

COURSE SYLLABUS

COURSE TITLE:	Basic Anatomy and Physiology	PREFIX & NUMBER:	BIO 112
LECTURE HOURS:	3.0 per week (Fall & Spring) 4.5 per week (Summer)	LAB HOURS:	3.0 per week 4.5 per week
CONTACT HOURS:	6.0 per week (Fall & Spring) 9.0 per week (Summer)	CREDIT HOURS:	4.0 Semester Hrs.

CATALOG DESCRIPTION:

This course is a basic integrated study of the structure and function of the major systems of the human body. Laboratories complement the material presented in lecture.

TEXTBOOKS AND OTHER REQUIRED MATERIALS:

Lecture:

Marieb, Elaine N. (2009). Essentials of Human Anatomy and Physiology. (9th ed.). Benjamin Cummings.

Laboratory Manual:

Krieger, Paul. (2005). A Visual Analogy Guide to Human Anatomy. Morton Publishing.

GRADING SYSTEM AND POLICY:

<p>Final course grades will be determined according to the following grading scale (see attendance policies).</p> <table style="margin-left: 40px; border: none;"> <tr><td>860 – 950</td><td>=</td><td>A</td><td>=</td><td>91%</td></tr> <tr><td>765 – 859</td><td>=</td><td>B</td><td>=</td><td>81%</td></tr> <tr><td>670 – 764</td><td>=</td><td>C</td><td>=</td><td>71%</td></tr> <tr><td>613 – 669</td><td>=</td><td>D</td><td>=</td><td>65%</td></tr> <tr><td>0 – 612</td><td>=</td><td>F</td><td></td><td></td></tr> </table>	860 – 950	=	A	=	91%	765 – 859	=	B	=	81%	670 – 764	=	C	=	71%	613 – 669	=	D	=	65%	0 – 612	=	F			<p>METHOD OF EVALUATION</p> <p>Final Grade:</p> <p>To determine final course grades, the instructor will total each student's earned points from tests and quizzes, and divide these by the total possible points (950) as follows:</p> <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">Points</th> </tr> </thead> <tbody> <tr> <td>1-hour lecture tests (4)-----</td> <td style="text-align: right;">400</td> </tr> <tr> <td>Quizzes-----</td> <td style="text-align: right;">100</td> </tr> <tr> <td>Lab practicals (2)-----</td> <td style="text-align: right;">200</td> </tr> <tr> <td>Lab quizzes-----</td> <td style="text-align: right;">100</td> </tr> <tr> <td>Exam -----</td> <td style="text-align: right;"><u>150</u></td> </tr> <tr> <td>TOTAL-----</td> <td style="text-align: right;">950</td> </tr> </tbody> </table>		Points	1-hour lecture tests (4)-----	400	Quizzes-----	100	Lab practicals (2)-----	200	Lab quizzes-----	100	Exam -----	<u>150</u>	TOTAL -----	950
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The grade I represents incomplete work and is a temporary grade. In those rare instances where the grade of I may be requested, two conditions must be met: 1) documented evidence of a family or medical emergency at the end of the term; 2) student must be passing the course. A student with an incomplete must satisfactorily complete the course requirements by mid-term of the following semester (or Summer term) or the grade will be changed to an F.

GRADING SYSTEM AND POLICY: (Cont)**Quizzes:**

Quizzes will be given at any time during the lecture period. These will be based on material taught by your instructor. A total of 100 quiz points will be added to the total point value for the course. Quizzes **MAY NOT** be made up if missed (this includes sickness, "excused" absences and car problems). An instructor may use a drop quiz to replace a missed quiz.

Tests:

Four 1-hour lecture tests, two laboratory practicals, and one examination will be administered in this course.

Make-ups on Missed Tests:

Each student is expected to take all tests at the scheduled times. If a student misses a test he/she will be required to provide the instructor with solid documentation (doctor's note, etc.) to be allowed a make-up and must schedule and complete the make-up within 1 week's time of the original test date. Otherwise an automatic zero will be recorded for each missed test.

No student will be allowed more than one make-up for a missed test. Make-ups are not allowed on missed quizzes or on a missed laboratory practical examination. Due to the nature of this course and limitations of time and facilities, **NO EXTRA CREDIT** work will be authorized and **ALL STUDENTS** must take the final lecture examination.

