

Environmental Sampling and Analysis (EPCT 1444, Section XXX)

Fall/Spring/Summer Semester Year (Course Days & Times Here)

Credit Hours: 4

Classroom Contact Hours per week: 4

Instructor

Name

Austin Community College

Phone: (512) XXX-XXXX

E-mail:

Office Hours:

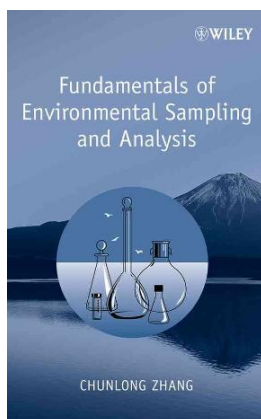
Textbook

Fundamentals of Environmental Sampling and Analysis

Edition

Chunlong Zhang 2007

Wiley



Class Format & Materials Needed

This course is a face-to-face format. This course includes both classroom and field activities. Classroom activities will include lecture, in-class, and laboratory exercises. Outdoor activities will include field trips to off-campus locations. Note the possibility exists that some field activities may be scheduled on weekends.

Course Description

Student will learn various sampling protocol, procedures, quality control, preservation and field study of surface and ground water. The emphasis is on analysis commonly performed by the field technician, especially on natural waters. Laboratory exercises will involve monitoring and sampling water wells and nearby lakes and creeks. Field trips will be required

Prerequisites

Course prerequisites include ACC requirements of reading, writing and math proficiency as demonstrated by The Texas Success Initiative, or proof of exemption or waiver.

Transferability of workforce courses varies. Students interested in transferring courses to another college should speak with their Area of Study (AoS) advisor, Department Chair, and/or Program Director.

Program Learning Outcomes

PSLO 3 - Ecological Systems - Recognizing and defining terms and concepts related to the biosphere and ecosystems.

PSLO 4 - Data Collection - Use standard environmental monitoring instrumentation/equipment and techniques to accurately record, compile, and analyze data taken in the field and the laboratory and preparing reports on the analyses.

STUDENT LEARNING OUTCOMES

Students will demonstrate how to select monitoring equipment; calibrate instruments for sampling and field analysis; identify preservation procedures; demonstrate representative sampling methods; and prepare and evaluate documentation associated with sampling and field analysis.

Specific student learning outcomes are listed first in each online module.

Class schedule

Course Schedule

Module	Class Schedule	Lab Schedule	Dates
1	Course Overview & Chapter 1 Environmental Profession PPT Health and the Environment PPT	No Laboratory	Week 1 Aug 23 & 25
1	Chapter 2.1.1 Airborne Hazards Prt 1 Airborne Hazards Prt 2	Lab 1 Measurements and Units	Week 2 Aug 30 & Sept 1
2	Airborne Hazards Prt 3 Chapter 2.1.3, and 2.2	Lab 2 Statistics	Week 3 Sept 6-8
3	Air Sampling for Hazardous Agents Chapter 3	Lab 3 Preparing to sample	Week 4 Sept 13-15

4	Toxicology Refresher	Lab 4 Organic Vapors IH Reports	Week 5 Sept 20-22
	Exam 1 Opens Sept 24 and closes September 27 (midnight) exam is online Chapters 1-3		Due Sept 27
	Laboratory Reports 1-4 due Sept 29		Due Sept 29
5	Exposure Standards	Lab Calculating Exposure TWA, Ceiling, and STEL	Week 7 October 4-6
6	Radiation Monitoring	Lab 5 Calculating Radiation Dose and Risk	Week 8 October 11-13
6	Lab 7 Calculating Radiation Dose and Risk	Lab 6 Using Geiger Counters	Week 9 October 18-20
7	Occupational Exposure Monitoring	Lab 7 Noise Survey Noise Map	Week 14-16 October 25-27
	Exam 2 Opens October 29 and closes November 1 (midnight) exam is online Chapters Chapter 4 and Radiation		Due November 1
	Laboratory Reports 5-8 Due		Due November 3
7	Occupational Exposure Monitoring Noise	Lab 8 Noise Dosimetry Noise Reports	Nov 8-10
8	Environmental Sampling Techniques Chapter 2.12, 2.3 Chapter 4	Lab 9 Stream Flow Measurement. Lab 10 Water Quality Sampling DO, Salinity Lab	Nov 15-17
8	Environmental Sampling Techniques	11 Water Quality Sampling Ammonia, Nitrate, Nitrites, pH	Nov 22-24
8	Environmental Sampling Techniques Chapter 4.2	Lab 12 Total Suspended Solids	Nov 29- Dec1
9	Mold Sampling and Unknowns	Lab TBD	Dec 6

