This course syllabus is intended as a set of guidelines for the course. Both North Lake College and your instructor reserve the right to make modifications in content, schedule, and requirements as necessary to promote the best education possible within prevailing conditions affecting this course.

**This instructor recommends students to save a hard copy, or an electronic copy of the syllabus and keep it as a reference of the material covered in the class. It is not unusual for colleges and universities to require copies of syllabi from transferring students.**

**Instructor Information:**

Maria Serra, M.S.
mserra@dcccd.edu
972-273-3235
Office C352

Office Hours: T/R: 11:00 am - 12:00 P.m.

Please allow 12 hrs (24 hrs. on weekends) for an email response, email messages are checked several times during the day on most days, however, an immediate response may not always be possible. Always include: 1.- your name, 2.- class and section number, and 3.- a subject on your email message, this will allow me to respond immediately if the message warrants an urgent quick response.

**SCIENCE LEARNING CENTER: P333**

Free tutoring. Free internet access (for science use ONLY).
Access to older version, sometimes current versions, text books (Provided your teacher has given us one to use)
Great place to study
Interactive CD ROMS (North Lake College ID required)Video Tapes (North Lake College ID required).
DVD's (North Lake College ID required). On-site, and online tutoring available, Visit [tinyurl.com/sconlinetutors](http://tinyurl.com/sconlinetutors) for a video on how to access online tutoring.

The Science Center provides student services in the following subjects (majors and non majors): Biology, Botany, Microbiology, Anatomy and Physiology. Chemistry, Geology, Botany, Physics and Ecology. The center is located in P-333 & P-334 and offers various resources all of which are free to the students. The SC features tutors, software, videos, CDROM’s, internet, models, places to study quietly, places for group work, and other materials to assist in science classes. In order to access resources of the SC a North Lake College ID Card is required. The subject specific schedule of tutors is updated every semester and is located at [www.northlakebiology.com/SLC_tutor_schedule.htm](http://www.northlakebiology.com/SLC_tutor_schedule.htm)

When students attend SC we ask that they sign in and out. This data helps us keep the center stocked, running, and most of all, free of charge!. **A quiet study room is now available**

**Hours of operation – M-R 8-8, F 9-3 and Sa 9-3**

**Contact information:** Center Phone: 972-273-3273 Coordinator: Amanda Mellow [www.northlakebiology.com](http://www.northlakebiology.com)
Course Information

Course title: BIOL 2402 – Anatomy and Physiology 2
Section numbers: 73202 and 73203 Credit hours: 4
Class meeting time: M/W Lecture 2:00 p.m. – 4:50 p.m. – C253
                  M/W Lab 11:00 a.m. – 1:50 p.m. - C350
                  M/W Lab 5:00 – 7:50 pm C350

Recommended Textbooks and Materials
There is not a specific required textbook for the course, any text from the following list will be accepted as a course textbook:
“Anatomy and Physiology” 9th or 10th Edition, Van Putte, Seeley
“Fundamentals of Anatomy and Physiology” 9th or 10th Edition, Martini
“Essentials of Human Anatomy and Physiology” 10th or 11th Edition, Marieb
“Anatomy and Physiology: The Unity of Form and Function” 5th or 6th Edition, Saladin
Openstax open source textbooks
https://openstaxcollege.org/textbooks/anatomy-and-physiology
Any other textbook, please consult instructor

Lab Recommended: there is no specific lab manual requirement. Any current edition Anatomy and Physiology lab manual would contain the material that covered in class.

