Abilene Approval Chart for Curriculum Changes

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

Course Number: CIVE 371 **or Degree Plan(s):**

	Campus-Level Academic Review[1]	Dept./ School	College	Dean	TEC	AUAC/ Grad	Provost
	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

	Full Review	Dept./School	College	Dean	TEC	AUAC/Grad	Provost	Campus Faculty	Senior VP AA	President
	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

	Change to General Education Requirements for Undergraduates (System)	Dept./School	College	Dean	TEC	AUAC/Grad	Provost	Campus Faculty	Senior VP AA	President
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.

Updated 8/1/2023

Department/School(s)

12/1/23

Chair Signature Date

Chair/Program Director Signature Date

College Academic Council(s)

2/5/2024

Chair Signature Date

Chair Signature Date

Dean(s)

2/5/2024

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 (*Subject Code and Number)*	CIVE 371

1. Systems and Catalog Information Complete each item.

A	Course Developer	Shinhyu Kang
B	Course Instructor	Tim Kennedy
C	Course Title	Civil Engineering Materials Lab
D	Course Abbreviation for Banner if title is more than 30 characters	-
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		Lab (LAB) See Schedule Type definitions in the Reference section.
L		3
M		Standard
N	Maximum Enrollment	18

O	**Catalog Description** (50 words or less)	A study of Civil Engineering materials. Materials science and engineering: properties, economics, quality and sustainability. Materials include: metals, aggregates, Portland cement and asphalt concrete, mix design, wood, masonry, and novel materials.
P	List any prerequisites (course/s, test scores, class standing, major, etc.)	ENGR 220
Q	List any corequisites (these *must* be taken at the same time; note that a single requirement cannot be both a prerequisite *and* 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?	Yes If yes, attach a completed course fee form. Standard lab fee of $70
T1	Will the course be offered in **fall** terms?	No
T2	Will the course be offered in **spring** terms?	Yes, every year
T3	Will the course be offered in **summer** terms?	No
U	First semester this course will be offered under new Course ID. *May not be earlier than the coming fall semester.*	Spring 2025
V	Is this course required for a program(s)?	Yes 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? *This is rare, and rationale should explain compelling extenuating circumstances.*	No If yes, provide rationale:

X	Has this course been offered as a Special Topics course? *New courses are not required to be taught as Special Topics courses prior to approval.*	No If yes, provide course ID, term, and enrollment:
Y	List any courses in which the content overlaps the proposed course. (Course ID and Name). *Attach a statement from the instructor/dept chair of the existing course justifying the new offering.*	

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 is required in the new Civil Engineering degree program.

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

No other course in the curriculum covers the standard materials used in structural infrastructure projects like this course will.

3. Course Design

A. Audience and Course Goal

1. Describe the intended audience, including prerequisite skills.

   This course is intended for Civil Engineering majors who have a foundational understanding of static mechanical systems.

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

   Students who have taken this course will have hands-on experience in testing and creating many structural materials used in modern construction.

B. Student Learning Outcomes and Measurements

	Student Learning Outcome	Measurement
1	Define physical and mechanical properties of materials used in civil engineering	Pre-lab, Lab report
2	Apply testing methods used to measure properties of civil engineering materials	Pre-lab, Lab report
3	Design portland cement concrete mixes	Lab Practical Project

C. **Text and Resources**

Materials for Civil and Construction Engineering, Fourth Edition, by Michael Mamlouk and John Zaniewski, Pearson Prentice Hall, 2011. ISBN 0134320533

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.

CIVE 371 – Civil Engineering Materials Lab

About the Course

Course number and title: CIVE 371 – Civil Engineering Materials Lab

Credit Hours: 1 (contact hours: 3)

Prerequisites/corequisites:
ENGR 220 Statics

Catalog Description: A study of Civil Engineering materials. Materials science and engineering: properties, economics, quality and sustainability. Materials include: metals, aggregates, Portland cement and asphalt concrete, mix design, wood, masonry, and novel materials.

