

Abilene Approval Chart for Curriculum Changes

A = Approve I = Information Item R = Respond In Writing

Course Number: CIVE 331 **or Degree Plan(s):**

		De pt./ Sch ool	Coll ege	Dea n	TEC	AU AC/ Gra d	Pro vos t
	Campus-Level Academic Review¹						
	Change to a Course Include signatures from all chairs/program directors for cross-listed courses. ¹						
1.	Title (description unchanged)	A	A	A	I	I	I
2.	Description (not affecting content)	A	A	A	I	I	I
3.	Course term(s)	A	I	A	I	I	I
4.	Content (change of course outcomes)	A	A	A	I	I	A
5.	Number of credit hours	A	A	A	A	A	A
6.	Course number within the hundred	A	A	I	I	I	I
7.	Course number beyond the hundred	A	A	A	A	A	A
8.	Prerequisites	A	A	A	I	I	I
9.	Course restriction (e.g., majors only, junior standing)	A	A	A	A	A	A
10.	Level change (U to G or G to U)	A	A	A	A	A	A
11.	Cross list course	A	A	A	A	A	A
12.	Department of record	A	A	A	A	A	A
13.	Open or close a course	A	A	A	A	A	A
	Change to a Degree Plan						
14.	Educational Program — Revise	A	A	A	A	A	A
15.	Educational Program — Adopt/revise admission requirements	A	A	A	A	A	A
16.	GPA — Revise program-required GPA	A	A	A	A	A	A
17.	Minor — Revise	A	A	A	A	A	A

		De pt. /Sc hol	Col leg e	De an	TE C	AU AC /Gr ad	Pro vos t	Ca mp us Fac ult y	Se nio r VP AA	Pre sid ent
	Full Review									
	Change to Catalog Information (for Campus)									
18.	General requirements for Bachelor's and Associate Degrees	-	-	-	-	A	A	A	A	I
19.	Policies governing academic probation and suspension	-	-	-	-	A	A	A	A	I
20.	Requirements for graduating with honors	-	-	-	-	A	A	A	A	I
	Change to a Degree Plan									
21.	Educational Program — Add or Discontinue ^{2,3}	A	A	A	A	A	A	A	A	I
22.	Educational Program — Discontinue (Provost-proposed)	R	-	R	A	A	A	A	A	I
23.	Minor — Add or Discontinue	A	A	A	A	A	A	-	A	I
24.	Minor — Discontinue (Provost-proposed)	R	-	R	A	A	A	-	A	I
25.	Degree — Add or Discontinue	A	A	A	A	A	A	A	A	I
26.	Degree — Discontinue (Provost-proposed)	R	-	R	A	A	A	A	A	I

		De pt. /Sch ool	Col leg e	Dea n	TEC	AU AC/ Gra d	Pro vos t	Ca mp us Fac ult y	Sen ior VP AA	Pre sid ent
	Change to General Education Requirements for Undergraduates (System)									
27.	Change course outcomes of an included course	A	A	A	A	A	A	-	A	I
28.	Add or drop a required course from the General Education Requirements	A	-	A	-	A	A	A	A	I
29.	Add or drop a course from a menu within the General Education Requirements	A	-	A	-	A	A	-	A	I
30.	Comprehensive revision of General Education Requirements	-	-	-	-	A	A	A	A	I

Notes

² Any change to a cross-listed course requires the signature of both department chairs or program directors overseeing the course to ensure that the courses stay in sync. This includes courses taught at other campuses (e.g. BIBL 101 and BIBO 101).

³ For undergraduate majors, a minimum of 30 hours is required. These programs must have a minimum of 6 elective hours, unless the requirements of external accrediting bodies make it impossible. Master's programs must include a minimum of 30 hours, and doctoral programs must include a minimum of 30 hours beyond the master's.

⁴ When a department/school or dean proposes closing a program, approval routing follows the typical process beginning with the department/school. An administrative proposal by the provost or senior vice president for academic affairs would follow the "provost-proposed" routing on the chart.

