Introduction to Environmental Science ESCI 1401
Department of Physical and Environmental Sciences
Fall 2020

A. COURSE INFORMATION

Course number/section: ESCI 1401.001 (CRN 51434)
Class meeting time: Asynchronous Online (no regular meeting time)
Lab meeting time: Lab meets once weekly as follows:
ESCI 1401.101 M 09:00-10:50 am
ESCI 1401.103 M 01:00-2:55 pm
ESCI 1401.104 M 03:00-4:55 pm
ESCI 1401.106 T 02:00-3:50 pm
ESCI 1401.108 W 11:00 am-12:50 pm
ESCI 1401.W31 W 01:00-2:50 pm (Learning Community 21GE)
ESCI 1401.110 W 03:00-4:55 pm
ESCI 1401.W31 R 09:00-10:50 am (Learning Community 21ES)

Class / Lab location: Lecture online; all labs in CI 214
Course Website: http://bb9.tamucc.edu (lecture and labs have separate websites)

B. INSTRUCTOR INFORMATION

Instructor: Dr. John S. Wood
Office location: CS 130A
Office hours: By appointment
Telephone: (o) 361-825-4185 or (c) 361-548-2528
E-mail: john.wood@tamucc.edu
Appointments: Contact via email or phone to schedule an appointment by WebEx.
Lab instructors: Graduate Teaching Assistants and Adjuncts serve as lab instructors;
their contact information will be posted via Blackboard on the lab website.

C. COURSE DESCRIPTION

Catalog Course Description
ESCI 1401 - Environmental Science I: Intro to Environmental Science. 4 sem. hrs. (3:2)
TCCNS Equivalent: ENVR 1401. Principles of the scientific method and critical thinking
provide a foundation for subsequent consideration of environmental issues through a
multidisciplinary approach. Laboratory exercises and local field experiences reinforce
concepts introduced in the lectures. This course counts toward the natural science component
of the University Core Curriculum. Safety training given during a laboratory meeting early in
the semester is required for continued participation in this course. Fall, Spring.

Extended Course Description
Principles of the scientific method and critical thinking provide a foundation for subsequent
consideration of environmental issues through a multidisciplinary approach. Laboratories
exercises and local field experiences reinforce concepts introduced in the lectures. This
course counts toward the natural science component of the University Core Curriculum.

Topics include environmental systems, species relationships, communities, human
populations, biomes and biodiversity, environmental conservation, food and agriculture,
environmental health and toxicology, climate, air pollution, water resources, environmental
geology and earth resources, energy, solid and hazardous waste, economics and urbanization, environmental policy and sustainability, and how individuals may promote environmental sustainability through conscious lifestyle and career choices.

D. PREREQUISITES AND COREQUISITES

Prerequisite/ Corequisite course required – SMTE 0096 Environmental Science Lab Safety Seminar

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES


Optional Textbook(s) or Other References: None.

Supplies: (Lecture) Reliable laptop or other computing device needed, as this is an online course. (Lab) Calculator and camera useful for many labs (most cell phones have both).

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:

1. Recognize, describe and quantitatively evaluate the natural world and the interactions between physical and biological processes;
2. Understand the role humans play in shaping the physical and biological environment;
3. Acquire a scientific vocabulary and critical thinking skills related to environmental science;
4. Gain hands-on experience in measuring and observing various aspects of the environment.
5. Present data in a scientific format and evaluate and discuss the data scientifically

G. INSTRUCTIONAL METHODS AND ACTIVITIES

The following instructional methods and activities will be used for lecture: PowerPoint slide shows, online quizzes, Blackboard discussion board forums, and online lecture exams. Lab instructional methods will include lab investigations, lab PowerPoints, Blackboard discussion board forums, and online lab quizzes. For lecture, you are expected to read the textbook
chapters on your own. PowerPoint presentations will highlight major points, but not all chapter details. After reading each chapter, review the PowerPoint posted to Blackboard.

Online Lecture Quizzes made available through Blackboard for most chapters and topics. They will test your understanding of the major chapter concepts and help you prepare for each Lecture Exam. Lecture exams will cover content from each chapter and from the Exercises.