	Exam 3 Opens December 8 and closes December 10 exam is online covering occupational exposure	May 7
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NOTE: This schedule is subject to change during the semester. Topics and tests may not correspond to the above dates. You will be notified at least a week in advance of each exam.

GRADING POLICY

Grades for the course will be based on the following:

Grade Component

Component	Possible Points
3 Tests	300 points (100 points each)
12 Lab Assignments	300 points (12 points each)

Course Grade

This is how your course grade will be determined:

Course Grade Calculation

Grade	A	B	C	D	F
Percentage	90-100%	89-80%	79-70%	69-60%	59-0%

Monitor your progress.

You can check your grades throughout the course by selecting the **My Grades** link in the menu.

Two exams will be given during the semester,

The course will be graded on a standard grade scale (70- 79% = “C”; 80-89%= “B”, etc.). There will be no large curve at the end of the course to drastically alter averages and “save the day”. Regardless of how convincing the arguments or how much you feel you deserve it, I do not “give” grades not earned. I simply do the math at the end of the semester and what you earned is your final grade.

Exam Structure: Each exam is 27 questions (25 exam questions and 2 extra credits questions). The exams require solving quantitative and qualitative problems and may contain multiple-choice and matching type questions. The tests are timed and generally you will be given 40 minutes to complete exams. Each exam is a standalone measure of how well you have learned the material covered in the designated chapters. When appropriate, and related to the material covered, questions from previous exams may be included on subsequent exams. The final exam is not comprehensive, but the material does build on itself, so do not clear your memory after each exam!

Final Exam: The final exam must be taken to pass the course.

No Makeup Exams: There are no makeup exams – If you miss an exam, your grade will be calculated using the four exams you take (four exams are the minimum number required to pass the class).

Wise Advice: If you are having trouble (more than one exam is below the grade level you are happy with) or have any questions, seek help from me immediately. Don't wait until the last weeks of the semester, or the last test, to become "concerned" - it will do no good.

Keep up with the reading. Read the chapters before the test is posted. Studying for exams: 1). Reread the chapter. 2). Review the bold terms in the chapters as well as all figures: 3). Answer the review questions at the end of each chapter. (Repeat as needed.)

Incompletes: An instructor may award a grade of "I" (Incomplete) if a student is unable to take the final examination or complete an end-of-the-semester assignment, due to extenuating circumstances, such as death of a loved one or illness. A student must request an incomplete in writing with documentation of the circumstances justifying it. The student must complete the examination or assignment by a date set by the instructor. This date shall not be later than the course withdrawal deadline in the subsequent semester.

Students may request an Incomplete from their faculty member if they believe circumstances warrant. The faculty member will determine whether the Incomplete is appropriate to award or not. The following processes must be followed when awarding a student an I grade.

1. Prior to the end of the semester in which the "I" is to be awarded, the student must meet with the instructor to determine the assignments and exams that must be completed prior to the deadline date. This meeting can occur virtually or in person. The instructor should complete the Report of Incomplete Grade form.
2. The faculty member will complete the form, including all requirements to complete the course and the due date, sign (by typing in name) and then email it to the student. The student will then complete his/her section, sign (by typing in name), and return the completed form to the faculty member to complete the agreement. A copy of the fully completed form can then be emailed by the faculty member to the student and the department chair for each grade of Incomplete that the faculty member submits at the end of the semester.
3. The student must complete all remaining work by the date specified on the form above. This date is determined by the instructor in collaboration with the

student, but it may not be later than the final withdrawal deadline in the subsequent long semester.

