# BIOL 1407: Biology For Science Majors 2

**North Lake College**

## GENERAL INFORMATION

<table>
<thead>
<tr>
<th>College Name</th>
<th>North Lake College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division</td>
<td>Math Science</td>
</tr>
<tr>
<td>Semester/Term &amp; Year</td>
<td>Spring 2015</td>
</tr>
</tbody>
</table>

## INSTRUCTOR INFORMATION

<table>
<thead>
<tr>
<th>Name</th>
<th>Matthew A. Dempsey – Associate Dean of Math and Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCCCD E-mail</td>
<td><a href="mailto:mdempsey@dcccd.edu">mdempsey@dcccd.edu</a></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>972.273.3279</td>
</tr>
<tr>
<td>Office Number</td>
<td>P-333A</td>
</tr>
<tr>
<td>Website(s)</td>
<td><a href="http://ecampus.dcccd.edu">http://ecampus.dcccd.edu</a> and <a href="http://www.northlakecollege.edu/hawaii">http://www.northlakecollege.edu/hawaii</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Amanda Turley</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCCCD E-mail</td>
<td><a href="mailto:aturley@dcccd.edu">aturley@dcccd.edu</a></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Office Number</td>
<td>TBA (Email me varies by daily schedule)</td>
</tr>
<tr>
<td>Skype</td>
<td>Turley_Biology</td>
</tr>
<tr>
<td>Websites</td>
<td><a href="http://ecampus.dcccd.edu">http://ecampus.dcccd.edu</a> and <a href="http://www.northlakecollege.edu/hawaii">http://www.northlakecollege.edu/hawaii</a></td>
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## COURSE INFORMATION

<table>
<thead>
<tr>
<th>Course Number</th>
<th>BIOL 1407</th>
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<tbody>
<tr>
<td>Section Number</td>
<td>73426</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>4</td>
</tr>
<tr>
<td>Class Meeting</td>
<td>Lecture Online - Hybrid</td>
</tr>
<tr>
<td>Time</td>
<td>Lab 8:30AM Friday Only</td>
</tr>
<tr>
<td>Course Title</td>
<td>Biology for Science Majors 2</td>
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</table>

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 Lec., 3 Lab.) Coordinating Board Academic Approval Number 2601015103

Course: BIOL 1406. One of the following must be met: (1) DREA 0093 AND DWRI 0093; (2) English as a
<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Second Language (ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) Reading and Writing standards AND the college Writing score prerequisite requirement.</th>
</tr>
</thead>
</table>
| Program Level Objectives | PROGRAM –LEVEL OBJECTIVES FOR BIOL 1407 Biology 1407 develops the following objectives from the Texas Higher Education Coordinating Board:  
  - Communications: Written  
  - Communications: Visual  
  - Critical Thinking  
  - Empirical & Quantitative Skills |
| Measurable Student Learning Outcomes (SLOs) | **LECTURE:**  
1. Describe modern evolutionary synthesis, natural selection, population genetics, 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.  

**LAB:**  
1. 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 scientific investigations.  
4. Demonstrate knowledge of modern evolutionary synthesis, natural selection, population genetics, 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

Exam 1 - Evolution
1. Chapter 22 – Descent with Modification
2. Chapter 23 – The Evolution of Populations
3. Chapter 24 – The Origin of Species
4. Chapter 25 – The History of Life on Earth
5. Chapter 26 – Phylogeny and the Tree of Life

Exam 2 – Archaea, Bacteria, and Protists
6. Chapter 27 – Bacteria and Archaea Diversity
7. Chapter 28 – Protists Diversity

Exam 3 - Plantae
8. An Introduction to Basic Plant Anatomy and Morphology
9. Chapter 29 Bryophytes and Tracheophytes
10. Chapter 30 Gymnosperms and Angiosperms

Exam 4 – Fungi and Animalia Introduction
11. Chapter 31 – Fungi Diversity
12. Chapter 32 – Animalia Anatomy Introduction

Exam 5 - Animalia
13. Chapter 33 – Basal Animals
14. Chapter 33 – The Lophotrochozoa
15. Chapter 33 – The Ecdysozoa
16. Chapter 34 – The Deuterostomia (and you)

Exam 6 – Ecology and Ecosystems
17. Survey of Ecology
18. Survey of Biomes, Ecosystems, and Food Webs

Required or Recommended Materials

Lecture
Text: Biology (North Lake College Custom Version) or Larger Version*
*My note here please consider using the larger edition of the book, it will greatly assist you in future classes.
Author: Campbell/Reece
ISBN: 9781269871181
Copyright Year: 2012
Publisher: Pearson Learning Solutions – Mastering Biology

You do not need the access code! Mastering Biology may not be supported this spring.
You may purchase the larger volume that contains both 1406 and 1407 (recommended if you are majoring in biology).