Intended audience: This is an elective course for Engineering majors who are interested in Civil Engineering.

About the Teacher

Professor's name, title, or rank:
Dr. Tim Kennedy

Office location: 121B Onstead Science Building

Phone number/Email address: 325-674-6732 (Office) / timothy.kennedy@acu.edu

Office hours/Contact expectations:

Monday and Wednesday 09:00 AM - 11:00 PM, or by appointment.

Mission Statements

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.

Unique Christian Perspective: Engineering is a well-respected profession. The public entrusts engineers to be honest, competent, and ethical. Many codes of ethics for these fields indicate that the commitment to protecting the health, safety, and welfare of the public is of paramount importance. These values are in harmony with Christian principles and ideals. Christian engineers should be honest (Matthew 5:37), work hard to ensure competency (Colossians 3:23), and put the public's interest ahead of his or her own (Luke 6:31). Considering these principles, this course will be taught such that you will gain an appreciation for the professional nature of engineering. It will be taught to give you every opportunity to begin to develop competency in these fields. This will require homework, quizzes, tests, and group discussion. The instructor especially encourages the discussion of topics that would bear on integrating faith and professional responsibilities (cheating on licensure exams, weapons design and manufacture, environmental laws and employment opportunities in developing nations, etc.)

Course Content

Outline of topics:
• Lab Report Writing
• Aggregate and Soil Testing
• Portland Cement Concrete Design and Testing
• Test methods for different types of materials (metal, timber, etc.)

Instructional Materials

Textbook:
Materials for Civil and Construction Engineering, Fourth Edition, by Michael Mamlouk and John Zaniewski, Pearson Prentice Hall, 2011. ISBN 0134320533

Learning Outcomes

Course goal:
Define the physical and mechanical properties of materials used in civil engineering,
Apply methods used to measure properties of civil engineering materials
Design portland cement concrete mixes.

Competencies: Students are expected to obtain the following competencies, which will be measured throughout the course using the following instruments.

	Competency	**Measurement Instrument**
1	Define physical and mechanical properties of materials used in civil engineering	Pre-lab, Lab report
2	Apply testing methods used to measure properties of civil engineering materials	Pre-lab, Lab report
3	Design portland cement concrete mixes	Lab Practical Project

Assessment and Grading

Assessment activities:
Course grades will be calculated according to the following formula:

Assessment Activities	**Due Date**	**Weight**
Pre-Lab summary 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.	**Each week**	**20%**
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	**1 week following lab results**	**55%**

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.		
Lab Practical Projects Students will be required to use skills acquired in previous labs to complete a lab practical that extends their knowledge to the application of concepts.	**See Canvas for details**	**25%**
Total		100%

Final grade calculation: The grading scale will be as the table follows:

Range of Points	**Final Letter Grade**
90%-100%	A
80%- 89%	B
70%-79%	C
60%-69%	D
Below 59%	F

University Policies

ADA Compliance Policy:

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 email alpha@acu.edu or call their office directly at 325-674-2667.

Academic Integrity Policy:

Academic integrity is defined as academic work completed as assigned for each class by the individual or group responsible for the work. Violations of academic integrity and other forms of cheating involve the intention to deceive, mislead, or misrepresent and, therefore, are a form of lying. Such actions are contrary to behavioral norms that flow from the nature of God. Academic misconduct includes, but is not limited to, the following: 1) Failure to give credit to sources used in work in an attempt to present the work as one's own, 2) Submission of papers or projects obtained from another source (e.g., research service or club paper file) as one's own, and 3) Falsifying information orally or in writing. Academic misconduct may result in, but is not limited to, a zero on the assignment and/or an F in the course. Additionally, the department chair, the Dean of your school, and the Dean of Student Life will be notified. See the full university

policy, including how to appeal a decision, by following this link.

The use of Chegg and similar homework solution sites is **a violation of academic integrity** in at least two ways. First, the solutions you find there were generally made available under conditions that they should not be posted or shared except as required with current students. Second, solutions copied from or aided by consulting a homework solution site and then submitted for credit are not truly the work of the person submitting them for credit.

