Biology II
Biology 1407
Department of Life Sciences
Spring 2020

A. COURSE INFORMATION

Course number/section: BIOL 1407.002
Class meeting time: MWF 12:00-12:50 (Lab: must attend assigned labs)
Class location: Lecture: Bay Hall (BH) 104
Labs for all the above sections meet in Tidal Hall 307
Course Website: (Island Online/Blackboard Portal): https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Cherie McCollough, PhD
Professor and Chair, Department of Life Sciences
Office location: Tidal Hall 309C
Office hours: MTWRF 1-2
Telephone: (361) 825-3166
e-mail: Cherie.McCollough@tamucc.edu
Appointments: A student may make an appointment to see me at times other than the scheduled office hours. I am available for consultation and extra help, but it is the student’s responsibility to request such help. I am frequently called out of my office during office hours for committee and other meetings. If I am away, please send me an email and we can get together.

C. COURSE DESCRIPTION

Catalog Course Description
This course is an overview of the major concepts in biological diversity and plant and animal biology. Laboratory work will include individual/team activities as well as technology-related assignments. This course counts toward the natural science component of the University Core Curriculum.

Extended Course Description
Even if you never have a position in a biology-related field, this course and your experience at TAMUCC will be beneficial to you. This course covers many topics that have a biological basis that are important issues in our society and gives you the skills to follow the debate about these issues and make an informed choice on these issues. This course provides you with the basic skills required to do well in other biology courses that you will take as part of your degree plan. Specifically, we will cover fundamental concepts regarding population divergence and speciation, evolutionary
relationships among the major limbs of the ‘tree of life’, biodiversity, physiological adaptations to deal with different environmental conditions, and global patterns of ecology and conservation.

D. PREREQUISITES AND COREQUISITES

Prerequisites: Biology I (BIOL 1406).
Corequisites: none.

Students in BIOL 1407 are expected to register for Laboratory Safety Seminar – SMTE 0091. Students must complete this web-based course during the first week of the semester to be allowed to enter and attend laboratory. THERE ARE NO EXCEPTIONS TO THIS RULE. Please complete ASAP.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Materials:
2. Biology (LoosePgs)(w/Connect Access)(CUSTOM)(TAMU); Edition: 12th; ISBN: 9781260932720; Author Raven; Publisher: MCGRAW-HILL CREATE (CUSTOM PUBLISHING)

Laboratory Manual for Biology 1407, Fall Spring 2018. The lab manual will be available on Blackboard. You do NOT have to purchase a lab manual at the bookstore.

INTERNET AND WEBSITE REQUIREMENTS:
This course requires the use of the internet (Islander TAMU-CC email account, listserv, and worldwide web) to foster the technological abilities of the student. All students are expected to subscribe to and utilize the course Blackboard account regularly.

OPTIONAL Website:
Supplies and Other Requirements:
• Note taking supplies are required for class.
• Students must bring their school ID (Sanddollar card) to exams.
• Access to BlackBoard will be required.
• See separate Lab Syllabus regarding laboratory.
• All students are required to have a lab coat when entering the labs for any reason. In addition, to the lab coat, students must be wearing long pants and closed-toe, close-heel shoes to enter the labs at any time.
F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

SLO 1. Describe the major factors driving evolution in populations and support this with evidence from nature/literature

SLO 2. Summarize the diversity across major lineages of the ‘tree of life’

SLO 3. Formulate hypotheses regarding how different organisms may have evolved to take advantage of environmental conditions while maintaining homeostasis

SLO 4. Generate informed hypotheses regarding evolutionary relationships of species or groups of species based on shared derived characters

SLO 5. Explain to others the importance of biological evolution in shaping the physical world around us and in governing the interactions of living organisms with each other and their environments.

Student’s abilities to complete these tasks will be evaluated through:

1. Four semester exams and a final exam.
2. Homework assigned during semester. Possible (TBD) homework may include: out of class homework, readings, quizzes, group in-class activities or other activities.
3. Laboratory activities (see separate syllabus)

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This course uses a variety of instructional methods and activities in order to facilitate student’s learning, including but not limited to: PowerPoint lectures, labs, group activities, student projects, assigned readings and reflections, research, quizzes, reports, supplemental questions, homework, and review sessions via supplemental
instructor. You will also be completing Transformative Reading Exercises (TREs) in this class.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Your lecture average is worth 75% of the overall BIOL 1407 course grade; your average from lab (based on lab reports, lab quizzes, lab practicals, etc. as stated in lab syllabus) will make up the remaining 25% of the grade.