Recommended supplemental text: (will help with lab and lecture, not available in bookstore)
Text: A Photographic Atlas for the Biology Laboratory
Author: Kent M. Van De Graaff and John Crawley
ISBN: 978-0895828033
Copyright Year: 2009
Publisher: Morton Publishing Company
Your grade is based on a combination of 6 lecture/lab exams which worth 100pts each and assignments comprised of exercises, journals, quizzes, Student Learning Outcome quizzes, surveys etc. Lab will also have additional points. This will affect the way things are calculated in the grade center MY GRADES. Let me put this another way, you may use the MY GRADES section of blackboard to preview how you have done on individual items, however, it does not take into account the weight items carry. So do not use MY GRADES to determine anything other than your performance on individual efforts. Please pay attention to due dates for quizzes, journals, and all other assignments. When an item expires, it will no longer be available to take. Additional graded projects may be assigned during the semester, but the grade is still a percentile grade of the total possible accumulated points. Your lecture average is 70% of your total grade and your lab grade is 30% in Biology 1407. Lecture/lab exams will be given in the testing center at North Lake College’s central campus (unless otherwise advised in class) and must be completed before the deadline expires. **LATE WORK POLICY IS AS FOLLOWS**

Exams and assignments are to be completed on-time, without exception. Should unusual circumstances arise, regardless of their nature, you may complete all assignments late considering the following penalties. Items will be discounted as follows:

1 Day Late = subtracted 5% from exam score  
2 Days Late = subtracted 15% from exam score  
3 Days Late = subtracted 25% from exam score  
4 Days Late = subtracted 50% from exam score  
5 Days Late = item defaults to a zero.

Additionally, any exams that are time-stamped as occurring during your regularly scheduled lecture or lab period will be lowered on letter grade (unless prior arrangements or permissions are granted).

Your final grade is calculated as follows.

<table>
<thead>
<tr>
<th>Exam</th>
<th>70% of the questions lecture 30% lab based.</th>
<th>100pts</th>
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<tbody>
<tr>
<td>Exam 1</td>
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<td>Exam 2</td>
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<td>Exam 3</td>
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<td>Exam 4</td>
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<td>Exam 5</td>
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**Grading Scale**

*Bonus points are possible, and will added to lowest quiz score by default. Check announcements or ask about opportunities.*

Your final grade will be a combination of both lecture and lab, with lecture representing 70% and lab 30% of the final grade.

- 90-100=A
- 80-89=B
- 70-79=C
- 60-69=D
- 59 and below=F

**Exams and Assignments**

**Lecture:**
All units will have quizzes that correspond to the chapters. Some units will have journal entries, related assignments and/or SLO quizzes. These are assigned to help you better understand your material, so have them completed before you take the exam. Please consult the individual folders as well as keep current with announcements regarding these assignments. All exams are computer based, no materials needed. You will report to the testing center to take the computer based exam. They will enter in the password for you. Please adhere to all testing center procedures. All assignments need to be completed before taking the exam... this extrapolates to quizzes, journals, and all related assignments.

Please see calendar for appropriate dates for completion. Below is an outline – HIGHLY subjected to adjustment to best deliver the material in an orderly and timely fashion that best promotes a learning environment. Announcements in class or in Blackboard supersede the information below. Again, please understand that the calendar below WILL be adjusted, not when or if... it WILL BE ADJUSTED.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evolution</td>
<td>Week 4</td>
</tr>
<tr>
<td>Bacteria + Protista</td>
<td>Week 6</td>
</tr>
<tr>
<td>Plantae</td>
<td>Week 8</td>
</tr>
<tr>
<td>Fungi</td>
<td>Week 10</td>
</tr>
<tr>
<td>Animalia</td>
<td>Week 14</td>
</tr>
<tr>
<td>Ecology</td>
<td>Finals Week</td>
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</table>

**Drop Date – April 16th, 2015**

**Laboratory:** Please see your lab instructor for a calendar and complete list of assignments.
### Attendance Policy

Attendance in class, as well as logging onto Blackboard is mandatory. This will be monitored and assessed as part of your participation element in lecture. All responsibility for completing the assignments, and doing so in a timely manner is that of the student. Attendance will also be mandatory for laboratory. 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.

