This course syllabus is intended as a set of guidelines for (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.

Instructor Information:

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

Office Hours: Upon request
The most effective way to reach me is via email. I will be checking email a couple of times a day.

SCIENCE LEARNING CENTER: P333 and A&P PLACE C331

Not available during Wintermester

(North Lake College ID required)
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)

The Science Learning 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 SLC 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 SLC 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
When students attend SLC 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 8to8, F 9-3 and Sa 9-3

Contact information: Center Phone: 972-273-3273 Coordinator: Tara Arrington
www.northlakebiology.com
Course Information

Course title: BIOL 2401 – Anatomy and Physiology I
Section numbers: 72429
Credit hours: 4
Class meeting time: Lecture MTWRFSSU ONLINE
                   Lab       MTWRFSSU ONLINE

Required Textbooks and Materials

Lecture:
There are several options:

2.- **Required: Connect code with ebook package. ISBN: 9781259996351

3.- If you already have an A&P textbook you may be able to use it, email me the name, author, and edition number. If you already have a textbook, or an ebook you will only need to purchase the required McGraw-Hill Connect code (see option 2 above).

Laboratory
Lab will follow the “Reveal” feature of McGraw-Hill Connect. With assigned exercises, and power points.

For more information on how to access MacGraw-Hill Connect, visit the course’s eCampus site.

Course Description and Prerequisites
BIOL 2401 Anatomy and Physiology I (4). This is a Texas Common Course Number. Prerequisite: Biology 1406 or SCIT 1407.
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 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 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>
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<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 Outline: Lecture

MODULE 1

• Chapter 1: Introduction to Anatomy and Physiology Concepts:
  • The language of anatomy and physiology
  • Definitions: anatomy, physiology, homeostasis
  • A brief history of anatomy and physiology
  • Specialties of anatomy and physiology
  • Overview of the levels of organization of biological systems
  • Overview of the 11 body systems’ components and functions.
  • Homeostasis: Regulating, control mechanisms, feedback mechanisms
  • An overview of anatomy: anatomical landmarks, orientation terms, body cavities, abdominopelvic regions and quadrants, body planes and sections, serous membranes.
  • Overview of body imaging techniques

Chapter 4: The Tissue Level of Organization.

• Tissues: Definition and Types, Tissues and Histology
  • Epithelial Tissue: main types by location, general characteristics and function, types of epithelial tissue classified by structure. Glandular epithelial tissue and glands
  • Connective Tissue: general characteristics, and function, cells and matrix of connective tissue, connective tissue classification and types
Module 2

Chapter 5: The Integumentary System
- The Integumentary system components, and general function
- Regions of the Skin
- The Epidermis: strata, cellular characteristics, functions, skin color
- The Dermis: general characteristics, layers, markings and cleavage lines.
- Skin Glands: sudoriferous, and sebaceous glands.
- Hair and Nails: general structure and organization
- Functions of the Skin: thermal regulation, metabolic and protective functions.
- Skin Cancer and Burns
- Aging and the Integument.

Chapter 6: The Skeletal System: Bones and Skeletal Tissues
- Function of Skeletal System
- Components of Skeletal System
- Histological Structure of Bone: Types of bone tissue, cells, and matrix organization.
- Bone structure, long and short bones, flat bones
- Osteogenesis, and bone growth: endochondral, and intramembranous ossification, appositional growth.
- Factors affecting bone growth. Calcium homeostasis.
- Bone repair and bone fractures
-- Effects of aging on bone

Chapter 7: Gross Anatomy of The Skeletal System
- Overview of gross anatomy: classification of skeletal system, function, and structural - organization. Bone markings.
- The Axial Skeleton: the skull, vertebral column and vertebrae, spinal curvatures, sacrum and coccyx, the thoracic cage.
- The Appendicular skeleton: The pectoral girdle and upper extremities, the pelvic girdle and lower extremities
Module 3