Several extra credit assignments will be issued throughout the course and are an opportunity to earn additional points towards the course total.

Weekly labs will expose students to diverse lab and field equipment and techniques for data collection and analysis.

**H. MAJOR COURSE REQUIREMENTS AND GRADING**

The student learning outcomes described in Section F will be measured through the assignments listed below. Lecture activities are worth 60% and lab activities are worth 40% of the course grade. Limited extra credit opportunities will be made available.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>POINTS</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Lecture exams (120 points each)</td>
<td>360</td>
<td>36%</td>
</tr>
<tr>
<td>Lecture Chapter Quizzes</td>
<td>140 pts</td>
<td>14%</td>
</tr>
<tr>
<td>Green Campus Team Project</td>
<td>100 pts</td>
<td>10%</td>
</tr>
<tr>
<td>Lab Quizzes</td>
<td>50</td>
<td>5%</td>
</tr>
<tr>
<td>Lab Submissions (Short Lab Write-Ups, Formal Lab Reports, Lab Presentations)</td>
<td>350 pts</td>
<td>35%</td>
</tr>
</tbody>
</table>

| 1000 pts                                      | 100%     |

**I. COURSE CONTENT/SCHEDULE**

**LECTURE AND LAB SCHEDULE**

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>LECTURE TOPIC</th>
<th>TEXTBOOK CHAPTER</th>
<th>LAB ACTIVITY</th>
</tr>
</thead>
</table>
| 1    | 8/19-8/21| **W. 8/19 Classes begin**  
                      Course Introduction. Understanding Our Environment | Chapter 1         | NO LABS THIS WEEK.  
Complete SMTE 0096 Lab Safety Training online (Blackboard) |
| 2    | 8/24-8/28| Environmental Systems: Matter, Energy and Life  
**R. 8/26 Last day to late-register or add a class** | Chapter 2         | Lab 1: Scientific Method                             |
<p>| 3    | 8/31-9/04| Evolution, Species Interactions, and Biological Communities.                  | Chapter 3         | Lab 2: Our Ecological Footprint                      |</p>
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>LECTURE TOPIC</th>
<th>TEXTBOOK CHAPTER</th>
<th>LAB ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>9/08-9/11</td>
<td><strong>M. 9/07 Labor Day - TAMUCC Closed</strong> Human Populations.</td>
<td>Chapter 4</td>
<td>NO LABS THIS WEEK</td>
</tr>
<tr>
<td>5</td>
<td>9/14-9/18</td>
<td>Biomes and Biodiversity</td>
<td>Chapter 5</td>
<td>Lab 3: Species Diversity</td>
</tr>
<tr>
<td>7</td>
<td>9/28-10/02</td>
<td>Food and Agriculture Environmental Health and Toxicology</td>
<td>Chapter 7</td>
<td>Lab 5: Vegetation Studies I: Quadrat Procedure</td>
</tr>
<tr>
<td>8</td>
<td>10/05-10/09</td>
<td>Climate</td>
<td>Chapter 9</td>
<td>Lab 6: Vegetation Studies II: Line-Point Intercept Procedure</td>
</tr>
<tr>
<td>9</td>
<td>10/12-10/16</td>
<td>Air Pollution</td>
<td>Chapter 10</td>
<td>Lab 6: Vegetation Studies II: Line-Point Intercept Procedure</td>
</tr>
<tr>
<td>10</td>
<td>10/19-10/23</td>
<td><strong>Lecture Exam 2 (Ch. 6-10)</strong> Take M. 10/19-T 10/20. Water: Resources and Pollution</td>
<td>Chapter 11</td>
<td>Lab 7: Toxicity Testing: Brine Shrimp</td>
</tr>
<tr>
<td>11</td>
<td>10/26-10/30</td>
<td>Environmental Geology and Earth Resources</td>
<td>Chapter 12</td>
<td>Lab 8: Water Quality Studies</td>
</tr>
<tr>
<td>12</td>
<td>11/02-11/06</td>
<td><strong>R. 11/05 Last Day to Drop a Class</strong></td>
<td>Chapter 13</td>
<td>Lab 9 cont’d.: EIA: Field Measurements</td>
</tr>
<tr>
<td>13</td>
<td>11/09-11/13</td>
<td>Solid and Hazardous Waste Green Campus Team Project Online Poster Fair</td>
<td>Chapter 14</td>
<td>Lab 9 cont’d.: EIA: Presentations</td>
</tr>
<tr>
<td>14</td>
<td>11/16-11/20</td>
<td>Economics and Urbanization</td>
<td>Chapter 15</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>11/23-11/24</td>
<td>Environmental Policy and Sustainability T. 11/24 Last Class Day Thanksgiving Break</td>
<td>Chapter 16</td>
<td>NO LABS THIS WEEK (Thanksgiving Break 11/26-11/27)</td>
</tr>
<tr>
<td>16</td>
<td>12/1 – 12/07</td>
<td><strong>Lecture Exam 3 (Ch. 11-16). Details to be announced</strong></td>
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**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. Students are expected to read the chapters and be able to discuss in class.
J. COURSE POLICIES

