



What is CIVL 1101?

Course Title: Civil Engineering Measurements

Course Description:

Theory of measurements, linear measurements, angles, topographic surveys, and mapping with applications in Civil Engineering: emphasis on individual and group problem solving, techniques of data collection and analysis, and project documentation.

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What is CIVL 1101?

Course Meetings:

► **Lecture:**

Tuesday/Thursday, 1:00 - 1:55 pm, ET 233

► **Lab:**

Wednesday: 2:20 - 5:20 pm, ES 114

Thursday: 2:20 - 5:20 pm, ES 116

Friday: 2:20 - 5:20 pm, ES 114

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What is CIVL 1101?

► **Instructor:**

*Dr. Charles Camp, Office: ES 106B
Phone: 678-3169 (office)
Email: cvcamp@memphis.edu*

► **Office hours:** An "open door policy" or by appointment

12:00 noon to 1 p.m. or right after class

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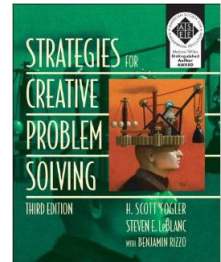
What is CIVL 1101?

► **Required Textbooks:**

Strategies for Creative Problem Solving

by Fogler and LeBlanc
Prentice Hall

ISBN-13:9780133091663



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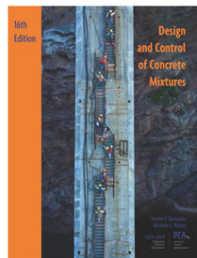
What is CIVL 1101?

► **Required Textbooks:**

Design and Control of Concrete Mixtures

Portland Cement Association 2016

ISBN-13: 978-0893122775



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What is CIVL 1101?

► **Required Computer:**



 Office 365

► **Web site:** www.ce.memphis.edu/1101

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What is CIVL 1101?

Course Learning Outcomes

At the successful completion of this class, the student should be able to demonstrate:

1. Recognize and apply basic instrumentation and measurements typical to those used in Civil Engineering practice
2. Recognize the limitations, constraints, and applicability of various field and laboratory data collection methods
3. Application of the spreadsheets to solution of engineering problems

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What is CIVL 1101?

Course Learning Outcomes

At the successful completion of this class, the student should be able to demonstrate:

4. Application of problem-solving strategies to the analysis, design, and evaluation of engineering problems
5. Write and present technical reports supporting engineering decision making
6. Demonstrate the ability to work in a group

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What is CIVL 1101?

Grading

The final grades for the course will be based on the following percentages:

Components	Percentages
Homework	10%
Mid-Term Exam	20%
Final Exam	25%
Project #1	15%
Project #2	15%
Project #3	15%

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What is CIVL 1101?

Grading

Final letter grades will be based on the following scale which reflects the percentages as noted above.

Exam/Homework/Projects	Grade
90-100	A
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
60-69	D
Below 60	F

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What is CIVL 1101?

Grading

- ▶ Attendance in both the lecture and lab portions of the class is **required**. Every unexcused absence from lecture is a reduction in the final class average of 2 points.
- ▶ We will use **TopHat** to record attendance.
- ▶ Every unexcused absence from a lab is a reduction of 25% on the student's grade for the associated project report.

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What is CIVL 1101?

TopHat – interactive learning environment

Top Hat is a **teaching platform** that **helps professors engage their students** inside and outside the classroom



<https://tophat.com>

Book a Demo

Watch video

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What is CIVL 1101?

Homework

- ▶ Homework is due at the beginning of class on the due date.
- ▶ **Late homework will not be accepted for any reason.**
- ▶ If you sign up for the class Remind page with join code **civ1101**, two homework assignment will be dropped in computing the final homework average.

Remind



CIVL 1101 f24
@civ1101

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What is CIVL 1101?

Make-up Work

- ▶ Due to the nature of the class, make-up work will be very difficult to complete.
- ▶ Should the student think that they should be allowed to make-up missed work they must document, in writing, their reason(s) for being allowed to make up the missed work or to have an absence excused.
- ▶ The student will be required to submit documentation for missing the class session and should be ready to provide such evidence at the time the request is made.
- ▶ It will be up to the discretion of the instructors if work may be made up or if the absence is excused.

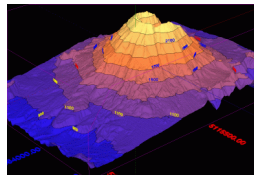
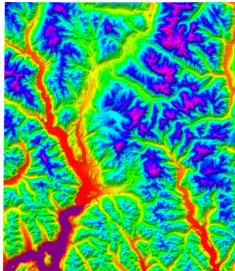
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What is CIVL 1101?