Chapter 8: Joints
- Function of Joints
- Functional classification of joints
- Structural classification of joints
- Synovial joints: structure, support structures, abnormal conditions, movement.
- Synovial joint classification based on structure and degree of movement.
- Joint movement
- Synovial joints: knee joint, shoulder joint, hip joint, elbow joint, TMJ

Chapter 9: Muscles and Muscle Tissue
- Organization of Skeletal muscle
- Microscopic structure of Skeletal muscle
- Structure of the muscle fiber
- Structure of the sarcomere
- The Sliding Filament Theory of Muscle Contraction
- Muscle metabolism: energy for contraction
- Force and velocity of muscle contraction, muscle fibers
- Effects of exercise
- Types of muscle tissue and their characteristics

Chapter 10: The Muscular System
- Muscles as levers, muscle origin and insertion
- Muscles of the head, and trunk
- Muscles of the upper and lower limbs

Module 4

Chapter 11: Fundamentals of the Nervous System and Nervous Tissue
- Nervous System Function
- Nervous System Divisions: CNS, and PNS.
- PNS Divisions: Afferent, and Efferent
- Histology of the Nervous System
- Neuron structure and function, and classification
- Gray Matter and White Matter of the CNS and PNS
- Neuron Channels, Resting Potentials, Action Potentials and Graded Potentials
- Propagation of Action Potentials
- Influence of Myelin sheath and Axon size on Conduction Velocity.
- Nerve Fiber Classification
- Synapse and Information Transfer. Neurotransmitters and their properties
- EPSP’s and IPSP’s
- Patterns of Neuronal Processing

Chapter 12: Spinal Cord and Spinal Nerves
- Spinal cord location and function
- Protective structures
- Spinal cord organization and function. Reflex arch.
- Spinal nerves

Chapter 13: Brain and Cranial Nerves
- Development and Organization of the Central Nervous System
- Protective Structures of the Brain
- Histology of the CNS
- The Cerebrum: structures, somatic and motor regions, the limbic system, the basal nuclei, lateralization of the cerebral cortex.
- The Diencephalon: regions, structures, and functions of the epithalamus, thalamus, and hypothalamus.
- The Brain Stem: regions, structures, and functions of the mesencephalon, the pons, and the medulla oblongata.
- The Cerebellum: regions, structures, and functions of the cerebellum.
- The Reticular Activating System
- Cranial Nerves: location, and function.

Chapter 14: Neural Integration
- Sensation, Classification of Senses, and Types of Sensory Receptors
- Responses of Sensory Receptors
- Sensory Nerve Tracts
- Descending Pathways Modifying Sensation
- Referred Pain, Phantom and Chronic Pain
- Control of Skeletal Muscles: Descending Motor Tracts and the Cerebellum
- Aging and the Central Nervous System

Chapter 16: The Autonomic Nervous System
- The Autonomic Nervous System Function
- The ANS vs. SNS
• The Sympathetic vs. The Parasympathetic Branches of the ANS
• Origins and Roots of the Parasympathetic Nervous System
• Neurotransmitters and Receptors of the ANS
• Interactions of the Autonomic Division: Sympathetic and Parasympathetic Effects on Metabolism and control of ANS function.

Course Outline: Laboratory

Practical Exam 1 covers: Introduction, Language of Anatomy, Tissues, Integument and Membranes
Practical Exam 2 covers: Bone Tissue, The Skeleton: Axial and Appendicular
Practical Exam 3 covers: Joints, and Skeletal Muscle Tissue, and Muscles
Practical Exam 4 covers: Nervous System Tissue Histology, Central Nervous System: brain and spinal cord. Spinal Nerves, and Cranial Nerves

Course Assignments Outline and Evaluation Procedures

<table>
<thead>
<tr>
<th>LECTURE MODULES 1-5</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Lecture Quizzes</td>
<td>1 quiz/chapter, 20 questions /quiz, no time limit, 1 time quiz</td>
</tr>
<tr>
<td>5 Lecture Tests</td>
<td>80 questions. Computer test to be taken at the Testing Center. Times 2 hrs/test</td>
</tr>
<tr>
<td>10 Discussion Questions</td>
<td>1 correct entry/chapter by due date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRACTICAL EXAMS LAB</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Lab Quizzes</td>
<td>1 quiz/chapter, 10 questions/quiz, not time limit, 1 time quiz</td>
</tr>
<tr>
<td>4 Lab Practicals</td>
<td>50 questions. Computer test to be taken at the Testing Center. Timed 1.5 hrs./test</td>
</tr>
</tbody>
</table>