GRADE COMPUTATION:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Laboratory average (reports, quizzes, assignments, practical, etc.)</td>
<td>25%</td>
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<tr>
<td>Lecture average</td>
<td>75%</td>
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Points from lecture will come from the following:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Exams</td>
<td>4 @ 200 points each</td>
</tr>
<tr>
<td>Comprehensive final exam*</td>
<td>1 at 200 points</td>
</tr>
<tr>
<td>Assignments, quizzes, homework</td>
<td>~300 points</td>
</tr>
<tr>
<td>Total</td>
<td>~1300 points</td>
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Note: subject to change during semester. Instructor will announce any changes in class.

TOTAL LECTURE AVERAGE = % of total available percentage earned.

Letter Grades: Your final letter grade will be based on your average in lecture and lab.

A ≥ 90% > B ≥ 80% > C ≥ 70% > D ≥ 60% > F

• I will correct any clerical, mathematical, and/or other instructor grade errors. However, you have one (1) week to notify me of such errors after an assignment, quiz or examination is returned or the grade will stand.
• I will not change a legitimate course grade just because you “need” it (for financial aid, to get into professional school, etc.). The grading section of this syllabus describes how grades are computed. Please be sure you maintain a high enough average to get the grade you want. You have plenty of help in my class. Take advantage of the resources offered, such as reviews and SI. The reasons for receiving a grade of “I” (incomplete) are clearly defined in the University Catalog; this “grade” cannot be used simply to prevent a student from receiving an unwanted grade in a class.

• I only discuss grades in person in my office (i.e., I do not discuss grades or matters relating to grades over the telephone or by e-mail, before or after class in the room, etc). If you wish to know your final grade before the official grade report is mailed to you, please see me in person or provide me with a self-addressed, stamped envelope.

Examinations: There will be four examinations (200 percentage points each), taking questions for these tests primarily from material covered in the lectures, from handouts and other assignments, and from readings in the textbook and assignments. Examinations may consist of essay, short-answer, compare-contrast, fill-in-the-blank, multiple-choice, matching, making and/or labeling drawings, and/or various types of open ended questions. The first four examinations cover material from one specific section of the course. The final examination is comprehensive (i.e., covers material from the entire course). There are NO MAKE-UP EXAMINATIONS. If you are required to be away during an examination for a University Excused absence (athletics, etc.), you must take the exam EARLY, not after the students have taken the exam. This must be scheduled well before the exam is administered.

During an exam, if you leave an examination room—for any reason—you must turn in your exam and answer sheet and you will not be allowed to resume the examination.

Attend to personal matters (e.g., restroom visits) before the examination.

• Be on time! Anyone arriving after someone has completed an examination and left the room will not be allowed to take that examination.

• Cheating and plagiarism are unacceptable behaviors and will be reported to Student Affairs.

Quizzes: Quizzes may be given at any time, announced or unannounced, at the beginning of class, middle of class, end of class, online, or take-home. These may be fill in the blank, multiple choice, short answer, or essay questions. If you miss a quiz, it will count as a 0. Quizzes, homework, projects, and class assignment grades are combined together for the “assignment” portion grade.

Other Assignments: Other class assignments will be required to be completed and will be used in grade calculations. I do not accept late work, so all assignments must be completed on time.
Assignments will be announced in class and posted on Blackboard.

There will be assignments, homework, and quizzes given in class. These may include pop quizzes, data interpretation, experimental design, seminar attendance, etc. They may be due at the start of the next lecture class, but some assignments may be in-class only and makeups are not possible. You are encouraged to get together and work on them as a group. However, unless specified otherwise, the assignments must be turned in individually and be written in your own words, NOT COPIED. An assignment grade of ZERO will be given if the work is not in your own words.

Laboratory: Laboratory activities will contribute 25% of the final course grade. Please see the separate Lab Syllabus for details of these activities.

All assignments and examination answers must be legible to the Instructor. If I cannot read it, I cannot grade it, so illegible answers and papers will receive a 0.

I. COURSE CONTENT/SCHEDULE

The complete course calendar will be posted on Blackboard. Course schedule follows this document.

Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

The schedule may require adjustments. Additional assignments may or may not be provided at the Instructor’s discretion. Such assignments might include homework, group projects, reading assignments, quizzes, etc. Every attempt will be made to follow the time and evaluation schedules shown here. It is the student’s duty to attend each class and regularly visit BlackBoard to be aware of all assignments, deadlines, and changes to such.