Labs:

Lab topics have been selected and organized to match lecture topics as closely as possible and will fill in the details that cannot be covered in lecture. A tentative lab schedule is attached to the syllabus and should be consulted to determine and prepare for what will be covered each week. Quizzes will be given in lab to total 100 points. An instructor may use a drop quiz to replace a missed quiz. A lab practical will be given about the time of midterm and then again at the end of the course. There will be **NO** make-ups for a missed laboratory practical exam.

For your safety, if you have a medical condition that results in seizures, blackouts, etc. (e.g., from epilepsy, diabetes) please inform your instructor before the first laboratory session. This information will be kept confidential. If you wish to seek accommodations due to a disability, please contact Services for Students with Disabilities, Building 410, Room 210.

Proper care of the equipment is essential in the Biology department. The equipment may be expensive or difficult to replace. Students who fail to take care of equipment may be subject to disciplinary action and/or be barred from participation in laboratory.

As stated in the Student Handbook, children are prohibited from classes and labs.

ACCOMMODATIONS FOR STUDENTS WITH SPECIAL NEEDS:

The College will make reasonable accommodations for persons with documented disabilities. Students should notify the Counselor for Students with Disabilities (located in Counseling and Career Development, Building 410, Room 210) and their instructors of any special needs. Instructors should be notified on the first day of classes.

SAFETY:

For your safety, if you have a medical condition that results in seizures, blackouts, etc. (e.g., from epilepsy, diabetes), please inform your instructor. This information will be kept confidential. If you wish to seek accommodations due to a disability, please contact Services for Students with Disabilities, Building 410, Room 210.

FOR STUDENTS ENROLLED IN ONLINE OR OTHER DISTANCE-LEARNING SECTIONS:

To confirm that you are actively involved in this course you need to contact the instructor at least once per week. Forms of contact can include (but are not limited to) posting/receiving e-mails, participating in online class discussions or chat rooms, and completing and submitting course assignments. Please see the instructor's addendum for any additional instructions.

ELECTRONIC COMMUNICATION DEVICES IN CLASSROOMS:

To minimize classroom disruptions and protect the integrity of test-taking situations, activated electronic communication devices such as pagers and telephones are generally not permitted in classrooms at Trident Technical College. The only exception to this policy will be for on-call emergency personnel (police, fire, EMS), who will be required to notify their classroom instructor of their need for such devices at the beginning of the term and provide documentation verifying their occupation. However, on-call emergency personnel may not leave a testing situation, communicate by electronic means and return to complete an examination. In these cases, instructors should make arrangements for re-testing.

ATTENDANCE POLICY:

Before attending classes, you must meet all prerequisites and officially register for all courses. Prompt and regular attendance is your responsibility. You are responsible for all material covered and all assignments made in class. Any time you are absent from a class, laboratory or other scheduled events, it is your responsibility to make satisfactory arrangements for any make-up work permitted by the instructor.

An absence is defined as nonattendance for any reason, including illness, emergency or official leave. If you arrive late to class, you may not be allowed into the classroom and may be considered absent for that period. If you leave before the instructor dismisses class, you may also be considered absent. All class sessions are important. Any time you miss a class you increase your risk of making a failing grade. For example, some departments or individual instructors will count your class participation as a substantial percentage of your grade. Of course, if you are not in class, you will not get the necessary points for your class participation.

If you quit coming or participating in the course and do not officially withdraw by the withdrawal date for each semester, you will receive a grade of F or U. Your instructor cannot assign a grade of W. If you receive financial aid or veterans' aid, your aid may be revised as a result of any changes in your course schedule.

FACULTY AVAILABILITY:

Your instructor is available to you outside of class for academic assistance. Full-time faculty maintain and post regularly scheduled office hours. Part-time faculty are accessible in a variety of ways, which may include conferences before and after class or by appointment, telephone conferences, and E-mail. The phone number for contacting your instructor is provided on your syllabus addendum or cover sheet.

**THE CONTENTS OF THIS SYLLABUS ARE SUBJECT TO CHANGE WITH THE APPROVAL
OF THE DEPARTMENT HEAD OF NATURAL SCIENCES**

COURSE OBJECTIVES:

Upon the successful completion of this course, the student will be able to, either orally or in writing, and with minimum use of outside references, complete the following objectives.