** Note: Lowest Lecture Test grade will be dropped.

All Lecture and Lab Quizzes are MGH 'Connect' quizzes
All exams (lecture and lab) are to be taken at North Lake Testing Center, and will be available until their due date. Refer to schedule on eCampus for due dates of all assignments.

Exams and Assignments: 700 pts. Lecture, 300 pts. Lab

<table>
<thead>
<tr>
<th>Lectures</th>
<th>4 of 5 exams 10% each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Discussion questions</td>
<td>10%</td>
</tr>
<tr>
<td>Lab Practicals</td>
<td>4 Practicals : 7.5 % each</td>
</tr>
<tr>
<td>Lab quizz</td>
<td>10%</td>
</tr>
</tbody>
</table>

TOTAL POINTS 100%
% Grading Scale | Points Grading Scale per 100 pts.
---|---
A = 100 – 90 % | A = 1000 – 900 pts.
B = 89 - 80 % | B = 890 – 800 pts.
C = 79 - 70 % | C = 790 – 700 pts.
D = 69 - 60 % | D = 690 – 600 pts.
F < 59% | F < 590 pts.

Due to the fast nature to wintermester semesters, there is no makeup test, or practical exams. Please be mindful of the schedule, plan accordingly.

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.*

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](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 can not “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 before entering the Testing center. Only battery operated 4 function, non programmable scientific or TI83/TI 84 calculator are allowed (if permitted by instructor). 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.

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.

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

Discipline/ Course/ Department/Policies

WHAT IS EXPECTED OF STUDENTS:
This is a fast paced, online class, which means good planning, and sticking to a schedule is of the essence.
** Students must read chapters and exercises ahead of time.
** You should plan to cover one chapter of lecture or lab per day. This is a fast paced course; don’t fall behind.
** A sample schedule of work can be found on eCampus, under the “Syllabus and Schedule” tab. Following this schedule will help you stay on track.
** Take advantage of all the xtra study material, worksheets, review questions, etc. these will help you gage the level of mastering of the material.
Attendance:
This is an on-line course, however, you are expected to participate in the discussion questions, and complete on-line quizzes on time, which will give me an idea of whether you are pacing yourselves and keeping up with the work.

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.

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.
- Read your textbook. Go over headings, diagrams and charts. Take advantage of all the review material provided.
- 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.
- 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 are learning. Explaining a concept to someone else helps you remember it longer.
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.

FREE TUTORING: SCIENCE LEARNING CENTER
"Peer coaching" will also be available this semester in P333. Check for posted times. Open lab times will be arranged by the second week of the semester. Times will be posted by or announced in class. More information on pages 1 and 2 of this syllabi.

INSTITUTIONAL POLICIES

ACADEMIC DISHONESTY
The Student Code of Conduct prohibits academic dishonesty and prescribes penalties for violations. According to this code, which is printed in the college catalog, "academic dishonesty", includes (but is not limited to) cheating, fabrication, facilitating academic dishonesty, plagiarism, and collusion.

1) The Vice-President of Academic & Student Affairs may initiate disciplinary proceedings against a student accused of academic dishonesty.

2) Academic dishonesty includes, but is not limited to, cheating on a test, plagiarism and collusion.

3) Cheating on a test includes:
   a) Copying from another student's test paper;
   b) Using, during a test, materials not authorized by the person giving the test;
   c) Collaborating with another student during a test without permission to do so;
   d) Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of an un-administered test.
   e) Substituting for another student, or permitting another student to substitute for you to take a test; and
   f) Bribing another person to obtain an unadministered test or information about an unadministered test.
4) “Plagiarism” means the appropriation of another’s work (ideas and/or words) and the unacknowledged incorporation of that work in one’s written work offered for credit. Quotes not identified as quotes constitute a form of plagiarism even if the borrowed ideas are documented.