J. COURSE POLICIES

ATTENDANCE POLICIES

You are responsible for the material covered and assignments made in every lecture regardless of whether you attend it. “I came in late and didn’t hear about the assignment,” is never an acceptable excuse. It is always your responsibility to determine what happened in class during your absence.
Attendance is mandatory. Excused absences require contacting the instructor. Students with a university approved scheduled absence (athletics, military duty, etc.) MUST contact the instructor well in advance of a scheduled absence. Documentation for the excused absence MUST be presented.

Family vacations and celebrations of your birthday are worthwhile, but are not classified as excused absences. If you book an airplane flight or non-emergency appointment which conflicts with class, I do NOT consider that to be an excused absence. Routine events should be scheduled to avoid class conflicts. In general, only unavoidable and documented absences are excused (major family illness or accidents, deaths, funerals).

I WILL BE TAKING ATTENDANCE AT EACH CLASS. STUDENTS ARE GIVEN ONE UNEXCUSED ABSENCE PER SEMESTER FOR THIS CLASS. AFTER THAT ABSENCE, THEY WILL RECEIVE A 5% POINT DROP IN THEIR GRADE FOR EACH ADDITIONAL ABSENCE. LEAVING CLASS EARLY/ARRIVING LATE FOR CLASS WILL COUNT AS HALF (½) OF AN ABSENCE.

Unacceptable Excuses: Only unavoidable absences are excused (see above), so you should schedule routine personal events (e.g., vacations, wedding, reunions, non-emergency medical or dental visits, parent-teacher conferences, household or auto repairs) to avoid conflicts with your classes. Oversleeping is never an acceptable excuse. Employment conflicts are not acceptable excuses for absences, tardiness, or leaving class early. Texas waves jury duty for students, so jury duty is not an acceptable excuse. If you arrange to take any test at an alternate time and do not show for that appointment, then you forfeit the opportunity to take the test except at its originally scheduled time.

It is the responsibility of the student to obtain any material missed during an absence from his/her classmates. It is always your responsibility to determine what happened in class or laboratory during your absence. If you are absent, you must obtain any handouts or assignments from me in my office on your own time: I rarely bring assignments to class more than once. You must obtain class notes from other students.

Special circumstances may warrant deviating from these guidelines (including administering a “make-up” examination) and will be referred to the Vice President of Student Affairs. This also applies to any situations for which you cannot provide an acceptable excuse as outlined above.

Late Work and Make-up Exams
Quizzes, assignments, and points missed because of an unexcused absence (including tardiness and leaving early) cannot be recovered. An excused absence
(with documentation) allows me to make alternative arrangements for completing SOME assignments. The documentation required for an absence to be excused must be:

- from an appropriate source (e.g., doctor, dentist, funeral director) who states the nature of the event that caused (or will cause) your absence.
- in writing, on official stationary, and signed. (I do not return excuses to you.) Telephone calls, FAXes, and e-mails are not acceptable.
- presented prior to the absence for a scheduled event (e.g., university sponsored activity, recognized religious holiday, military service).
- presented no more than one week after the date of an unexpected absence.

**Late Work and Make-up Exams**

If you know you will be out, you may always turn in assignments early. Except for excused absences, late assignments will not be accepted. If you know in advance that you will have an excused absence when an assignment is due, you must turn in that assignment before its due date. You should turn in assignments that were missed because of an unexpected, excused absence as soon as possible.

For some scheduled events (athletics, military duty, etc.), you may arrange to take a lecture examination before (not after) its scheduled date. (You should take a test as close to its originally scheduled time as possible, but you may not take a test more than one week before its originally scheduled time. You must obtain your instructor's approval at least one week before you wish to take the test). If you arrange to take any test at an alternate time and do not show for that appointment, then you forfeit the opportunity to take the test except at its originally scheduled time. Students who do not arrange to take examinations in advance will not be eligible for this special consideration. A written excuse from the university department involved or from the Office of Student Engagement and Success is required.

In general, there are NO individual make-up examinations.

**Extra Credit**

I do occasionally offer extra credit points, but these are rare.

