This course syllabus is intended as a set of guidelines for Biology 1406. 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:

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972-273-3528
C-231
Office Hours by Appointment

Course Information
Biology for Science Majors I
Biology 1407
Section number: 72200
Credit hours: 4
Class meeting time: TBA

Course Description: An introductory survey of current biological concepts for students majoring in the sciences. Emphasis will be placed on topics which include evolution, biological diversity, ecology, and comparative structure and function of organisms. (3 Lecture, 3 Lab.)

Coordinating Board Academic Approval Number 2601015103

Prerequisite: BIOL 1406. One of the following must be met: (1) Developmental Reading 0093 AND Developmental Writing 0093; (2) English as a Second Language
(ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) Reading and Writing standards AND DCCCD Writing score prerequisite requirement.

**Required or Recommended Textbooks and Materials**

**Lecture Text:** There is no text to purchase. Please log into the following URL for access to the OpenStax FREE online text.

https://openstaxcollege.org/textbooks/biology

**Laboratory Manual:** There is no lab manual to purchase. All lab units will be provided online through eCampus.

**Learning Outcomes**

**Learning Outcomes: Lecture**

Upon successful completion of this lecture based course students will be able to:

1. Describe modern evolutionary synthesis, natural selection, Mendelian inheritance, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

**Learning Outcomes: Laboratory**

Upon successful completion of this laboratory-based course, students will:

1. Be able to apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of investigations.
4. Demonstrate knowledge of modern evolutionary synthesis, natural selection, Mendelian inheritance, micro and macroevolution, and speciation.
5. Distinguish between phylogenetic relationships and classification schemes.
6. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
7. Describe basic animal physiology and homeostasis as maintained by organ systems.
8. Compare different sexual and asexual life cycles noting their adaptive advantages.
9. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

**Course Outline**

- Descent With Modification: A Darwinian View of Life
- The Evolution of Populations
• The Origin of Species
• Tracing Phylogeny: Macroevolution, the Fossil Record and Systematics
• Prokaryotes and the Origins of Metabolic Diversity
• The Origins of Eukaryotic Diversity
• Plant Diversity I: the Colonization of Land
• Plants Diversity II: The Evolution of Seed Plants
• Fungi
• Invertebrates and the Origin of Animal Diversity
• Vertebrate Evolution and Diversity
• Introduction to Ecology
• Population Ecology
• Community Ecology
• Ecosystems

**Means of Assessment of Course Learning Outcomes**

Learning outcomes will be assessed by examinations in both lecture and laboratory. Additionally each of the twelve units completed in lab will be assessed by either lab report, quiz or other activities deemed appropriate by the instructor.

**Attendance Policy:**

Lecture and laboratory attendance is required. All responsibility for make-up work is that of the student. Attendance will be taken at the beginning of both lecture and lab classes. No absence is permitted from lab without penalty except in extreme circumstances. Your laboratory instructor will review lab attendance and the makeup policy at your first lab. Laboratory units cannot be completed without laboratory attendance.

**Evaluation Procedures**

**Evaluation:** Your grade is based on three lecture exams, two lab exams, two papers, participation and your field notebook. Each item is valued at 100 points. Additional graded activities may be assigned during the semester. Your grade in lab is based on a percentile of all exams. The grade scale will be 90-100 for an A, 80 to 89.99 for a B 70 to 79.99 for a C, 60 to 69.99 for a D and below 60 an F.
Exams and Assignments

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<tbody>
<tr>
<td>Lecture Exams (3)</td>
<td>300</td>
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<tr>
<td>Lab Exam (2)</td>
<td>200</td>
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<tr>
<td>Two Papers</td>
<td>200</td>
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<tr>
<td>Field Work and Notebook</td>
<td>200</td>
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<tr>
<td>Other Assigned Activities</td>
<td>100</td>
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**Discipline/ Course/ Department/Policies**

Students are expected to be on time for all class and to fully participate in class activities. When you come to class, plan on staying until the class is dismissed. Take care of any out of class needs prior to entering the class. Cell phones should be turned to silent and be put away during class activities. No texting or other inappropriate use of electronic devices as determined by the instructor. Laptops, notepads, etc. can be used in class, but only for class purposes. All electronic devices are to be turned off and put away during exams. All students are expected to abide by the college Student Code of Conduct.

The instructor reserves the right to make changes to any part of this document as deemed necessary by the instructor for overall class success, evaluation, class policies and completion of the class.

**INSTITUTIONAL POLICIES**

Institutional Policies relating to this course can be accessed from the following link: www.northlakecollege.edu/syllabipolicies

**COUNSELING SERVICES (A430)**

Counseling services for personal issues are provided to all students currently enrolled at North Lake College. These services are provided by licensed professionals who are bound by confidentiality (within ethical parameters) at no charge. With the assistance of a counselor, students are able to identify, understand, resolve issues and develop appropriate skills. To make an appointment call 972-273-3333 or visit A 430.

**THE ACADEMIC SKILLS CENTER (A332)**
The Academic Skills Center (ASC) is designed to provide assistance to students in the following areas:

- Labs for students enrolled in foreign language, Developmental Reading, and ESOL courses. One-on-one tutoring is available.
- The Writing Center can help students clarify writing tasks, understand instructors’ requirements, develop and organize papers, explore revision options, detect grammar and punctuation errors, and properly use and document sources. Rather than merely editing or “fixing” papers, tutors focus on helping students develop 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.

For more information or to schedule a tutoring appointment, come by A-332 or call 972-273-3089.

TESTING CENTER (A 425)
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.
   No tests will be issued after 2:30 p.m. Other cut-off times may be in effect for specific exams by the instructor’s direction. All exams collected at 3:30 p.m.
Sunday – CLOSED

If you instructor requires you to complete an exam in the Testing Center, be sure to have the following information when you request you test:
   1. Instructor’s name
   2. Subject, course number, and section number (exp: Speech 1311.7011)
   3. Exam number (1st, 2nd, 3rd, etc.)
   4. 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:
   1. Pencil
   2. Scantron answer sheet
   3. A Test Request Form must be completed before entering the Testing Center.
   5. Government or school issued photo identification is required & enforced.
You may not bring personal items into the Testing Center. This includes bags, cell phones, and pagers.

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.

Questions? Please visit the Testing Center (A 425) or call 972-273-3160.