COVID-19
Face Coverings - (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Extra masks will be made available if needed.

Attendance/Tardiness
Even though the lecture part of this course is online without a regular class meeting time, regular course participation is critical. Log in to Blackboard regularly to check on course announcements, new quizzes and exercises, etc. The grade you will receive for this course is based on your performance on exams, quizzes, and other assignments. Missing any of these opportunities to collect points towards your point total will affect your grade.

Be sure that you access your Islander email, as announcements should show up there as well.

Late Work and Make-up Exams
Work is due by the stated deadlines. The grade for unexcused late work will be reduced by 10% for each day it is late. Exams may be taken late only in cases of unforeseen emergency or prior arrangement with the instructor.

Lab Attendance and Missed Labs
Lab attendance is mandatory. If you don’t come to the lab, you cannot collect data for lab reports or participate in lab exercises. If you must miss your own lab section in any week, plan to attend another lab section in that same week to make up the missed work. But, you may attend a specific lab section only if there is capacity in the lab room to accommodate you. Inform your own lab instructor and the lab instructor for the section you are visiting, by emailing ahead of time if possible. If you have an excused absence but could not attend another lab section that week, email your lab instructor as soon as possible to discuss the matter. There are no opportunities to make up a missed lab activity after the week has passed.

Extra Credit
You have various opportunities to earn extra credit points. These opportunities will be assigned and announced throughout the course.

Cell Phone Use
There are no policies on cell phone use.

Laptop Use
It is recommended that you have access to a laptop or desktop PC with Word to access course materials, download and digitally complete exercises, etc. All work submitted to Blackboard must be in Word or PDF format.

Food in Class
Absolutely no food or drink allowed in the lab room.

Missed Exam
Online exams are scheduled to be taken during a period of several days to allow students greatest flexibility. Online exams may be taken any time up to a stated deadline. Students who must miss an exam or quiz should contact the instructor as soon as possible about the situation.

Participation
Students are expected to actively participate in this class by keeping up with course materials and completing all assignments on time. Generally, students who proactively
keep up with course material are able to learn the material more effectively and earn a higher grade in this class.

**Missed Exam or Quiz**
Online exams and quizzes may be taken during a stated period to allow students flexibility in completing them, and students are expected to adhere to the deadlines. A student who misses an exam or quiz deadline should contact the instructor as soon as possible about the situation.

Any student with three or more final examinations scheduled on the same day may request to take one of the examinations on another day during the final examination period. The time sensitive process is described below the Final Exam Schedule found at: [http://registrar.tamucc.edu/Register%20for%20Classes/Final_Exams.html](http://registrar.tamucc.edu/Register%20for%20Classes/Final_Exams.html)

**Others**

**Lab COVID Lab Safety Plan**

1. No more than 12 students will be allowed in the CI 214 lab room at a time. ESCI 1401 Lab sections have up to 20 students enrolled and are assigned to meet weekly. Students will be informed at the beginning of the semester via Blackboard whether they will attend the first hour, or the second hour, of that weekly lab period. No more than 10 students will be assigned to attend either hour of a weekly lab period.