Department/School(s)



12/1/23

Chair Signature

Date

Chair/Program Director Signature

Date

College Academic Council(s)



3/22/24

Chair Signature

Date

Chair Signature

Date

Dean(s)



3/22/24

Signature

Date

Signature

Date

Teacher Education Council

Signature

Date

**Campus Academic Council:
Abilene Undergraduate or Abilene Graduate**

Signature

Date

Provost

Signature

Date

University General Education Council

Signature

Date

University Faculty

Abilene Faculty Senate Chair signature

Date

Dallas Faculty Council Chair signature

Date

Senior Vice President for Academic Affairs

Signature

Date

President

Signature

Date

Abilene New Course Application

You may delete the preceding instructional pages before submitting application.

Course ID (<i>Subject Code and Number</i>)	CIVE 331
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1. Systems and Catalog Information Complete each item.

A	Course Developer	Darby Hewitt
B	Course Instructor	Tim Kennedy
C	Course Title	Environmental Measurements Laboratory
D	Course Abbreviation for Banner if title is more than 30 characters	Environmental Measurements Lab
E		OSE - Onstead Science and Engineering
F		PHYS - Engineering & Physics
G		1
G1		0
G2		3
H	Is the course for a fixed or variable number of credit hours?	Fixed If variable, explain rationale:
I	Is the course repeatable for additional credit?	No
J	Maximum total number of credit hours a student can earn for this course	1
K		<u>Lab (LAB)</u> See Schedule Type definitions in the Reference section.
L		3
M		<u>Standard</u>
N	Maximum Enrollment	18
O	Catalog Description (50 words or less)	Laboratory examinations of water, wastewater, and air. Water and air quality parameters and their

		significance. Sources and types of pollutants and their effects.
P	List any prerequisites (course/s, test scores, class standing, major, etc.)	Credit for or concurrent enrollment in ENGR 378
Q	List any corequisites (these <i>must</i> be taken at the same time; note that a single requirement cannot be both a prerequisite <i>and</i> a corequisite)	
R	If the course is cross-listed, specify the subject code and course number of the other course	
S	Does this course require any additional student course fees?	<u>Yes</u> If yes, attach a completed course fee form . Standard \$70 lab fee
T1	Will the course be offered in fall terms?	<u>No</u>
T2	Will the course be offered in spring terms?	<u>Yes, every year</u>
T3	Will the course be offered in summer terms?	<u>No</u>
U	First semester this course will be offered under new Course ID. <i>May not be earlier than the coming fall semester.</i>	Spring 2025
V	Is this course required for a program(s)?	<u>Yes</u> If yes, attach a completed curriculum proposal to change the program(s).
W	Should the addition of this course be retroactively applied to the degree plan it supports? <i>This is rare, and rationale should explain compelling extenuating circumstances.</i>	<u>No</u> If yes, provide rationale:
X	Has this course been offered as a Special Topics course? <i>New courses are not required to be taught as</i>	<u>No</u> If yes, provide course ID, term, and enrollment:

	<i>Special Topics courses prior to approval.</i>	
Y	List any courses in which the content overlaps the proposed course. (Course ID and Name). <i>Attach a statement from the instructor/dept chair of the existing course justifying the new offering.</i>	

2. Curriculum

- A. Explain any effects of this course on any degree plans. If the addition of the course alters program requirements, submit a separate [Approval Chart for Curriculum Change](#) to update the program.

This course is required in the Civil Engineering degree.

- B. Justify the addition of this course to the current curriculum, explaining the gap it meets.

This course will provide students with in-depth hands-on experience with making and interpreting environmental quality measurements.

3. Course Design

- A. Audience and Course Goal

1. Describe the intended audience, including prerequisite skills.

This course is intended for civil engineering students.

2. State the overarching course goal(s) in performance terms.

Students will be well equipped by this course to perform standard measurements of water and structural materials used by professional civil engineers

B. Student Learning Outcomes and Measurements

	Student Learning Outcome	Measurement
1	Define all major water quality parameters	Prelab, Lab reports, Lab Notebook, Practicals
2	Apply analytical methods to quantify water quality parameters	Lab Reports/Notebook
3	Relate major water quality parameters to environmental and public health impacts	Lab Reports, Lab Practicals
4	Interpret and make recommendations using learned analytical methods with respect to important regulatory, public health, and environmental requirements	Lab Reports, Lab Practicals

C. Text and Resources

Davis and Cornwell, *Introduction to Environmental Engineering*, Fourth Edition, McGraw-Hill Publishers, Inc., 2006.

