIT 2 Ecology Sept. 12 - 24

Chapter 3 The Biosphere pp. 62 - 85
Chapter 4 Ecosystems and Communities pp. 86 - 117
Chapter 5 Populations pp. 118 – 137
Chapter 6 Humans in the Biosphere pp. 138 - 167

UNIT 3 Cells Sept. 25 – Oct. 1

Chapter 7 Cell Structure and Function pp. 168 – 199
Chapter 8 Photosynthesis pp. 200 – 219
Chapter 10 Cell Growth and Division pp. 240 – 259
# BIOL 025F

## MIDTERM 1

### UNIT 4 GENETICS Oct. 2 -- 16

- Chapter 11 Introduction to Genetics pp. 262 - 285
- Chapter 12 DNA and RNA pp. 286 - 317
- Chapter 13 Genetic Engineering pp. 318 - 339
- Chapter 14 The Human Genome pp. 340 - 365

## MIDTERM 2

### UNIT 5 EVOLUTION Oct. 17 – 31

- Chapter 15 Darwin's Theory of Evolution pp. 368 – 391
- Chapter 16 Evolution of Populations pp. 392 – 415
- Chapter 17 The History of Life pp. 416 – 445
- Chapter 18 Classification pp. 446 – 467

## MIDTERM 3

### UNIT 6 MICROORGANISMS and FUNGI Nov. 1 - 16

- Chapter 19 Bacteria and Viruses pp. 470 - 495
- Chapter 29 Protists pp.496 - 525
- Chapter 29 Fungi pp. 526 - 549

## MIDTERM 4

### UNIT 7 PLANTS Nov. 19 -- 26

- Chapter 30 Plant Diversity pp. 550 - 577
- Chapter 31 Roots, Stems and Leaves pp. 578 - 607
- Chapter 32 Reproduction of Seed Plants pp. 608 – 629

## MIDTERM 5

### UNIT 8 INVERTEBRATE ANIMALS Nov. 27 – Dec. 3

- Chapter 26 Sponges, Cnidarians pp. 656 - 681
- Chapter 27 Worms and Mollusks pp. 682 - 713
- Chapter 28 Arthropods and Echinoderms pp. 714 - 733
- Chapter 29 Comparing Invertebrates pp. 734 – 765

## MIDTERM 6
UNIT 9  VERTEBRATE ANIMALS  Dec. 4 - 7

Chapter 30  Nonvertebrate Chordates, Fishes and Amphibians  pp. 766 - 795
Chapter 31  Reptiles and Birds  pp. 796 - 819
Chapter 32  Mammals  pp. 820 - 847
Chapter 33  Comparing Chordates  pp. 848 - 869
Chapter 34  Animal Behavior  pp. 870 - 887

MIDTERM 7

UNIT 9  Chordates  Dec. 10 - 12

Chapter 47  The Biosphere  pp. 1006 – 1031
Chapter 48  Populations and Communities  pp. 1032 – 1047
Chapter 49  People and the Biosphere  pp. 1048 – 1075

MIDTERM 8

REVIEW  December 13

Final Exam  TBA

Evaluation:

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Grade Point

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Overall Expectations:

Please turn off cell phones, MP3 players and any other electronic devices during class time.

Assignments: Assignments must be dated and submitted to the instructor no later than 4:00 pm on the day on which the assignment is due. Late assignments will be accepted but a penalty of 2% of the mark to a maximum of 10% per day will be deducted as a penalty. Exemptions for assignments may be granted in exceptional circumstances beyond the control of the student. A 5% bonus mark will be given to all assignments that are turned in on time.

Punctuality: Punctuality is important. Students are expected to be ready to begin work when the class is scheduled to begin. Therefore, students are encouraged to arrive at class a minute or two early so that they may organize their working materials by starting time. Late arrival is detrimental to the student and inconsiderate of the instructor and other students. Arrival in good time is associated with success and is considerate of the instructor and other students.

Attendance: Students are expected to attend all classes. Should a student miss a class for any reason it is his/her responsibility to cover the work missed and be ready for the next class.

If you want to be assured of success in this course the following three things will most often grant that to you.

1. Attend every day and get involved in the class. When you can’t attend, cover the work done anyway.
2. Ask a question when you do not understand the work and keep asking until you get an explanation you can understand.
3. Do all of the daily work given or give it your very best effort and get help with the parts you are unable to complete.

Student Rights and Responsibilities

Students should be aware of their rights and responsibilities as laid out in the Keyano College Credit Calendar 2012-2013. In order to “refrain from unduly disturbing, disrupting or otherwise interfering with studies…” (KCCC, 2012-2013, p. 38) students should turn cell phones and pagers off when they come to class, and refrain from bringing children or other visitors to class.
Learner Assistance Program (LAP)
If you have been diagnosed with a Learning Disability in the past, or you feel that you would benefit from some assistance from a Disabilities Counsellor, please call our office 780-792-5608 to book an appointment. Services and accommodations are intended to assist you in your course, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, receiving accommodations, and your overall success at Keyano College.

HAVE A GREAT SEMESTER!!