### INSTITUTIONAL POLICIES

#### ADA Statement
If you are a student with a disability and/or special needs who requires accommodations, please contact the college Disability Services Office.

#### Religious Holidays
Absences for observance of a religious holy day are excused. A student whose absence is excused to observe a religious holy day is allowed to take a make-up examination or complete an assignment within a reasonable time after the absence.

#### Academic Honesty
Academic honesty is expected, and integrity is valued in the Dallas County Community Colleges. Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion.

As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct published in the DCCCD Catalog. More information is available at [https://www1.dcccd.edu/catalog/ss/code.cfm](https://www1.dcccd.edu/catalog/ss/code.cfm).

#### Withdrawal Policy (with drop date)
If you are unable to complete this course, it is your responsibility to withdraw formally. The withdrawal request must be received in the Registrar's Office by (semester's drop date). Failure to do so will result in your receiving a performance grade, usually an "F."

If you drop a class or withdraw from the college before the official drop/withdrawal deadline, you will receive a "W" (Withdraw) in each class dropped.

**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 six 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 six 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](https://www1.dcccd.edu/coursedrops)

**Drop Date – April 16th, 2015**

Repeating this Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional
Course tuition to students registering the third or subsequent time for a course. This class may not be
repeated for the third or subsequent time without paying the additional tuition. Third attempts
include courses taken at any of the Dallas County Community Colleges since the Fall 2002
semester. More information is available at:
https://www1.dcccd.edu/catalog/ss/oep/third_attempt.cfm.

Financial Aid 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 after the drop date are also subject to this policy.

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

Counseling Services Counseling services for personal issues are provided to all students currently enrolled at North
Lake College at NO CHARGE. These services are provided by or supervised by licensed
professionals who are bound by confidentiality (within ethical parameters). 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 go to A 311.

For additional information go to:
http://northlakecollege.edu/services-and-resources/health-and-wellness/counseling-
services/Pages/default.aspx

CLASSROOM POLICIES
E-Mail Policy Email: mdempsey@dcccd.edu
hawaii@dcccd.edu for information regarding the Hawaiian Field Studies (see below)
Skype: available upon request

You can expect a 24hr turn around for your email during the business week (assuming I am not
also experiencing a technical difficulty).
You can expect a 48hr turn around on the weekends, again technology permitting.
If you do not hear back from me in a timely manner, please call 972-273-3279 (my office
phone), perhaps the internet is broken.

Please, as with all communications in class, keep it classy and respectful.

Discussion Board responses, emails, and all other correspondence among faculty and students
enrolled in this class are expected to conform to the level of conduct that would be expected in
a regular classroom. Students should feel free to express disagreement with the instructor and
other students but it must be done in a manner which is not verbally abusive, threatening, or
harassing. Communication among students is encouraged but must end if one of the parties
requests that it be terminated.

Students will not send unsolicited email espousing a cause, religion, or activity to other class
participants and will not add other class participants to any listserves or other entity which
distributes unwanted email or material.

Violation of these guidelines may result in disciplinary action against the offending student. This action can include termination of the student's participation in the class and a grade of F.

I will be taking the class, the gradebook, and all material down Friday morning of finals week. This means if you wish to have access to your grades, your assignments, your journals etc… you must preserve this before that before I take the class off-line. Your final grade calculation will be done that weekend and posted to econnect.dcccd.edu (NOT ECAMPUS) in a timely manner.

Science Learning Center

The Science Learning Center provides student services in the following subjects (majors and non-majors): Biology, Botany, Microbiology, Anatomy and Physiology, Chemistry, Organic Chemistry, Geology, Physics, Nutrition and Ecology.

The center is located in P-333, P-334 and P-340; offering 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 the front of the SLC.