4. Supporting Documentation

Required of all applications	
1	Approval Chart for Curriculum Changes
2	Syllabus — Attach the syllabus for the course based upon the anticipated first-semester offering.
4	Library — Submit new course application and syllabus to the Library dean's office. Attach the Library's memo.
Attach if applicable	

5	Content Overlap — Include one document for each course you listed in Section 1Y. Attach statement from instructor/dept chair of existing course justifying the new offering.
6	Departmental Resources — List the resources that support the course and are available only through the department, if applicable. Attach the list of the holdings and the location(s).
7	Resources — List resources (other than library or departmental resources) that are needed to support this course (computers, lab equipment, other technology, etc.). Attach a complete list of all items and indicate possible sources or estimated cost of each. List the sources of any needed funds.
8	Expenses — List additional expenses needed to implement this course (full-time or part-time faculty, graduate or lab assistants, student employees, travel, special student costs, room renovation, storage facility, etc.). Attach a complete list of all items, the estimated cost of each and the source of the funds.
9	Justification — Attach any documents to which you refer in Section 2B.

Updated 8/1/2023

Syllabus for **Environmental Measurements Laboratory** (CIVE 331); 1 credit hours

Spring 20XX, M 2-4:50 PM

BEN212

Course website: Canvas site on my.acu.edu

Instructor: Dr. Tim Kennedy, Associate Professor of Engineering and Physics

Email: timothy.kennedy@acu.edu

Office: OSC 121B

Office hours: Monday 10-12, 2-4; Tuesday 8-11

Phone: (325) 674-6732 (Office), (217) 417-5859 (Cell)

Please limit cell phone calls/texts to emergencies if after 8 PM.

Text: Davis and Cornwell, *Introduction to Environmental Engineering*, Fourth Edition,

McGraw-Hill Publishers, Inc., 2006.

ACU Catalog Course Description: Laboratory examinations of water, wastewater, and air. Water and air quality parameters and their significance. Sources and types of pollutants and their effects.

Faith and Learning in the context of engineering courses: In any professional context, our faith should influence our work ethic. The author of Ecclesiastes encourages his readers to do whatever they do with all their might (paraphrase of Eccl. 9:10). You should be mindful of the faith tradition you represent with your actions when you go to work, and the classroom is a great place to start practicing that mindfulness.

Learning objectives (assessed through weekly lab reports and practical exam):

At the end of this course, students should be able to

- Define all major water and air quality parameters
- Apply analytical methods to quantify water and air quality parameters
- Relate major water and air quality parameters to environmental and public health impacts
- Interpret and make recommendations using learned analytical methods with respect to important regulatory, public health, and environmental requirements

Lab Outline:

Week 1 – Water and air quality data

Week 2 – Water and wastewater chemistry and characteristics

Week 3 – Measuring pH of water

Week 4 – Measuring Alkalinity of water

Week 5 – Measuring Conductance of water

Week 6 – Measuring Hardness of water

Week 7 – Measuring suspended solid content in water

Week 8 – Measuring dissolved organic matter in water

Week 9 – Dissolved oxygen (DO) and Chemical Oxygen Demand (COD)

Week 10 – Introduction to regulatory standards for air quality

Week 11 – Industrial and landfill air emissions analysis

Week 12 – Testing of microbial content in air

Week 13 – Planning holistic water quality measurements

Week 14 – Review of methods

Week 15 – Practical exam

Format of Lab:

Each Friday, a new module will be opened in Canvas, and that module will have a pre-lab assignment which will be due on the following Monday before lab time. There will be a practical exam at the end of the semester.

Final Grade Composition:

Course Assignments	Due Date*	Weight
Pre-Lab summary	Each week	20%

Pre-lab summaries will be due on Canvas and based on posted readings and standards. They will be to help you with the experiment that you are performing during the lab. You will need to complete a pre-lab before each experiment in order to make sure the lab goes as smoothly as possible.		
Lab Report and Lab Notebook Each group will be responsible for preparing a typed report of each laboratory exercise. Lab reports are due the week following the experiment. Lab reports are due at the beginning of class. Additionally, a bound composition notebook will be required during each lab exercise in order to journal pertinent information regarding the process involved with each analytical test including necessary data collected from the experiments. The lab notebook will be checked periodically as well as submitted along with the lab practical at the end of the semester.	1 week following lab results	55%
Lab Practical Projects Students will be required to use skills acquired in previous labs to complete a lab practical that extends their knowledge to application of concepts.	See Canvas for details	25%

Calculation of Final Course Grade*

The grading scale will be as follows:

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

*Instructor reserves the right to decrease the lower bound of the grade cut-offs.