Course Description and Prerequisites
BIOL 2401 Anatomy and Physiology I (4). This is a Texas Common Course Number. Prerequisite: Biology 1406. Number: 2607075103
This course examines cell structure and function, tissues, and the skeletal, muscular, and nervous systems. Emphasis is on structure, function, and the interrelationships of the human systems. This is a transferable course intended for those seeking to complete a Bachelor's Degree. (3 Lec., 3 Lab.) Coordinating Board Academic Approval

Course-Level Student Learning Outcomes

<table>
<thead>
<tr>
<th>Departmental SLO 1</th>
<th>Departmental SLO 2</th>
<th>Departmental SLO 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students at the Biology 2401 course level will demonstrate knowledge of the nervous system at 70% proficiency from both a written course exam and a laboratory practical</td>
<td>All students at the Biology 2401 course level will demonstrate knowledge of the skeletal system at 70% proficiency from both a written course exam and a laboratory practical</td>
<td>All students at the Biology 2401 course level will demonstrate knowledge of the muscular system at 70% proficiency from both a written course exam and a laboratory practical</td>
</tr>
<tr>
<td>EEO 1, 2, an&amp; 5 CCICs 1,2,5, &amp; 6 Gen Ed SLOs 1, and 2</td>
<td>EEO 1, 2, an&amp; 5 CCICs 1,2,5, &amp; 6 Gen Ed SLOs 1, and 2</td>
<td>EEO 1, 2, an&amp; 5 CCICs 1,2,5, &amp; 6 Gen Ed SLOs 1, and 2</td>
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</tbody>
</table>
Course Objectives

I. Student must be able to identify basic anatomy associated with each system and use appropriate vocabulary. EEO 1, 2, and 5 CCICs 1, 2, 5, and 6

II. Student must be able to understand the basic physiology of each system and describe it with appropriate vocabulary. EEO 1, 2, and 5 CCICs 1, 2, 5, and 6

III. Students must be able to integrate vocabulary, anatomy and physiology of the various systems. EEO 1, 2, and 5 CCICs 1, 2, 5, and 6

IV. Students must demonstrate the ability to communicate their knowledge using appropriate vocabulary. EEO 1, 2, and 5 CCICs 1, 2, 5, and 6

Specific Course Student Learning Outcomes

All students will participate in the following activities to assure that the Core Curriculum Intellectual Competencies and the Exemplary Educational Objectives are met. Professors may include additional activities to enhance the educational experience.

1.- Students will be expected to read their textbook, class notes, and other relevant material pertaining to the course. Evaluation of student’s reading and critical thinking skills will be through oral and written questions.

2.- Students will use college level writing skills when completing Clinical Cases and Chapter Assignments.

3.- Each student will have the opportunity at least once during the semester to use college level communication skills by answering oral questions pertaining to the material covered in class. In addition, while studying human bones, each student will be assigned a bone to introduce and present to the class using appropriate vocabulary and clear, coherent language.

4.- Students’ listening ability will be evaluated through the use of tests, practical exams, and oral questions.

5.- Students will use critical thinking methods while completing the Chapter Assignments which require students to analyze, organize, evaluate and manipulate information to be summarize and organize in the form of charts or short paragraphs.

6.- Computer literacy will be reinforced through Clinical Cases and Chapter Assignments which require students to search the web, produce electronic documents, and deliver information.
COURSE SYLLABUS
BIOL 2402
Course Outline: Lecture

MODULE 1
Chapter 15: Special Senses: Olfaction, Gustation, Vision, Hearing, and Equilibrium

MODULE 2

MODULE 3

MODULE 4

MODULE 5
COURSE OUTLINE: LAB

Labs focus on the mastering of anatomical structures gross anatomy, identification, location, and relationship of organs, and organ structures. Microscopic anatomy, identification of tissues, their location, and their relationship with each other, some physiology is included to reinforce lecture material.

Lab Practical 1:
Special senses: vision, auditory, and equilibrium.
Endocrine system; glands, glandular tissue and cells, and hormones produced.

Lab Practical 2
Microscopic identification of blood components, understanding of ABO-RH blood typing system, and Hct. Heart structures, blood vessel anatomy, identification of blood vessels.

Lab Practical 3
Identification of lymphatic system structures. Respiratory system structures, respiratory function test. Digestive system structures, and microscopy of digestive system tissues.

