

USING A CELL PHONE DURING CLASS WILL BE TAKEN AS AN INDICATION THE STUDENT IS NOT INTERESTED IN LEARNING THE CLASS MATERIAL. THE INSTRUCTOR WILL TAKE CELL PHONE USAGE INTO CONSIDERATION WHEN DECISIONS ON EXTRA CREDIT, REVIEW SESSIONS, ETC. NEED TO BE MADE.

Instructor: Dr. Deborah Hunter (Debby)

Name of Community College: Turtle Mountain Community College

Catalog Number and Title of Course: BIOL 111 Concepts of Biology/Lab

Credit Hours: 4

Prerequisites: None

Office Room Number/Office Phone Number: Between rooms 101 and 103, 477-7880 or Ext. 2101
dhunter@tm.edu

Office Hours: M, T, W, and R 8:30 AM to 10:30 AM; TH from 3:00 PM to 4:30 PM, Friday by appointment.

Date the Syllabus was Prepared: 24 Aug. 2015

Course Meeting Time: MTW 2:30-3:50 PM, Lab W in Room 103

Brief Citation of Text: The text for Concepts of Biology is *Biology Science for Life with Physiology*, 3rd Edition, by Belk and Maier. The text is written for non-science majors and focuses on the role of biology in our daily lives. Review the chapter titles listed below to learn what will be discussed. The text will be supplemented by *Current Issues in Biology*. Students will have an opportunity to receive class credit and extra credit by selecting articles to read from *Current Issues in Biology*. A few examples of articles the students can select to read include: *His Brain, Her Brain; Alcoholism and our Genes; Does Race Exist?*, and *Next Generation Cheating* (performance enhancement drugs for athletes). In addition, students will have the opportunity to select articles from journals available in the TMCC library, including: *Discovery, Game and Fish, Fish and Stream, Science News, Nature, North Dakota Water, Smithsonian, Scientific American, and Mother Earth News*.

Catalog Description: Concepts of Biology is an introductory level non-majors transferable class. It is designed to meet the requirements of a Lab Science. This course will meet General Education requirements and Associate of Arts Degree requirements.

Rationale: This course is designed for students who are interested in obtaining a better understanding of the unity between man and nature (*Mnaadendmowin* and *Dbaadendizwin*) and for students interested in learning simply for the joy of learning (*Nbwaakaawin*).

Course Goals: Upon completion of this class students will have a good foundation of the study of life and how biology impacts their daily lives. Students will have a basic understanding of the similarities and differences in the development and life styles of organisms living in the present and past and how the differences and similarities affect the survival of the living organisms. Course objectives include:

1. Basic science literacy, possibly including superficial coverage of cell biology, ecology, human anatomy and physiology, evolution, genetics, and environmental biology
2. Understanding how science informs cultural perspectives.
3. Understanding the relationship among levels of biological information.
4. Understanding the unity and diversity of life forms.
7. Comprehending methods of inquiry and technology and the applications for society.
8. Integrating knowledge and ideas in science.
9. Understanding and utilizing scientific knowledge.

Requirements: The grading scale for this course is as follows:

- A..... 90%-100%
- B..... 80% - 89%
- C.....70% - 79%
- D.....60% - 69%
- F.....Below 60%

The points accumulated for the grading scale is tentatively based on points obtained from:

*Homework and In-class Worksheets	15 % of grade
Lab Exercises	25 % of grade
<u>Lecture Exams & quizzes</u>	60 % of grade
	100 % of grade

Extra Credit: Students will have the opportunity to earn extra credit.

Quizzes – 5 to 10 points each

In-class quizzes may be given to the students to help them prepare for the exam.

Lecture Exams – 100 points each. There will be five lecture exams.

When preparing the exam the instructor reviews the Visualize This questions, Stop and Stretch questions, the chapter summary and end-of-chapter questions presented in the text.

Visualize This are questions located in the text figure legends and are designed to reinforce the student's understanding of the material presented in the figure.

Stop and Stretch questions are located within the chapter that help the student think critically about the concepts presented in the chapter section.

End of chapter questions:

- Roots to Remember
- Learning the Basics
- Analyzing and Applying the Basics
- Connecting the Science

Method of Instruction:

In addition to the text and *Current Concepts in Biology*, students will have access to the MyBiology website. In MyBiology the student will have access to animation videos, Discovery Channel videos, practice exams, and vocabulary quizzes to aid the student in understanding the material. Lecture outlines and worksheets using the exam format will be provided by the instructor.

