Bio101/101L: Biology Survey 1 Duel Credit

Title:	Biology Survey 101 and Lab
Credit Hour:	3 Credits
Institution:	DSU/Madison Central High School
Academic Term:	First Semester
Course Meet Time and Location:	A-B Block schedule (M-F) 90 minutes, room B1

Instructor's Contact Information

Instructor:	Maxine Unterbrunner, MS Bio, Ed.
Office:	Room B1
Office Hours:	8:00-4:00
Office Phone Number:	256-7701
Email address:	Maxine.unterbrunner@k12.sd.us
DSU Faculty Mentor:	Kristel Bakker

DSU Faculty Mentor:	Kristel Bakker
Office:	Science Center room
Office Phone Number:	256-5182
Email address:	kristel bakker@dsu.edu.

Course Description

The course is offered as a dual credit course with Dakota State University sponsoring Madison Central High School.

The first semester is an introduction to the fundamental principles of biology including the structure and function of cells, energy transformation and metabolism, reproduction and heredity, molecular genetics, evolution and ecology. The lab work is organized to correspond with the content being covered in class. The tentative schedule of topics and exams will follow the course outline establish by the university instructor.

The second semester will focus on the study of human anatomy and physiology. The material covered will contain general information on a wide range of topics that are relevant to the health and well being of students and members of the communities in which they live. The lab work is organized to correspond with anatomy and physiology sections of the text. Each experiment presents important concepts in a framework of laboratory activities using problem

skills. The dissection of organs from animals will be done in labs to give the students important hands on learning opportunity.

Prerequisites

The high school student wishing to enroll in the university course for dual credit, rank in the upper one-half of their class or score at or above the 50th percentile on a national standardized, norm-referenced test, such as the ACT or SAT.

<u>Course Title</u> Biology Survey | Bio 101/101L

<u>Text</u>

"Biology Life One Earth With Physiology Authors: Audesirk, Audesirk, and Byers

Copyright: 2011 Ninth Edition ISBN#: 0-321-59846-6

Human Anatomy and Physiology

Text:

Hole's Human Anatomy & Physiology

McGraw-Hill Publishers Authors: Shier, Butler, and Lewis Copyright: 2004 Tenth Edition ISBN# 0-07-291932-9

Laboratory Manual

Study Guide Authors: Audesirk, Audesirk, and Byers Copyright: 2011 Ninth Edition ISNB#: 0-321-61177-2

Laboratory Manual

Hole's Human Anatomy & Physiology McGraw-Hill Publishers Authors: Shier, Butler, and Lewis Copyright: 2004, Tenth Edition ISBN# 0-07-243891-6

INSTRUCTIONAL METHODS USED:

The course will be presented utilizing lecture and laboratory experiences. The students will have available a Blackboard component. The Blackboard contains features for the students to use for review of lecture notes, Power Point presentations, and other study tools.

METHODS OF REPORTING TO PARENTS AND OR GUARDIANS:

Grades are recorded on the computer, allowing the parents/guardian access to their child's grade using a porthole provided by the district. If the home does not have internet access grades are sent to every child's parent/guardian midway through the semester at the end. Parent/teacher conferences are held approximately 9 weeks into the first and second semester for parents to meet with individual instructors. If the parent/guardian is unable to meet with the instructor they may call the school, and set up a time to meet or the parent can e-mail for the information.

FIELD TRIP:

The students will be viewing cadavers at the campus of SDSU during the second semester. The students will have signed permission notices from their parent or guardian because of the content of the field trip. The students will also have the opportunity to measure their body fat at the HYPER center on the campus. The class will also take advantage of the local hospital with a trip to the facility during the second semester.

CLASSROOM GUIDELINES

No sleeping.

No cheating.

Academic dishonesty is when the student is caught cheating; copying of another student's work (test, worksheet, quiz or other types of assignments) or is caught with any type of device used for cheating the student will receive a zero for the assignment and the parent/guardian will be notified. The principal's office will receive a written explanation of the action taken to be placed into the student's file.

No food, but a drink will be allowed.

No profanity.

No consumption of lab material, unless it is part of the lab procedure. Unexcused absent/kicked out of class will result in a zero for that work done in class that day.

EVALUTION PROCEDURES

Biology Survey I

There will be chapter exams and unit exam over the information covered for the semester. The exams will evaluate the students knowledge of the materials covered over the chapters and unit. The format for the questions used on the test will be multiple choice, matching, true and false and essay questions.

There will be in class assignments that will be graded. The assignments will include vocabulary and terminology quizzes, and worksheets.

The lab reports and lab exercise will be done individually and in small groups. There will be lab exams for students, each worth 100 points.

PERCENTAGE O	F GRADE	GRADING SCALE	
Exams		100-90	A
Assignments	20%	89-80	B
Lab	10%	79-70	C
Final Exam	7%	69-60	D
		69-01	F
		00 no	credit

The semester grade is calculated by weighing the semester exam grades as 63% of their grade with 7% being contributed by their final exam.

Human Anatomy and Physiology

There will be a lecture exam after each chapter covered in the class, each worth 100 points. The test will consist of multiple choice, matching, true and false, and short essay questions. There will be in class assignments that will be graded. The assignments will include vocabulary and terminology quizzes, and worksheets.

The lab reports and lab exercise will be done individually and in small groups.

There will be lab exams for students, each worth 100 points.

One or two term papers will be written and presented to the class. Each paper will be worth a test score. The students will be given a little time during class to research, but the majority will be done spent out of class.

PERCENTAGE OF	GRADE	GRADING SCALE	
Exams	70%	100-94	A
Assignments	20%	93-87	B
Lab	10%	86-78	C
Final	7%	77-68	D
		67-01	F
		00nc	o credit

The semester grade is calculated by weighing the semester exam grades as 63% of their grade with 7% being contributed by their final exam.

South Dakota Course Standards

- 9-12.N.1.1. Students are able to evaluate a scientific discovery to determine and describe how societal, cultural, and personal beliefs influence scientific investigations and interpretations.
 - Example: professional journals "American Biology Teacher", "Journal of Medicine", etc.

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- 2) 9-12.N.1.2. Students are able to describe the role of observation and evidence in the development and modification of hypotheses, theories and laws.
- 3) 9-12.N.2.1. Students are able to apply science process skills to design and conduct student investigation.
- 4) 9-12.N.2.2. Students are able to practice safe and effective laboratory techniques.
- 5) 9-12.L.1.1. Students are able to relate cellular functions and process to specialized structures within the cells
- 6) 9-12.L.1.2. Students are able to identify structures and function relationships with major taxa.
- 7) 9-12.N.2.2A Students are able to use statistical analysis of data to evaluate the validity of results.
- 8) 9-12.L.1.1A. Students are able to explain the physical and chemical processes of cell respiration and their importance to plant and animal life.
 - Example: human cellular respiration
- 9) 9.12.L.1.2A. Students are able to describe how living systems use biofeedback mechanisms to maintain homeostasis.
- 10) 9-12.L.1.3A. Students are able to explain how gene expression regulates cell growth and differentiation.
- 11) 9-12.L.1.4A Students are able to identify factors that change the rate of enzyme catalyzed reaction.
- 12) 9-12.L.2.1A. Students are able to predict the result of complex inheritance pattern involving multiple alleles and genes.