When students attend SLC we ask that they sign in and out. These data help us keep the center stocked, running, and most of all, free of charge!

Hours of operation:
Spring/Fall semester: M - R 9 am to 7 pm, F & Sa 9 am – 3 pm
Maymester and Wintermester: M – R 2 pm – 6 pm
Summer I & II: M – R 2 pm – 7 pm

Contact information
Center Phone: 972-273-3273
Coordinator: Tara Arrington

Hawaiian Field Studies
If you are interested in taking science to the next level, hands-on, join me and the rest of the Hawaiian Field Studies crew this summer. Program basic information is as follows.

The Hawaiian Islands are a paradise rich with magnificent hotels, sandy beaches, brilliant sunsets and some of the best recreational and relaxation spots on earth. Beyond the tourist attractions, though sometimes one and the same, lies a natural wonder of botanical rarities, explosive geological features and themes of evolution, adaptation, conservation and extinction. Born from the sea floor in a continuous chain of volcanoes, the Hawaiian Islands exist today as a window into biological and geological processes that tell the story of life on earth.

Join us in the Hawaiian islands with the opportunity to study in this unique environment and earn 16 college credit hours!

Mahalo nui loa (thank you)

**Proposed 2015 Program Information**

**COMING SOON THIS TRIP IS STILL IN THE DISTRICT APPROVAL PROCESS**

**BASIC INFORMATION**
16 College Credit Hours
3 Islands (Oahu or Maui, Hawaii & Kauai)
Travel Dates for '15
6/15 - 6/29 (Updated as of 8/25/2014)*

**PERKS (Besides 16 credit hours and two weeks in Hawaii)**
4hrs of the Green Diploma – Society
8hrs of the Green Diploma – Environment
Service Learning Certificates
Use of a North Lake SLR Digital Camera prior to an during the field studies.

**STEPS TO JOIN**
1. E-mail the program to be added to the list hawaii@dcccd.edu
2. Submit a $500 deposit (check, mail, or credit card) Deposit is refundable until classes begin in March.

**PRE-TRIP CLASSES**
TBA - Likely 10 ranging from March to June, all on the weekends.*

**PAYMENT INFORMATION***

*All fees due by April 1, 2015.
Student Fee $TBD, Approximately $500 Deposit + $1400 Balance
Airline Package - $900 to $1100* & Airline to and from HNL – Rates vary
Tuition - $832* for in county residents. (Out of county may be eligible for in-district rates)
For complete fee explanations, due dates and up to date information, email or call.

COURSES
BIOL 1411 4hrs - Intro Botany - Dempsey
BIOL 2406 4hrs - Environmental Bio - Dempsey
GEOL 1401 3hrs - Earth Science - Kubicek
ARTS 2356 - Digital Photography - Jenkins
PHED 1123 - Walking for Fitness - Joutras
Total - 16 Credit Hours*.
*Students must enroll in all courses to participate in the program.

Accepting deposits now, until the trip fills. After filling the first three vans, a waiting list will be established and new students added six at a time. 24 Students MAX.

Contact Information
E-Mail: hawaii@dcccd.edu
Phone: 972-273-3279
Twitter: @nlchfs
Facebook: aloha Dempsey
Instagram: nlchfs

*Subject to change. The approximate amount for the trip should run approximately $3,900. Please note that only the student fee deposit and tuition are refundable (up until the first day of class). All other fees are NOT refundable. More detailed information will be added as it becomes available.

Also note that this program is subject to cancellation if enrollment does not meet a specific quota or other circumstances arise.

Green Diploma
Course

Think Green!

Green Diploma
The green diploma is a graduation distinction awarded for the successful completion of designated “green” courses. The curriculum for green courses includes assignments and teaching methodology focused on the triple bottom line of society, economy, and environment. Faculty members pledge to go paperless and reduce each course’s environmental impact. Students who earn the Green Diploma wear a green cord at graduation to recognize their achievement.
Requirements for earning the Green Diploma

- 15 college credit hours of "green" coursework
- grade average of "C" or better
- at least one class from each category of sustainability: environmental, economic, social

"Green" courses are offered in a variety of programs, and course availability varies by semester. View the complete green catalog (PDF).

This course satisfies four hours of the green diploma in the credit of sustainable environment.