**CE 260 Field Measurements Syllabus**

**Credits: 2 Hours**

**Tuesday/Thursday: 8:00-8:50 am**

**CE 260 – BAB131**

**Instructor: Robert Kluger**

**Course Description:** The lecture will teach students theories and applications behind concepts in surveying. This will include the fundamental surveying aspects and calculations required in many engineering projects.

**Prerequisites:** ENGR 110 or ENGR 149

**Co-Requisites:** CEE 261

**Learning objectives:**

1. Define coordinate systems, compute angles and directions
2. Classify errors related to precision and accuracy
3. Recognize surveying tools/equipment and their purpose
4. Compute elevations from leveling operations
5. Compute areas of closed loop traverses
6. Learn about emerging technology including drones, GPS and geographic information systems
7. Compute earthwork volumes

**ABET Outcomes:**

*CE260:*

(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

(3) an ability to communicate effectively with a range of audiences

**Textbook (Recommended):** *Surveying: Principals and Applications – 9th Ed. Kavanagh and Mastin. Pearson Education Inc. 2014.*

Note that the course lectures were designed around the textbook listed above and therefore all of the material described in the class can be succinctly found in this textbook. However, there are enough online resources that students who wish to spend the extra time to find them instead of buying the textbook may choose to do so. The instructor does not take responsibility for errors or inconsistencies in the sources the students do find. There will be no specific assignments from the textbook.

**Instructor Information:**

Robert Kluger, Ph.D., PE

WS Speed Room 112

Office Hours: by appointment via e-mail

E-mail: robert.kluger@louisville.edu

**CE260 Teaching Assistant**

Sajjad Karimi

Office Hours: TBD First Day of Class

sajjad.karimizinkanlu@louisville.edu

\*\*Office Hours will be held virtually

**Lectures:** Lectures will be held in person. For the best experience, students are highly encouraged to attend.

**Blackboard:** CE 260 will use Blackboard learning environment for course communications. The primary site for communications will be CE 260. Any key announcements will be posted to Blackboard. Students are expected to check Blackboard daily for announcements regarding the course. Assignments and exams will also be submitted through Blackboard.

**Office Hours:** Office hours are available for students who need additional help with concepts. Dr. Kluger and the TA’s are available via appointment. All office hours will be held virtually. If you see me in my office, feel free to drop in and ask questions as well.

**Exams:** Three midterms and one final will be administered throughout the semester. The exams will be announced at least 2 weeks ahead of time. Any material and concepts covered in lecture, lab, or homework assignments may be included in the exam. Exams are cumulative. Students will be allowed to use any materials including notes, homework, and their laptops, but *must complete the exam alone.* Your lowest exam grade will be dropped. \*Students caught cheating on Exams will receive a 0 and that grade cannot be dropped\*.

**Other Assignments:**

**Homework** will be administered at the instructor’s discretion. Homework assignments are meant to serve as preparation for exams. Assignments will be graded on a completion basis. All solutions will be posted after the due date of the assignment. No late submissions will be accepted. It is each student’s responsibility to review the solutions and ask questions at office hours if they do not understand.

**Grading:**

 **CE 260**

 Exams: 70%

 Worksheets: 10%

 Homework: 20%

 Total: 100%

The lowest exam grade in CE 260 will be dropped (unless it is a 0 received from cheating).

**Academic Dishonesty:** Students are held to the highest standard in regard to academic dishonesty. Any student caught cheating or in any other violation of the [Student Code of Conduct](http://louisville.edu/dos/students/studentrightsandresponsibilities) will be subject to consequences. At a minimum, the student will receive a 0 on the assignment that is not eligible to be dropped.

**Title IX/Clery Act Notification:**

Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

Disclosure to University faculty or instructors of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University’s Title IX officer.

For more information, see the [Sexual Misconduct Resource Guide](http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure).

**COVID 19:**

As a Community of Care, all Cardinals are expected to abide by public health guidelines and regulations as published by the University. While masks are currently not mandated, they are ***strongly encouraged*** when indoors (including classrooms, shared office spaces, etc), while Jefferson County is in “red level” (high risk) status based on CDC criteria.

Please note, in the event that the public health status changes, the University may reinstitute required masking, or otherwise alter their COVID policies. Students, Faculty, and Staff are expected to abide by any such requirements in the event they are implemented. As a Community of Care, please be courteous to others, whether or not they decide to wear a mask.

Faculty have the responsibility to help students meet these recommendations by allowing students absent for reason of illness and/or quarantine to make up missed work and not penalize students for these absences. Faculty may require documentation.

In the event the instructor becomes ill, he/she will send a notification via Blackboard prior to the subsequent class meeting to provide further instructions. Depending on the type of illness, class may be moved to a remote format (temporarily), may be run be a Graduate Teaching Assistant, or may be canceled. Please be sure to check your University email account regularly in case issues such as this arise.

UofL will posted updates to policies, FAQs, and other COVID information [here](https://louisville.edu/coronavirus).

Updated COVID-19 Status for the Jefferson County area can be found [here](https://covid-19-in-jefferson-county-ky-lojic.hub.arcgis.com/).

**Computer Issues and IT Support:** Speed IT staff are available by appointment from 9 am to 4 pm to assist you with your technology needs. You may schedule an appointment by sending a detailed email including any relevant error codes and screen snips at SPDHelp@Louisville.edu (preferred) or 502-852-7620.