4. Students will retain access to the course Blackboard page through the subsequent semester in order to submit work and complete the course. Students will be able to log on to Blackboard and have access to the course section materials, assignments, and grades from the course and semester in which the Incomplete was awarded.
5. When the student completes the required work by the Incomplete deadline, the instructor will submit an electronic Grade Change Form to change the student's performance grade from an "I" to the earned grade of A, B, C, D, or F.

If an Incomplete is not resolved by the deadline, the grade automatically converts to an "F." Approval to carry an Incomplete for longer than the following semester or session deadline is not frequently granted."

COURSE POLICIES

Attendance/Class Participation

Regular and timely class participation in discussions and completion of work is expected of all students. If attendance or compliance with other course policies is unsatisfactory, the instructor may withdraw students from the class.

Withdrawal Policy

It is the responsibility of each student to ensure that his or her name is removed from the rolls should they decide to withdraw from the class. The instructor does, however, reserve the right to drop a student should he or she feel it is necessary. If a student decides to withdraw, he or she should also verify that the withdrawal is recorded before the Final Withdrawal Date. **Check the official ACC academic calendar for information on the final withdrawal date.** The student is also strongly encouraged to keep any paperwork in case a problem arises.

Students are responsible for understanding the impact that withdrawal from a course may have on their financial aid, veterans' benefits, and international student status. Per state law, students enrolling for the first time in Fall 2007 or later at any public Texas college or university may not withdraw (receive a "W") from more than six courses during their undergraduate college education. Some exemptions for good cause could allow a student to withdraw from a course without having it count toward this limit. Students are strongly encouraged to meet with an advisor when making decisions about course selection, course loads, and course withdrawals.

Wise Advice: If you are having trouble (more than one exam is below the grade

level you are happy with) or have any questions, seek help from me immediately. Don't wait until the last weeks of the semester, or the last test, to become "concerned" - it will do no good.

Keep up with the reading. Read the chapters before the test is posted.

Studying for exams: 1). Reread the chapter. 2). Review the bold terms in the chapters as well as all figures: 3). Answer the review questions at the end of each chapter. (Repeat as needed.)

COLLEGE POLICIES

Health & Safety Protocols

Operational areas of ACC campuses and centers are fully open and accessible through all public entrances. The college encourages its staff, faculty, and students to be mindful of the well-being of all individuals on campus. If you feel sick, feverish, or unwell, please do not come to campus.

Some important things to remember:

- If you have not done so, ACC encourages all students, faculty, and staff to get vaccinated. COVID-19 vaccines are now widely available throughout the community. Visit www.vaccines.gov/ to find a vaccine location near you.
- Campuses are open to faculty, staff, and students: The college and its departments and offices may invite internal *and* external guests to their events and activities, though access is still restricted for external parties seeking to host activities at ACC. The college's [Appian Health Screening App](#) remains available to everyone who visits campus. This continues to be a good way to check your own health before coming to class or work.
- If you are experiencing COVID-19-related symptoms, please get a COVID-19 test as soon as possible before returning to an ACC facility. Testing is now widely available. To find [testing locations near you, click this link](#).
- If you test positive, please report it on the [ACC self-reporting tool located here](#).
- ACC continues to welcome face masks on campus. Per CDC guidelines, face masks remain a good way to protect yourself from COVID-19.

- The college asks that we all continue to respect the personal space of others. We are encouraging 3 feet of social distancing.
- Please be sure to carry your student, faculty, or staff ID badge at all times while on campus.

Because of the everchanging situation, please go to ACC's Covid website at <https://www.austincc.edu/coronavirus?ref=audiencemenu> for the latest updates and guidance.

