

BIOLOGY 120.3

The Nature of Life

Spring 2014

Instructor: Dr. Douglas Smith Biol Rm 150 309664415 dh.smith@usask.ca

Lecture: Lectures in 165 Physics: May 7th – 28th , 2014 (M-F, 8:30 – 10:50 a.m.)

This course is designed to introduce the student to the vast and exciting field of biology, with a focus on events that are not normally visible to the naked eye. It covers topics in cell biology, genetics and evolution.

BIOL 120.3 is one of two foundation courses for biology majors and for students going into Natural Sciences (Program C). BIOL 120.3 also counts towards the biology requirements of a number of programs in different colleges across campus. BIOL 121.3 – The Diversity of Life – is the sister course to BIOL 120.3, and focuses on biological diversity, evolution, adaptations of organisms to specific environments, and the factors influencing changes in biodiversity over time and space.

REQUIRED TEXTS: 1. **Biology** by Russel, Hertz, McMillan, Fenton, Addy, Maxwell, Haffie and Milsom
McGraw-Hill Publishing, 2013 Edition

2. Lab Manual for Biology 120 (2013-2014 Edition)

Copies of the text are also available for short-term loan from the Circulation Desk in the Natural Sciences Library.

EVALUATION:

Lecture Examinations

Students must bring their current University of Saskatchewan student card to **all exams** and be prepared to present it for verification purposes.

It is forbidden for students to utilize in any way during an exam, any electronic device (e.g., cell phone, dictionary, palm pilot, translator or calculator).

There will be one Mid-Term Lecture Exam on May 15th, 2014. In the event that a student is absent from this exam due to a medical emergency, death in the family, or another exceptional circumstance, **it is necessary for the student to present documentation (e.g., medical certificate, death notice or verification) explaining the absence**, to assist in the determination of whether permission will be granted for the student to write a deferred mid-term exam. **Students absent for a Mid-Term Lecture Exam must advise their lecturer in person or by telephone and initiate arrangements for writing a Deferred Mid-Term Exam, within TWO WORKING DAYS of the missed exam**, in order to avoid being assigned a grade of zero for the exam.

A Final Lecture Exam will be held on either May 29 or May 30, 2014. If a student is absent for a legitimate reason, **he/she may apply for a Deferred Final Exam, within THREE WORKING DAYS of the missed exam to the Dean's Office of the College in which he/she is registered.**

Laboratory Examinations

There will two Midterm Laboratory Exams. One on May 20th and the other on May 27th, 2014. **Consult the Lab Manual for the procedure to follow for a missed Lab or Lab Test.**

There are other regular assignments, drawings and quizzes required for successful completion of the laboratory component of the course, and these are outlined in the Lab Manual.

GRADES:

The final mark is calculated as follows:

Lecture midterm exam mark	= 15%
Final Lecture exam mark	= 45%
Lab Assignments and quizzes	= 15%
Midterm Lab Exam I (15%) & II (10%)	= <u>25%</u>
TOTAL	100%

LABORATORIES:

1. Labs begin on May 9th, 2014. Students are expected to attend (and be on time) for all scheduled labs, review labs and final lab exams.
2. **The current edition of the Lab Manual for Biology 120.3 is required for all labs** (this item can be purchased at the Bookstore in Marquis Hall). Please make sure that you read the lab instructions before going to your scheduled lab section. For your first lab you will also need a 2H, 3H or 4H drawing pencil, an eraser, a metric ruler, calculator and a pair of disposable vinyl gloves (all items are available from the Bookstore or North 40 Shop on campus).
3. Any other questions regarding the labs in BIOL 120.3 should be directed to the Laboratory Coordinator, Gillian Murza , in Biology Rm. 216.

ACADEMIC HONESTY:

It is the responsibility of all students to uphold the highest standards of integrity and honesty with respect to all of their academic work. It is in the student's best interest to make themselves aware of the implications and consequences of engaging in academically dishonest activities as described by the University of Saskatchewan Council. Therefore, it is a requirement of this course that the student must read the following webpage:

http://www.usask.ca/university_secretary/pdf/dishonesty_info_sheet.pdf

STUDENTS WITH A DISABILITY:

1. Disability Services for Students provides accommodations and services to part-time and full-time students with temporary and permanent disabilities.

Services include exam accommodations, note-taking services, referrals for assessments, counseling and other advocacy support.

Services are free, however, students are required to register with appropriate medical documentation.

If you are a student with a disability or would like more information about the services please contact Disability Services for Students at 306-966-7273 or check the website at www.students.usask.ca/disability

2. Students requiring an elevator for access to the second and third floors in the Biology Building (teaching labs and most faculty offices) may use the elevator at the north end of the research wing, opposite Room 130. Access to the second floor may also be obtained using the elevator in the Museum of Natural Sciences.

LECTURE AND LAB SCHEDULE FOR BIOLOGY 120.3 (Spring 2014)

TERM	LECTURE TOPIC	LAB TOPIC (see lab manual for details)
Day 1 (May 7)	Introduction and Cell Biology	NO LAB
Day 2 (May 8)	Cell Biology	NO LAB
Day 3 (May 9)	Cell Biology and Origin of Life	LAB 1 – Introduction, Microscopy, and Cells
Day 4 (May 12)	Origin of Life and Energy and Enzymes	LAB 2 – Eukaryotic Cell Structure and Function
Day 5 (May 13)	Energy and Enzymes	LAB 3 – Osmosis and Cell Division
Day 6 (May 14)	Membranes and Transport	NO LAB
Day 7 (May 15)	Midterm Exam and Membranes and Transport	LAB 4 – Sexual Life Cycles and Meiosis
Day 8 (May 16)	Respiration	NO LAB
Victoria Day (May 19)	Statutory Holiday	NO LAB
Day 9 (May 20)	Respiration and Photosynthesis	Midterm Exam I
Day 10 (May 21)	Photosynthesis and Cell Cycle	LAB 5 – Introduction to Genetics
Day 11 (May 22)	Cell Cycle and Inheritance	LAB 6 – Human Genetics and Gene Linkage
Day 12 (May 23)	Inheritance	Lab 7 – Biotechnology: Techniques and Applications
Day 13 (May 26)	Inheritance and Molecular Genetics	Genetics Tutorial
Day 14 (May 27)	Molecular Genetics	Midterm Exam II
Day 15 (May 28)	Molecular Genetics + Review	NO LAB