2. During the semester, students may make up a missed lab hour by attending another lab hour but only if the total number of students in the lab room can remain at or below 12.

3. Students will be expected to review and complete Pre-lab and Post-lab materials (made available via Blackboard) prior to and after each lab meeting. The assigned lab meeting time will be primarily to conduct the hands-on lab activity.

4. Plexiglass dividers will be installed between facing seats at lab tables inside the lab room. Only 6 seats will be at each table (50% capacity; normal seating is 12 seats). A plexiglass divider will be installed at the lecturer's front table.

5. Equipment and desk surfaces will be disinfected prior to and after each lab hour by the TA and student participants.

6. Students will have their temperatures checked prior to entering the lab room at the beginning of each lab hour. Each student must wear a mask covering the nose and mouth during the lab time, whether the lab activity takes place indoors or outside. Students choosing to wear a face shield must still wear a face mask. Students are expected to socially-distance as much as possible. Students are expected to provide their own face masks.

7. Students will be encouraged to wash their hands before and after the lab period, and to sanitize their hands with hand sanitizer, which will be provided in the lab room.

8. Most lab activities will be conducted outdoors.

**Lab Attire:** Face masks and closed-toed shoes are required in the lab. Students not wearing both will not be allowed in the lab. Other attire may be required for specific lab activities. Many labs are conducted outside, rain or shine (except in rare occasions such as hurricanes). Wear weather-appropriate clothes, as well as sunscreen and/or bug spray. Check the announcements posted to Blackboard each week for information on the weekly lab activity and appropriate attire.
Lab Manual: The lab manual is posted online to the Blackboard website for your lab section. Read the lab procedures before lab and come to lab prepared: Print out and bring the data sheets from the lab manual to your lab meeting each week; none will be provided for you.

Lab Instructors: Graduate Teaching Assistants (TAs) and Adjuncts serve as lab instructors and are directly responsible for managing each lab section, delivering lab instruction, and grading lab assignments. Direct any questions about the lab or lab assignments to your lab instructor. Contact information for lab instructors will be posted via Blackboard on the lab website.

Plagiarism. Penalties for plagiarism are discussed in the TAMUCC Academic Integrity/Plagiarism policy and apply to both lecture and lab assignments. The lab experiments and surveys are conducted in groups, and sharing data is allowed, but each student must write an individual, unique lab report, in his or her own words. Two or more students cannot submit a shared lab report. Students cannot copy any text, figures, tables, or graphs or other parts of a lab report from others and submit it as their own or it will be considered plagiarism.

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. 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.C0.03, 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 required 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.C0.03, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf. 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 http://disabilityservices.tamucc.edu/

- **Civil Rights Complaints**
  Texas A&M University-Corpus Christi is committed to fostering a culture of caring and respect that is free from discrimination, relationship violence and sexual misconduct, and ensuring that all affected students have access to services. For information on reporting Civil Rights complaints, options and support resources (including pregnancy support accommodations) or university policies and procedures, please contact the University Title IX Coordinator, Sam Ramirez (Samuel.ramirez@tamucc.edu) or Deputy Title IX Coordinator, Rosie Ruiz (Rosie.Ruiz@tamucc.edu) x5826, or visit website at Title IX/Sexual Assault/Pregnancy.

- **Limits to Confidentiality.**
  Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, are not able to maintain confidentiality when it conflicts with their responsibility to report alleged or suspected civil rights discrimination that is observed by or made known to an employee in the course and scope of their employment. As the instructor, I must report allegations of civil rights discrimination, including sexual assault, relationship violence, stalking, or sexual harassment to the Title IX Coordinator if you share it with me.

  These reports will trigger contact with you from the Civil Rights/Title IX Compliance office who will inform you of your options and resources regarding the incident that you have shared. If you would like to talk about these incidents in a confidential setting, you are encouraged to make an appointment with counselors in the University Counseling Center.

- **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.

L. 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.