Attendance and Late assignment policy: Because this is a laboratory course and will require specialized equipment and preparation for each activity, you must be present at every meeting time unless you have a University-excused absence. **NO late work will be accepted.**

Academic Integrity

I think that cheating is the worst thing someone could do in college, and that is saying a lot. Cheating is an act so counter to academic principles (not to mention Christian morality) that I will report any infraction without exception. See <https://acu.edu/dean-of-students/student-handbook/academic-policies/> for the full university policy.

University ADA Compliance Statement

Abilene Christian University is dedicated to removing barriers and opening access for students with disabilities in compliance with ADA and Section 504 of the Rehabilitation Act. The Alpha Scholars Program facilitates disability accommodations in cooperation with instructors. In order to receive accommodations, you must be registered with Alpha Scholars Program, and you must complete a specific request for each class in which you need accommodations. If you have a documented disability and wish to discuss academic accommodations, please call our office directly at 325-674-2667.

Title IX Information and Policy

At ACU, we strive to comply with all applicable legal requirements prohibiting, preventing, and responding to sexual misconduct against any member of the ACU community. Moreover, as a Christian community, ACU has committed itself, unequivocally, to ensuring a working and learning environment in which the dignity of every individual is respected.

*Our Title IX – Sexual Misconduct Policy outlines specific definitions and procedures related to **sexual harassment, sexual exploitation, sexual assault, stalking, and relationship violence**. If you experience sexual misconduct in any of these forms, we encourage you to [report it](#) so that we can help maintain a work and academic environment free of unlawful behavior.*

The mission of ACU: to educate students for Christian service and leadership throughout the world.

The mission of the Onstead College of Science and Engineering is to explore and understand God's creation in the natural world and apply the acquired knowledge and principles to address its issues and challenges.

Department Mission:

The ACU engineering program strongly supports the university's mission of educating students for Christian service and leadership throughout the world. In support of this mission, ACU engineering graduates will attain:

- A deep and broad understanding of engineering principles and practices as evidenced by professional employment, continued professional development, and graduate study in engineering or other professional fields.
- An extensive knowledge of innovative design processes unique to engineering professionals as demonstrated by using critical thinking skills to contribute to scientific and technical literature, patents and intellectual property, professional societies, and creative designs.
- A thorough understanding of Christian service and leadership as shown in their commitments to professionalism, ethics, and service and leadership within the engineering profession, the church, and society.

February 2, 2024

Dr. Darby Hewitt
Associate Professor
Department of Engineering and Physics
Onstead Science Center (OSC) 121B
(325) 674-6732

Re: Review of Environmental Measurements Laboratory (CIVE 331)

Dear Dr. Hewitt,

Thank you for submitting Environmental Measurements Laboratory (CIVE 331) to us for review. I have reviewed it based on the ACU Syllabus Guidelines. I found the syllabus to meet all aspects of the checklist.

Please note that this letter is intended as a reference, which will be read by the department chair and members of the council, who may also have questions or comments of their own. If you have any questions, please feel free to let me know.

Please also let me know if we can be of any help in the design and facilitation of this course.

Sincerely,



Dr. Scott E. Hamm,
Assistant Director, Adams Center

ABILENE CHRISTIAN UNIVERSITY
LIBRARY

M E M O R A N D U M

DATE: November 28, 2023

TO: Dr. Darby Hewitt

FROM: Mark McCallon, Associate Dean for Library Information Services **RE:** Course
Application for CIVE 331 – Environmental Measurements Lab

After reviewing the course application and syllabus, the library does have adequate resources to support the proposed course. Please contact Mark McCallon, Librarian Liaison, if additional resources are needed for the course. Thank you for letting us review the course proposal and syllabus.