Lab Practical 4

Evaluation Procedures:

1.- Four of five lectures exams will be counted towards the course grade. The lowest grade out of the five lecture exams will be dropped. Exams will test lecture material. Exams will have two parts: Part I: 80% of the exam will consist of multiple choice questions, and true and false questions. Answers will be recorded on a scantron. Part II: 20% of the test will consist of matching, short answers, or applications questions. Lecture exams 1-4 will be placed in the Testing Center, lecture exam 5 will be given in class the last week of the semester. Students will be allowed one -3 day- test extension per semester. Subsequent extensions (regardless of reasons) will be penalized 1 pts./day

** The use of notes, cell phones, smart watches, and other outside material is strictly prohibited during tests.

2.- Students will complete on-line quizzes over each of the chapters covered in the MODULES. These quizzes will be found on eCampus, and will consist of a maximum of 35 questions in a multiple choice, matching, true and false, format. Quizzes do not have to be completed ‘in one sitting’, students can start a quiz, save their work, and be able to go back to the saved quiz to continue answering questions, or edit previous answers. Changes can be made until the quiz is submitted; once the quiz is submitted, no more changes are permitted. Quizzes will be open and available until the end of the day on the posted due date. It is recommended that students take the lecture online quizzes before
3. **Four Practical Exams** will be given in lab during the scheduled time, the exams will consist of stations where models or microscope slides will be set up, students will be asked to identify structures, organs, and tissues. **The use of notes, cell phones, smart watches, and other outside material is strictly prohibited during tests.** Practical exams cannot be made up.

4. **Four off five in class Reviews** will serve as review or practice towards the lecture material. In class assignments will cover material from the current LECTURE MODULE. These assignments will be completed during class, in groups of two, and will be ‘open source’ assignments (open books, web, notes, etc.). Answers to the assignments will be posted on eCampus. Class assignments cannot be made up.

5. Students will work on a **Clinical Case** during the semester. The Clinical Case can be worked on individually or in groups of no more than two students. If worked in a group, make sure to include the names of all the participants. The Clinical Case will consist of a short description of a pathological condition, followed by questions regarding the condition. Students may use reference books, the internet, or any other material to find the answers to the questions. The Clinical Case can be found under the ‘Assignments” tab.

**EXTRA CREDIT** (will not exceed 3% of course grade):
Six Extra credit questions will be included in each lecture test, students will choose 2 of the 6 questions as xtra points towards the test grade.
A ‘Mock Practical’ will serve as a ‘Review’ for the Practical lab exam and will count as 5 pts. xtra credit towards the Practical Exam. **Note: this instructor does not offer xtra credit to individual students.** Any bonus, or xtra credit will be available to the entire class.

**Exams and Assignements: 70%  Lab  30%**

<table>
<thead>
<tr>
<th>Assignment Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Exams</td>
<td>4 of 5 exams 11.5% each</td>
</tr>
<tr>
<td>Lecture quizzes</td>
<td></td>
</tr>
<tr>
<td>In Class Reviews</td>
<td>4 of 5</td>
</tr>
<tr>
<td>Lab Practicals</td>
<td>4 Practical: 8.0 % each</td>
</tr>
<tr>
<td>Clinical Cases</td>
<td>3 % each</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
</tbody>
</table>

**% Grading Scale**
- A = 100 – 90 %
- B = 89 - 80 %
- C = 79 - 70 %
- D = 69 - 60 %
- F < 59%
Laboratory Practical Exams cannot be made up. Make up exams may consist of a few assay questions, or an oral examination. Each student can request one lecture exam extension/semester. Extensions will not exceed 3 days. After the first extension, additional extensions will be deducted 1 pt./day.

TESTING CENTER INFORMATION AND POLICIES

(A425) or call 972-273-3160.

Monday – Thursday: 8:30 a.m. – 8:00 p.m.
No tests will be issued after 7:00 p.m. Other cut-off times may be in effect for specific exams by the instructor's direction. All exams collected at 8:00 p.m.