Disability/Access Statement: If you have emergency medical information to share with me, if you need special arrangements in case the building is evacuated, or if you need accommodation in this because of a disability, please make an appointment with me.

Attendance and Participation: Lecture attendance and class participation in the laboratory exercises are mandatory.

Class Procedures: Homework may be in-class worksheets or take home worksheets. If absent, in-class worksheets cannot be made-up. Take home worksheets will not be accepted late without a medical documentation or preapproval by the instructor.

Lab assignments will be completed during the laboratory exercise and will not be accepted later. Only one lab make-up per student will be allowed this semester. The lab make-up must be completed prior to the EXAM related to the lab.

There will be four exams this semester. Only **ONE exam**, can be made-up per student. The exam make-up must be made-up with 4 class days of the missed exam. Make-up exams will not be same as the in-class exam and may be harder, as the student has more time to study.

Cell phone use is not permitted in the classroom during the lecture or during the lab!

Statement of Cultural Content: Biology is the study of life. It is the study of the interactions, similarities, and differences between all forms of life. The study of life is part of the Native American culture and will be addressed in the lectures and through guest speakers.

Statement of Academic Honesty: Students are expected to maintain scholastic honesty. Scholastic dishonesty includes, but is not limited to, plagiarism, copying another student's worksheet and lab report.

Instructor's Philosophy: Student's first! The instructor is being paid to provide the student with a good education. It is important that the instructor present the material in a manner the student will

understand. The student has the right to ask questions in lecture, ask questions after lecture, ask for help with worksheets, class assignments, and interpreting articles and stop by the instructor's office for a chat.

Assessment: Upon completion of this course the student will have basic understanding of the scientific process and will comprehend the methods of scientific inquiry and technology and the applications to personal, social and ecological issues on a daily basis. The preassessment exam given the first week of class will be compared to the final exam as an aid to determining student learning.

Anatomy and Physiology I Tentative Schedule

Mashkiki Giiziz (Medicine Moon)

Week 1: Aug. 24 - 27

Chp. 1 Can Science Cure the Common Cold. Introduction to the Scientific Method

Week 2: Sep 1 -4

Chp 2 Are We Alone in the Universe. Water, Biochemistry and Cells

Waatebagga Giiziz (Changing Leaves Moon) September

September 7th – Labor Day - Monday Holiday

Week 3: Sep. 7 – 10

Chapter 3 Diet. Cells and Metabolism

Week 4: Sep. 14 – 17

Chp 4 Life in the Green House. Photosynthesis, Cellular Respiration, and Global Warming

EXAM 1 Chapters 1 - 4

Week 5: Sep. 21 - 24

Chp 5 Cancer. DNA Synthesis, Mitosis and Meiosis

Week 6: Sep. 28 – Oct. 1

Chp 6 Are You Only As Smart as Your Genes. Mendelian and Quantitative Genetics

Binaakwii Giizis (Falling Leaves Moon) October

Week 7: Oct. 5 – 8

Chp 7 DNA Detective. Complex Patterns of Inheritance and DNA Fingerprinting

October 12th College Founding Day – Monday Holiday

Week 8: Oct. 12 – 15 MIDTERM

EXAM 2 Chapters 5 -7

Chp 8 Genetically Modified Organisms. Gene Expression, Mutation and Cloning

Week 9: Oct 19 - 22

Chp 9 Where Did We Come From? The Evidence for Evolution

Week 10: Oct 26 – 29

Chp 10 An Evolving Enemy. Natural Selection

Giiwose Giizish (Hunting Moon) November

Week 11: Nov. 2 -5

EXAM 3 Chapters 8 - 10

Chp. 11 Who Am I? Species and Races

November 6th Mitchif Day – Friday Holiday

Week 12: Nov. 9 - 13

Chp 12 Prospecting for Biological Gold. Biodiversity and Classification

November 11th – Ogitchi da/g (Veteran's) Day – Wednesday Holiday

Week 13: Nov. 16 - 19

Chp 14 Conserving Biodiversity. Community and Ecosystem Ecology

Week 14: Nov. 23 – 26

Chp 15 Where Do You Live. Climate and Biomass

November 26th and November 27th – Thanksgiving – Thursday & Friday Holiday

Week 15: Nov. 30 – Dec. 3

EXAM 4 Chapters 11, 12, 14 & 15

Chp 21 Attention Deficit Disorder

Manidoo Giizisoons (Little Spirit Moon) December

Week 16: Dec 7 -10

Chp. 22 Feeding the World Plant. Structure and Growth

Week 17. Dec. 14 – 17 FINAL WEEK

Comprehensive Final Exam