1. Describe the basic concepts of anatomy and physiology and homeostasis.
2. Explain the structure of an atom, chemical bonds, and classify molecules as inorganic or organic.
3. Describe the structure of a cell membrane and how it is related to membrane transport.
4. Describe the function of cell organelles and the process of mitosis.
5. Discuss the types and functions of the four tissue types.
6. Describe the general structure and function of the skin.
7. Compare the structure of bone types both macroscopic and microscopic.
8. Identify bones of the body.
9. Describe the three joint types.
10. Describe the organization of skeletal muscle and the structure of a sarcomere.
11. Describe the sliding-filament model of muscle contraction.
12. Identify the major axial and appendicular muscles of the body.
13. Describe the overall organization and functions of the nervous system.
14. Describe the structure and function of neurons and neuroglia.
15. Describe the structure and function of the spinal cord.
16. Describe the steps in a reflex arc.
17. Name the major regions and functions of the brain.
18. Identify the receptors for the general senses and describe how they function.
19. Describe the receptors and processes involved in the sense of smell.
20. Describe the receptors and processes involved in the sense of taste.
21. Identify the parts of the eye and their functions.
22. Describe the parts of the ear and their roles in the process of hearing.
23. Discuss the location, hormones and functions of the glands of the endocrine system.
24. Describe the functions and components of blood.
25. Trace the flow of blood through the heart.
26. Identify the layers of the heart wall.
27. Describe the structure of arteries, capillaries and veins.
28. Describe the components and functions of the conducting system.
29. Describe the events of the cardiac cycle
30. Identify the major components of the lymphatic system and explain their functions
31. List and explain the functions of the body's nonspecific defenses.
32. Describe the different categories of immunity.
33. Identify and give the functions of the organs of the respiratory system.
34. Describe the process of breathing and the respiratory volumes associated with this process.
35. List the functions of the digestive system.
36. Identify the organs of the digestive tract and the accessory organs of digestion.
37. Identify the components of the urinary system and their functions.
38. Describe the structure of the nephron and the process involved in urine formation.
39. Describe the components of the male reproductive system.
40. Describe the components of the female reproductive system.
41. Describe the events of the ovarian and uterine cycles.

**LECTURE AND LAB SCHEDULE
14-WEEK SESSION**

WEEK	LECTURE CHAPTERS	LAB TOPIC
1	Chapters 1 & 2	Organization of the Body The Microscope, Cell
2	Chapters 2 & 3	Mitosis; Epithelial, Connective, Muscle, Nerve Tissue
3	Chapter 3	Skin, Introduction to Skeletal System, Skull
4	LECTURE TEST 1 Chapter 4	Skull, Lower Axial & Appendicular Skeleton
5	Chapters 5 & 6	Skeletal Muscles
6	Chapter 7	Review for Lab Practical
7	LECTURE TEST 2 Chapter 7	MIDTERM PRACTICAL
8	Chapter 8	Nervous System
9	Chapter 9	Special Senses Endocrine
10	LECTURE TEST 3 Chapter 10 & 11	Blood, Circulatory System
11	Chapters 12 & 13	Respiratory System Digestive System
12	LECTURE TEST 4 Chapter 14	Urinary System Reproductive System
13	Chapters 15 & 16	Review for Lab Practical
14	FINAL EXAMINATION	FINAL LAB PRACTICAL

**LECTURE AND LAB SCHEDULES ARE TENTATIVE AND ARE SUBJECT TO CHANGE
WITH APPROVAL FROM THE DEPARTMENT HEAD OF BIOLOGICAL SCIENCES.**

**LECTURE AND LAB SCHEDULE
9-WEEK SESSION**

WEEK	LECTURE CHAPTER	LAB TOPIC
1	Chapter 1 Chapter 2	Organization of the Body The Microscope, The Cell, Mitosis
2	Chapter 3	Epithelial, Connective, Muscle, Nerve Tissue; Skin
3	LECTURE TEST 1 Chapter 4 Chapter 5	Introduction to Skeletal System, Skull Lower Axial & Appendicular Skeleton
4	Chapter 6 Chapter 7 LECTURE TEST 2	Skeletal Muscles Review for Lab Practical
5	Chapter 7 Chapter 8 Chapter 9	MIDTERM LAB PRACTICAL Nervous System
6	LECTURE TEST 3 Chapter 10 Chapter 11	Special Senses, Endocrine, Blood Circulatory System
7	Chapter 12 Chapter 13	Respiratory System Digestive System
8	LECTURE TEST 4 Chapter 14	Urinary System Reproductive System
9	Chapter 15 Chapter 16	Review for Lab Practical FINAL LAB PRACTICAL
10	FINAL EXAMINATION	

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