Friday - Saturday: 8:30 a.m. – 3:30 p.m.
Other cut-off times may be in effect for specific exams by the instructor's direction.
No tests will be issued after 2:30 p.m. All exams collected at 3:30 p.m.

Sunday: CLOSED

*Contact Testing Center for hours of operation during the holidays.

Testing Policy for Mathematics & Science Division: Students taking tests in math and science will NOT be allowed to leave the testing center or the classroom during a test and return to complete the test. If you leave, you are through testing

If you need special accommodations you must submit a request to the Disability Services Office in person (A430) or by phone at 972-273-3165.
Visit http://www.northlakecollege.edu/services-and-resources/advice-and-assistance/Pages/disability-services.aspx for more information.

If your instructor requires you to complete an exam in the Testing Center, be sure to have the following information when you request your test.

- Instructor’s name
- Subject and course number (exp: HIST 1301)
- Exam number (1st, 2nd, 3rd, etc.)
- Exam deadline (Get this information from your instructor. The testing staff cannot “look up” this information on computers.)

You should also bring the following supplies.

- Pencil and eraser
- Scantron answer sheet (If required)
- A Test Request Form must be completed at the Testing center.
- Only battery operated 4 function, non programmable scientific or TI83/TI 84 calculator are allowed (if permitted by instructor).
COURSE SYLLABUS
BIOL 2402

• Money for coin-return lockers (quarter). Please do not share lockers.

Important: Government- or school-issued photo identification is required & enforced.

• You may not bring personal items into the Test Center. This includes bags, cell phones and pagers. Coin-reimbursable (quarter) lockers are available for student use. Please do not share lockers.

• Please show courteous and cooperative behavior while using the services provided by the Testing Center.

• Do not bring children to the testing center. You must make arrangements for the care of your children prior to your exam date. The police department will be notified of any unattended children.

• Do not take any testing materials with you when you leave the Testing Center. This includes the test, answers, charts, scratch paper. These items will be attached to your test.

• Only battery operated 4 function, non programmable scientific or TI83/TI 84 calculator are allowed (if permitted by instructor).

Academic Dishonesty: The Dallas County Community District has established procedures and guidelines to protect the security and integrity of all exams. All incidents of academic dishonesty are documented and reported to the instructor, the Director of Testing and the Dean of Student Enrollment. ** The use of notes, cell phones, smart watches, or any other outside material is strictly prohibited during tests. For more information on what constitutes “Academic Dishonesty” please consult page 11 of this syllabus, and the ‘Student Handbook’.

Discipline/ Course/ Department/Policies

WHAT IS EXPECTED OF STUDENTS AND IMPORTANT INFORMATION TO REMEMBER

** Students must read chapters and exercises ahead of time.
** Lecture chapters should be read ahead of lecture. Research shows that information reviewed within 24 hours, and a second time within 72 hours of being presented is retained easier. This is a fast paced course; don’t fall behind.
** Students may be quizzed orally, during lecture, over the material covered in the previous lecture.
** Work on the questions at the back of the chapters, the study guide, and the quizzes offered in the texts’ website.
** Seek help. Take advantage of the instructor’s office hours, feel free to come by and ask questions or seek help. Please communicate with your instructor if you are having any problems, don’t wait to the end of the semester to address issues.
Email communications are sent weekly to the whole class. All email communication that I send to the class is also displayed in the ‘Announcements’ tab of eCampus. Check the tab often to make sure you are not missing any communication, or reminder. Emails sometimes are overlooked or lost.

If you request a letter of recommendation, allow 2 weeks for the letter to be crafted. The instructor reserves the right to decline writing a letter of recommendation.

Attendance:
As you are preparing for a career in the Health Care profession, it is imperative that you practice the professional attributes of punctuality and attendance. The administration and faculty of this program have expectations of your own professional behavior, as well. It will be impossible to satisfactorily complete this course if you have excessive absences. If you must be absent inform the instructor ahead of time. If the absence is due to illness or other unforeseen circumstances inform the instructor as soon as possible via e-mail or a phone call. Communication is key. PLEASE NOTE: Poor attendance (missing more than 4 lecture or lab periods within a semester) will preclude students from taking advantage of extra credit assignments.