5) “Collusion” means an unauthorized collaboration with another person in preparing written work offered for credit.

Academic dishonesty may result in the following sanctions, including, but not limited to:
1. A grade of zero or a lowered grade on the assignment or course.
2. A reprimand.
3. Suspension from the college.

NOTE: This instructor will take very seriously any academic dishonesty offence: an F in the class, suspension from the college, and a note on the student’s permanent record will be measures taken by this instructor in response to academic dishonesty. Cheating harms all students, the college, instructors, and society as a whole.

Please note that plagiarism is considered a form of cheating. This includes assignments in which the student uses internet resources. Copying and pasting of material from the internet constitutes plagiarism, unless the material is properly cited, and explained using the student’s own words.

NOTIFICATION OF ABSENCE DUE TO RELIGIOUS HOLY DAY(S)
Students who will be absent from class for the observance of a religious holiday must notify the instructor in advance. Please refer to the Student Obligations section of the college catalog for more explanation. You are required to complete any assignments or take any examinations missed as a result of the absence within the time frame specified by your instructor.

REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (A414)
North Lake College provides academic accommodations to students with disabilities, as defined under ADA law. It is the student’s choice and responsibility to initiate any request for accommodations. If you are a student with a disability who requires such ADA accommodations, please contact North Lake College’s Disability Services Office in person (A414) or by phone at 972-273-3165.
http://www.northlakecollege.edu/resources/disability.html

ADMINISTRATIVE WITHDRAWAL
Students with valid extenuating circumstances may be eligible for an administrative withdrawal by the Dean of the Division in which the course or
courses are taught. An administrative withdrawal will not be awarded to students who simply fail to withdraw prior to the last day to receive a “W.” The request for an administrative withdrawal must be made in writing to the Dean of the Division with any supporting documentation attached. This must occur before the last official day of the semester.

DROP POLICY
If you are unable to complete this course, you must officially withdraw by Friday December 22, 2017. Withdrawing is a formal procedure which you must initiate; your instructor cannot do it for you. All Dallas County Community Colleges charge a higher tuition rate to students registering the third time for a course. This rule applies to the majority of credit and Continuing Education / Workforce Training courses. Developmental Studies and some other courses are not charged a higher tuition rate. Third attempts include courses taken at any DCCC college since the fall 2002 semester. For further information, go online to: http://www.DCCCD.edu/thirdcourseattempt.

STOP BEFORE YOU DROP
For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops

FINANCIAL AID STATEMENT
Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate are also subject to this policy.

To apply for financial aid in the DCCCD, students must complete FAFSA (Free Application for Federal Student Aid) on the web at: http://www.fafsa.ed.gov
The Academic Skills Center (ASC)

- An ESOL lab with computer access.
- Free tutoring for students enrolled in foreign language courses.
- The iRead Lab offers individual and small group tutoring, as well as workshops, to help current students improve their reading, study, and test taking skills.
- The Writing Center to help students clarify writing tasks, understand instructors’ requirements, develop and organize papers, explore revision options, detect grammar and punctuation errors, properly use and document sources, and improve their writing skills.
- The Online Writing Lab (OWL) allows students to submit papers to our writing tutors electronically and get feedback within 24-72 hours. The OWL can be accessed through eCampus.
After logging on to eCampus, click on the Community Tab at the top.
Type “Owl” in the search field and click “Go.”
Next, click on the double drop-down arrows next to “NLC-OWL2,” and then click on “Enroll.”
Once enrolled, students can receive services from the OWL.
- The Blazer Internet Lounge with 12 computers, additional open seating, and WiFi Internet access.

For more information or to schedule a tutoring appointment, come by A-414 or call 972-273-3089.

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.
COURSE SYLLABUS

BIOL 2401_72429

WINTERMESTER 2017

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.