Statement on Academic Integrity

Austin Community College values academic integrity in the educational process. Acts of academic dishonesty/misconduct undermine the learning process, present a disadvantage to students who earn credit honestly, and subvert the academic mission of the institution. The potential consequences of fraudulent credentials raise additional concerns for individuals and communities beyond campus who rely on institutions of higher learning to certify students' academic achievements and expect to benefit from the claimed knowledge and skills of their graduates. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, falsifying documents, or the inappropriate use of the college's information technology resources. Further information is available at <https://www.austincc.edu/about-acc/academic-integrity-and-disciplinary-process>

Any course specific policies, expectations, or procedures could be included here.

Student Rights & Responsibilities

Students at ACC have the same rights and protections under the Constitution of the United States. These rights include freedom of speech, peaceful assembly, petition and association. As members of the community, students have the right to express their own views, but must also take responsibility for according the same rights to others and not interfere or disrupt the learning environment. Students are entitled to fair treatment, are expected to act consistently with the values of the college, and obey local, state, and federal laws.

www.austincc.edu/srr

As a student of Austin Community College you are expected to abide by the Student Standards of Conduct.

<https://www.austincc.edu/students/students-rights-and-responsibilities/student-standards-of-conduct>

Senate Bill 212 and Title IX Reporting Requirements

Under Senate Bill 212 (SB 212), the faculty and all College employees are required to report any information concerning incidents of **sexual harassment, sexual assault, dating violence, and stalking** committed by or against an ACC student or employee. Federal Title IX law and College policy also require reporting incidents of **sex- and gender-based discrimination and sexual misconduct**. **This means faculty and non-clinical counseling staff cannot keep confidential information about any such incidents that you share with them.**

If you would like to talk with someone confidentiality, please contact the District Clinical Counseling Team who can connect you with a clinical counselor on any ACC campus: (512) 223-2616, or to schedule online: <https://www.austincc.edu/students/counseling> .

While students are not required to report, they are encouraged to contact the Compliance Office for resources and options: Charlene Buckley, District Title IX Officer, (512) 223-7964; compliance@austincc.edu .

If a student makes a report to a faculty member, the faculty member will contact the District Title IX Officer for follow-up.

Student Complaints

A defined process applies to complaints about an instructor or other college employee. You are encouraged to discuss concerns and complaints with college personnel and should expect a timely and appropriate response. When possible, students should first address their concerns through informal conferences with those immediately involved; formal due process is available when informal resolution cannot be achieved.

Student complaints may include (but are not limited to) issues regarding classroom instruction, college services and offices on the basis of actual or perceived race, color, national origin, religion, age, gender, gender identity, sexual orientation, political affiliation, or disability.

Further information about the complaints process, including the form used to submit complaints, is available at:

<http://www.austincc.edu/students/students-rights-and-responsibilities/student-complaint-procedures>

Statement on Privacy

The Family Educational Rights and Privacy Act (FERPA) protects confidentiality of students' educational records. Grades cannot be provided by faculty over the phone, by e-mail, or to a fellow student.

Class grades should be posted in Blackboard, and this could be mentioned here.

Recording Policy

To ensure compliance with the Family Education Rights and Privacy Act (FERPA), student recording of class lectures or other activities is generally prohibited without the explicit written permission of the instructor and notification of other students enrolled in the class section. Exceptions are made for approved accommodations under the Americans with Disabilities Act.

Recording of lectures and other class activities may be made by faculty to facilitate instruction, especially for classes taught remotely through BlackBoard Collaborate or another platform. Participation in such activities implies consent for the student to be recorded during the instructional activity. Such recordings are intended for educational and academic purposes only.

Safety Statement

Health and safety are of paramount importance in classrooms, laboratories, and field activities. Students are expected to learn and comply with ACC environmental, health and safety procedures and agree to follow ACC safety policies. Emergency Procedures posters and Campus Safety Plans are posted in each classroom and should be reviewed at the beginning of each semester. All incidents (injuries/illness/fire/property damage/near miss) should be immediately reported to the course instructor. Additional information about safety procedures and how to sign up to be notified in case of an emergency can be found at <http://www.austincc.edu/emergency>

Everyone is expected to conduct themselves professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual may be immediately dismissed from the day's activity and will be referred to the Dean of Student Services for disciplinary action.