Tardiness:
Students are expected to arrive on time for class. Entering class after it is in session is disruptive to other students. Absence due to tardiness is included in classroom absence totals. Each occasion of tardiness is calculated to the next 1/2 hour. e.g. 10 minutes late = 30 minutes and 2 - 30 minute tardiness = 1 absent

eMail Etiquette
When emailing your instructor, please provide your name, course number, and course section on the ‘Subject’ line. As you write your emails, please remember that you are preparing for a professional career; therefore, you will be expected to make an effort to communicate in a manner consistent with your future goals; any written communication should be conducted using proper English grammar, spelling, and punctuation. Instructor checks emails at least twice a day during weekdays, expect a response within 12 hours of sending an email. On the weekends, emails may be checked less frequently, and it may take 24 hours to get a response.

Classroom policies:
A CELL PHONE RINGING, OR VIBRATING DURING CLASS, LAB, LAB OR LECTURE TEST IS DISTRACTING TO OTHER STUDENTS. THE INSTRUCTOR WILL PENALIZE ANY STUDENT WHOSE CELL PHONE RINGS OR VIBRATES DURING A TEST
Students not conforming to the cell phone policy will be asked to leave the class.

** THERE IS NO EATING OR DRINKING IN LABORATORY.

** THERE WILL BE NO TALKING DURING TESTS OR PRACTICAL EXAMS. READ “ACADEMIC DISHONESTY” PARAGRAPH ON “INSTITUTIONAL POLICIES” PART OF SYLLABUS.

** STUDENTS ARE RESPONSIBLE FOR KEEPING INFORMED OF ANNOUNCEMENTS MADE DURING CLASS IN THEIR ABSENCE. STUDENTS ARE RESPONSIBLE FOR KEEPING INFORMED OF TESTING CENTER HOURS OF OPERATIONS.

** Children in Class and Unaccompanied Children Policy:**

The institution strives to protect an environment most conducive to teaching and learning for all enrolled students. Children who are taking part in organized scheduled activities or who are enrolled in specific classes are welcomed. Minor children, however, should not be brought to the college. This practice is disruptive to the learning process. In the case of an emergency where the student-parent has no alternative but to bring the child to the campus, classroom faculty or the administrative heads of other units have full discretion as to whether a child may be allowed to quietly stay in the location. These individuals (classroom faculty or administrative heads) may require the student-parent to remove the children from the setting if the presence of the child is deemed to be disruptive to the learning process. For reasons of security and child welfare, the institution will not permit unattended children be left anywhere on the premises. Parents who have problems with childcare should visit the advisement/counseling center to receive referrals to childcare services in the area.

**Study Tips**

- **Don’t procrastinate.** Start today (not next week) to read and study.
- **Show up** for class and be actively listening (not daydreaming). Some material will be from sources other than the text. You will not know the material if you have missed class.
- Lecture chapters should be read ahead of lecture, and reviewed after lecture. Research shows that information reviewed within 24 hours, and, a second time, within 72 hours of being presented is retained easier. This is a fast paced course; don’t fall behind!
- **Read** your textbook; don’t waste your $100! We will cover 1-2 chapters per week. First, go over headings, diagrams and charts. Then (before reading the chapter) read over the questions you are to answer. Then read & answer the questions. Finally read the summary at the end.
- Students may be quizzed orally, during lecture, over the material covered in the previous lecture.
COURSE SYLLABUS