Anti-Harassment Policy:

As a professor, one of my responsibilities is to help create a safe learning environment on our campus. I also have a mandatory reporting responsibility related to my role as a professor. It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep the information you share private to the greatest extent possible. When I am not able to keep your information confidential, I will only share it with responsible administrators on campus who can provide you with services and resources. I am required to share with the Title IX Coordinator information regarding sexual misconduct or harassment, dating or domestic violence, or stalking that you report to me. If you would prefer to share information in a confidential setting, I encourage you to speak with someone in the ACU Counseling Center. All of your options are available for review by clicking on the link to ACU's policy.

Course Policies

Attendance: "ACU expects students to attend and participate in all class and laboratory meetings. Students must adhere to the policies published in each course syllabus." Attendance is expected at all class sessions. It is also expected that you arrive promptly. If you are absent or tardy, it will negatively affect your homework and quiz grades. Occasionally during class, students will work in small groups to solve problems. It Is the student's responsibility to obtain the materials that were distributed in class along with additional assignments and/or revisions in the class schedule if they are absent.

Tardiness: Tardiness is defined as being late for a class meeting by any amount of time. Students are encouraged to show up for the class on time. Students have the responsibility for missing a part of the lecture or teamwork that could affect their grades by tardiness.

Participation: Participation is defined as taking part in class activities. Students are encouraged to ask questions and participate as a method of learning. Food in class is not permitted, but drinks are welcome.

Late assignment/exam: Late assignments will not be accepted and will be assigned a grade of 0 points. Late assignments will affect your grade as you will not receive credit.

Calculators: Sharing of calculators is prohibited. Cell phone calculators are not allowed. If the course instructor determines that calculators may be used during the exams or other in-class graded activities, only NCEES-approved calculators will be permitted. This is to help you begin preparing for the FE exam. Also per NCEES policy, software that simulates approved calculators will not be permitted. The NCEES policy may be reviewed at https://ncees.org/exams/calculator/. If you are unsure about your calculator, it is your responsibility to check with the instructor for approval. If you are caught using a non-approved calculator, you will not be allowed to complete the activity, and you will receive a zero for that activity (including tests). The approved calculators include the following:

Casio: All fx-115 and fx-991 models (Any Casio calculator must have “fx-115” or “fx-991” in its model name.), Hewlett Packard: The HP 33s and HP 35s models, but no others. Texas Instruments: All TI-30X and TI-36X models (Any Texas Instruments calculator must have “TI-30X” or “TI-36X” in its model name.)

Behavior in class: No behavior that can distract the other students in the class will be allowed. Destructive behavior will result in your dismissal from the class.

Withdrawal from the Course: If you withdraw from the course, your grade is W. If the instructor withdraws you from the course, your grade is W or WF, depending on your grade at the time I withdraw you. The last day you can withdraw from a Spring 2023 class is Monday, April 10. Remember that your advisor must sign your Withdrawal from Class form.

The instructor reserve the right to make changes to the syllabus as needed. Any changes will be clearly announced on canvas and in class.

Tentative Course and Lecture Outline

Week	Topic
1	Introduction/ Testing Standards/Material Properties and Selection
2	Lab Reports
3	Aggregate
4	Aggregates Continued
5	Cement, Intro to Concrete mix
6	Lab Practical- Concrete Mix Design, slump test,
7	7-day concrete test Electrical Resistivity Compressive Strength
8	Steel
9	28-day concrete test Electrical Resistivity Compressive Strength

10	Timber
11	Asphalt
12	Masonry
13	Novel materials
14	Lab Practical
15	Lab Practical

February 2, 2024

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

Re: Review of Civil Engineering Materials Lab (CIVE 371)

Dear Dr. Hewitt,

Thank you for submitting Civil Engineering Materials Lab (CIVE 371) to us for a 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 371 – Civil Engineering Materials 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.