**Cell Phone Use**

Cell/smart phones and computers: Use of devices that can connect to the internet will not be allowed during the individual or group portion of team learning assignments. If a student is found to be using a cell phone, smart phone, or computer the device will be taken and put on the desk up front so the student can pick up their device after class. Cellular phones, pagers, and other “beepers” must be silenced BEFORE you enter the classroom. Cell phone should NOT be used during lecture – refrain from using these devices. If you MUST, please remove yourself from the room.
Laptop Use
Since you will have copies of the powerpoint we are covering each day, laptops are not needed in class, and should not be open during class. You will be engaged in learning biology – Facebook, email and other diversions are not conducive to learning.

Food in Class – NOT PERMISSABLE
Please respect other students and DO NOT EAT food in the class. As you will hear, you are surrounded by viruses and bacteria and don’t want to contaminate yourself by eating. Eat either before or after class. NO EXCEPTIONS.

Participation
All students are expected to attend the full class and lab periods, complete all learning assignments, complete reading assignments fully and carefully, turn assignments in on time, and to participate in class discussions.

K. COLLEGE AND UNIVERSITY POLICIES
• Academic Integrity (University)
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

• Classroom/Professional Behavior
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

• Statement of Civility
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience
that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.
If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

http://disabilityservices.tamucc.edu/

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

A. **OTHER INFORMATION**

- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>CHAPTER</th>
<th>ASSIGNMENT DUE</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>22-Jan</td>
<td>Course Intro, Syllabus, Protocols, Studying for this course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24-Jan</td>
<td>Genes within Populations</td>
<td>20</td>
<td></td>
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<tr>
<td>2</td>
<td>Jan 27-31</td>
<td>Evidence for Evolution (2) /Origin of Species (1)</td>
<td>21, 22</td>
<td></td>
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<td>3</td>
<td>Feb 3-7</td>
<td>Systematics, phylogenies, and Comparative Biology (2)/Genome Evolution (1)</td>
<td>23, 24</td>
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<td>4</td>
<td>Feb 10-14</td>
<td>Origin and Diversity of Life/Viruses/Prokaryotics/Protists</td>
<td>25, 26</td>
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<td>5</td>
<td>Feb 17-21</td>
<td>Exam I: Monday-Chaps 20-26 (1)/Prokaryotes&amp; Protists/Phylum March</td>
<td>27, 28</td>
<td></td>
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<tr>
<td>6</td>
<td>Feb 24-28</td>
<td>Behavioral Biology (1); Ecology of Individuals and Populations (2); Lords of Nature assignment</td>
<td>53, 54</td>
<td></td>
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<td>7</td>
<td>March 2-6</td>
<td>Community Ecology (1); Dynamics of Ecosystems (1); No class Friday (at home assignment - Chasing Corals)</td>
<td>55, 56</td>
<td>Lords of Nature Assignment Due at beginning of class, no late papers accepted</td>
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<td>8</td>
<td>March 16-20</td>
<td>The Biosphere and Human Impacts (2); Conservation Biology (1)</td>
<td>57, 58</td>
<td>Chasing Corals TRE due March 18 at beginning of class</td>
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<td>9</td>
<td>March 23-27</td>
<td>Plant Form, Transport in Plants; Exam II on Fri (Chpts.27, 28, Phylum, 53, 54, 55, 56, 57, 58)</td>
<td>35, 36</td>
<td></td>
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<tr>
<td>10</td>
<td>March 30-April 3</td>
<td>Animal Body/Nervous System</td>
<td>41, 42</td>
<td>Diversity of Life TRE DUE April 1st at beginning of class - no late papers accepted</td>
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<td>11</td>
<td>April 6-10</td>
<td>Respiratory System/Circulatory System/ review</td>
<td>47, 48</td>
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<tr>
<td>12</td>
<td>April 13-17</td>
<td>Exam III Monday, Chpts 35, 36, 37, 38, 41, 42/Racing Extinction Part I and Part II (Mandatory attendance)</td>
<td>no new chapters</td>
<td></td>
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<tr>
<td>13</td>
<td>April 20-24</td>
<td>Animal Development; Seedless Plants; Seed Plants</td>
<td>52, 29, 30</td>
<td>Racing Extinction TRE due at beginning of class - NO LATE PAPERS ACCEPTED</td>
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<tr>
<td>13</td>
<td>April 27-May 1</td>
<td>Fungi/Viruses/Review</td>
<td>31, 26</td>
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<td>4-May</td>
<td>Exam IV: Ch 47, 48, 52, 29, 30, 31, 26,</td>
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<td>6-May</td>
<td>Last Class day - Mandatory Attendance: Final Exam announcement; closure (do not miss class)</td>
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<tr>
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<td>Final Exam 8:30-10:00 Monday May 7th</td>
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