In the event of disruption of normal classroom activities due to an emergency situation or an outbreak of illness, the format for this course may be modified to enable completion of the course. In that event, students will be provided an addendum to the class syllabus that will supersede the original version.

Campus Carry

The Austin Community College District concealed handgun policy ensures compliance with Section 411.2031 of the Texas Government Code (also known as the Campus Carry Law), while maintaining ACC's commitment to provide a safe environment for its students, faculty, staff, and visitors. Beginning August 1, 2017, individuals who are licensed to carry (LTC) may do so on campus premises except in locations and at activities prohibited by state or federal law, or the college's concealed handgun policy.

It is the responsibility of license holders to conceal their handguns at all times. Persons who see a handgun on campus are asked to contact the ACC Police Department by dialing 512-223-1231. Please refer to the concealed handgun policy online at <http://austincc.edu/campuscarry>

Discrimination Prohibited

The College seeks to maintain an educational environment free from any form of discrimination or harassment including but not limited to discrimination or harassment on the basis of race, color, national origin, religion, age, sex, gender, sexual orientation, gender identity, or disability.

Faculty at the College are required to report concerns regarding sexual misconduct (including all forms of sexual harassment and sex and gender-based discrimination) to the Manager of Title IX/Title VI/ADA Compliance. Licensed clinical counselors are available across the District and serve as confidential resources for students.

Additional information about Title VI, Title IX, and ADA compliance can be found in the ACC Compliance Resource Guide available at:

https://drive.google.com/file/d/1xfmZHOPD_H1wgGKq1N7Irv6gvXxOXzbZ/view

Use of ACC email

All College e-mail communication to students will be sent solely to the student's ACCmail account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify students of any college-related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACCmail account when communicating with instructors and staff. Information about ACC email accounts, including instructions for accessing it, are available at:

<http://www.austincc.edu/help/accmail/questions-and-answers>

Use of the Testing Center

The Testing Centers will allow only limited in person testing and testing time will be limited to the standard class time, typically one and one-half hours.

Specifically, only the following will be allowed in the Testing Centers:

- Student Accessibility Services (SAS) Testing: All approved SAS testing
- Assessments Tests: Institutionally approved assessment tests (e.g., TSIA or TABE)
- Placement Tests: Placement tests (e.g., ALEKS)
- Make-Up Exams (for students who missed the original test): Make-up testing is available for all lecture courses but will be limited to no more than 25% of students enrolled in each section for each of four tests
- Programs incorporating industry certification exams: Such programs (e.g., Microsoft, Adobe, etc.) may utilize the ACC Business Assessment Center for the industry certification exams (BACT) at HLC or RRC

The instructor should provide additional information about how they will conduct examinations and other assessments here.

STUDENT SUPPORT SERVICES

The success of our students is paramount, and ACC offers a variety of support services to help, as well as providing numerous opportunities for community engagement and personal growth.

Student Support

ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and services. Information on these campus services and resources is available at <http://www.austincc.edu/students>. A comprehensive array of student support services is available online at: <https://www.austincc.edu/coronavirus/remote-student-support>

Student Accessibility Services

Austin Community College (ACC) is committed to providing a supportive, accessible, and inclusive learning environment for all students. Each campus offers support services for students with documented disabilities. Students with disabilities who need classroom, academic or other accommodations must request them through Student Accessibility Services (SAS).

Students are encouraged to request accommodations prior to the beginning of the semester, otherwise the provision of accommodations may be delayed. Students who have received accommodations from SAS for this course will provide the instructor with the legal document titled “Faculty Notification Letter” (FNL) through the Accessible Information Management (AIM) portal.

Until the instructor receives the FNL, accommodations should not be provided. Once the FNL is received, accommodations must be provided. Accommodations are not retroactive, so it is in the student’s best interest to request their accommodations as soon as possible prior to the beginning of the semester.