BIOL 2402

- **Seek help.** Take advantage of the instructor's office hours, feel free to come by and ask questions or seek help.
- **Take courses or seminars to improve your study skills.** Do you know how you best learn? Different approaches to studying? The Counseling Services of the college has trained personnel that can help you improve your study skills, note taking, and test anxiety.
- Each day before lecture begins, **read the lecture notes from the day before.** This will cut study time during preparation before tests.
- **Make a vocabulary** with definitions or identifications. Your medical vocabulary should be expanding exponentially during this course. You can find charts on line to use for practice in labeling parts.
- **Work with a study partner,** preferably someone who is serious about learning A & P and using time productively. Quiz each other on vocabulary, concepts, and identifications.
- **Practice being the “expert”** with your family and friends. Most people are very interested in the human anatomy and physiology. Tell them about what you learned in class. Explaining a concept to someone else helps you remember it longer.
- **Take advantage of the Science Center in P333.**

**ECAMPUS**

1. Class notes and announcements will be posted on the web on ECAMPUS at "ecampus.dcccd.edu".
2. You are expected to access "ECAMPUS" on a regular basis to be up to date with the class information.
3. Make sure you enter your email address. Let me know if you need help with "ECAMPUS".
4. All students can apply for a free email address/internet access at the Computing Center.

**INSTITUTIONAL POLICIES**

"Institutional Policies relating to this course can be accessed from the following link [www.northlakecollege.edu/syllabipolicies](http://www.northlakecollege.edu/syllabipolicies)

The link includes information on:

- Student success: Academic Advising, Degree Planning, and Tutoring
- Students with Disabilities
- Cheating, Plagiarism, and Collusion
- Student Survey of Instruction
- Religious and Ethnic Holiday Observances
EXEMPLARY OBJECTIVES:

The objective of the study of a natural sciences component of a core curriculum is to enable the student to understand, construct and evaluate relationships in the natural sciences and to enable the student to understand the bases for building and testing theories.

This course satisfies all of the Exemplary Educational Objectives for the natural sciences. They are

1. To understand and apply method and appropriate technology to the study of natural sciences.
2. To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses and interpretation both orally and in writing.
3. To identify and recognize the differences among competing scientific theories.
4. To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
5. To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture
Core Curriculum Intellectual Competencies (CCIC): This course reinforces all 6 of the Core Curriculum Intellectual Competencies defined by the Texas Higher Education Coordinating Board.

1. **READING**: Reading at the college level means the ability to analyze and interpret a variety of printed materials—books, articles and documents. A core curriculum should offer students the opportunity to master both general methods of analyzing printed materials and specific methods for analyzing the subject matter of individual disciplines.

2. **WRITING**: Competency in writing is the ability to produce clear, correct and coherent prose adapted to purpose, occasion, and audience. Although correct grammar, spelling and punctuation are each a sine qua non in any composition, they do not automatically ensure that the composition itself makes sense or that the writer has much of anything to say. Students need to be familiar with the writing process including how to discover a topic and how to develop and organize it, how to phrase it effectively for their audience. These abilities can be acquired only through practice and reflection.

3. **SPEAKING**: Competence in speaking is the ability to communicate orally in clear, coherent and persuasive language appropriate to purpose, occasion and audience. Developing this competency includes acquiring poise and developing control of the language through experience in making presentations to small groups, to large groups and through the media.

4. **LISTENING**: Listening at the college level means the ability to analyze and interpret various forms of spoken communication.

5. **CRITICAL THINKING**: Critical thinking embraces methods of applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies. Problem solving is one of the applications of critical thinking, used to address an identified task.

6. **COMPUTER LITERACY**: Computer Literacy at the college level means the ability to use computer-based technology in communicating, solving problems and acquiring information. Core-educated students should have an understanding of the limits, problems and possibilities associated with the use of technology and should have the tools necessary to evaluate and learn new technologies as they become available.

[http://www.dcccd.edu/Employees/Departments/EA/Academic%20Programs/Core%20Curriculum/Faculty%20Resources/Pages/default.aspx](http://www.dcccd.edu/Employees/Departments/EA/Academic%20Programs/Core%20Curriculum/Faculty%20Resources/Pages/default.aspx)

**Disclaimer**: The instructor reserves the right to amend this syllabus as necessary.