Please contact SAS@austincc.edu for more information.

Academic Support

ACC offers academic support services on all of its campuses. These services, which include online tutoring, academic coaching, and supplemental instruction, are free to enrolled ACC students. Tutors are available in a variety of subjects ranging from accounting to pharmacology. Students may receive these services on both a drop-in and referral basis.

[An online tutor request can be made here:](https://de.austincc.edu/bbsupport/online-tutoring-request/)
<https://de.austincc.edu/bbsupport/online-tutoring-request/>

[Additional tutoring information can be found here:
austincc.edu/onlinetutoring](http://austincc.edu/onlinetutoring)

Library Services

ACC Library Services offers both in-person and extensive online services, with research and assignment assistance available in-person during limited hours of service. Although all college services are subject to change, plans include ACC students signing up for study space and use of computers at open libraries, extensive online instruction in classes, online reference assistance 24/7 and reference with ACC faculty librarians. In addition, currently enrolled students, faculty and staff can access Library Services online (also 24/7) via the ACC Library website and by using their ACCeID to access all online materials (ebooks, articles from library databases, and streaming videos). ACC Libraries offer these services in numerous ways such as: "Get Help from a Faculty Librarian: the 24/7 Ask a Librarian chat service," an online form for in-depth research Q and A sessions, one-on-one video appointments, email, and phone (voicemail is monitored regularly).

- Library Website: <http://library.austincc.edu>
- Library Information & Services during COVID-19: <https://researchguides.austincc.edu/LSinfoCOVID19>
- Ask a Librarian 24/7 chat and form: <https://library.austincc.edu/help/ask.php>
- Library Hours of Operation by Location: <https://library.austincc.edu/loc/>
- Email: library@austincc.edu

Student Organizations

ACC has over seventy student organizations, offering a variety of cultural, academic, vocational, and social opportunities. They provide a chance to meet with other students who have the same interests, engage in service-learning, participate in intramural sports, gain valuable field experience related to career goals, and much else. Student Life coordinates many of these activities, and additional information is available at <http://sites.austincc.edu/sl/>.

Personal Support

Resources to support students are available at every campus. To learn more, ask your professor or visit the campus Support Center. All resources and services are free and confidential. Some examples include, among others:

- Food resources including community pantries and bank drives can be found here:
<https://www.centraltexasfoodbank.org/food-assistance/get-food-now>

- Assistance with childcare or utility bills is available at any campus Support Center: <http://www.austincc.edu/students/support-center>.
- The Student Emergency Fund can help with unexpected expenses that may cause you to withdraw from one or more classes: <http://www.austincc.edu/SEF>.
- Help with budgeting for college and family life is available through the Student Money Management Office: <http://sites.austincc.edu/money/>.
- A full listing of services for student parents is available at: <https://www.austincc.edu/students/child-care>
- The CARES Act Student Aid will help eligible students pay expenses related to COVID-19: <https://www.austincc.edu/coronavirus/cares-act-student-aid>.

Mental health counseling services are available throughout the ACC Student Services District to address personal and or mental health concerns:

<http://www.austincc.edu/students/counseling> .

If you are struggling with a mental health or personal crisis, call one of the following numbers to connect with resources for help. However, if you are afraid that you might hurt yourself or someone else, call 911 immediately.

Free Crisis Hotline Numbers:

- Austin / Travis County 24-hour Crisis & Suicide hotline: **512-472-HELP (4357)**
- The Williamson County 24-hour Crisis hotline: **1-800-841-1255**
- Bastrop County Family Crisis Center hotline: **1-888-311-7755**
- Hays County 24 Hour Crisis Hotline: **1-877-466-0660**
- National Suicide Prevention Lifeline: **988** or **1-800-273-TALK (8255)**
- Crisis Text Line: **Text “home” to 741741**
- Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline: **1-800-662-HELP (4357)**
- National Alliance on Mental Illness (NAMI) Helpline: **1-800-950-NAMI (6264)**