Project #1 – Topographic Model



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What is CIVL 1101?

Project #1 – Topographic Model

- ▶ The objective of this project is to develop a topographic model of a site (the one assignment to you in lab).
- ▶ Typically, the first step in a topographic survey is to measure the elevation of a series of point within the area.
- ▶ From the elevation data develop a contour map using at least a 1-foot contour interval.

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What is CIVL 1101?

Project #1 – Topographic Model

- ▶ Using a geographical Information system (GIS) develop a topography model of your site.
- ▶ Use GIS tools to construct contour lines
- ▶ Using aerial images as back grounds.
- ▶ Include a horizontal and vertical scale, your group name and logo, and a north arrow.

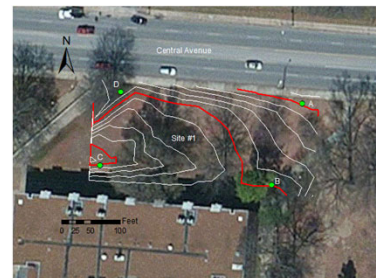
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What is CIVL 1101?

Project #1 – Topographic Model



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What is CIVL 1101?

Project #1 – Topographic Model

- ▶ Construction Engineering
- ▶ Environmental Engineering
- ▶ Geotechnical Engineering
- ▶ Structural Engineering
- ▶ Transportation Engineering
- ▶ Urban Planning
- ▶ Water Resources

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What is CIVL 1101?

Project #2 – Concrete Strength



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What is CIVL 1101?

Project #2 – Concrete Strength

The objective of this competition is to develop the strongest concrete cylinders as measured by the average normal stress (compression stress).

The concrete strength problem poses several challenges to the participants: selection of an appropriate concrete mix based on strength and workability; use of admixtures, selection of a curing environments, and the analysis of the results.

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What is CIVL 1101?

Project #2 – Concrete Strength



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What is CIVL 1101?

Project #2 – Concrete Strength

- ▶ Construction Engineering
- ▶ Environmental Engineering
- ▶ Geotechnical Engineering
- ▶ Structural Engineering
- ▶ Transportation Engineering
- ▶ Urban Planning
- ▶ Water Resources

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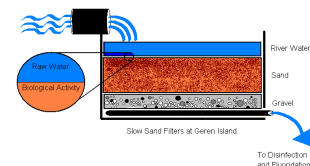
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What is CIVL 1101?


Project #3 – Water Filtration Design

The objective of this project is to design and construct, within given constraints, a granular-media filter that would treat as much water as possible (maximize volume) while removing as many suspended particles as possible (minimizing turbidity levels) for a given amount of time.

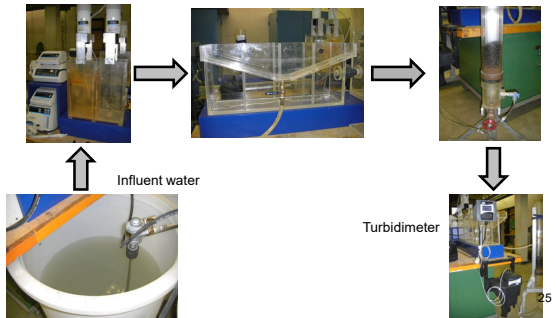


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 What is CIVL 1101?

Coagulation and Flocculation Sedimentation Gravity Filter



Influent water Turbidimeter


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 What is CIVL 1101?

Project #3 – Water Filtration Design

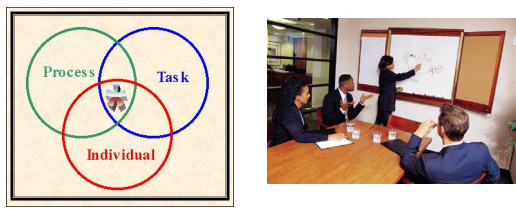
- ▶ Construction Engineering
- ▶ Environmental Engineering
- ▶ Geotechnical Engineering
- ▶ Structural Engineering
- ▶ Transportation Engineering
- ▶ Urban Planning
- ▶ Water Resources

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 What is CIVL 1101?


Technical Communications

- ▶ Intra-group and Inter-group communications
- ▶ Intra-class communications



▶ Intra-class communications

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 What is CIVL 1101?

Technical Communications

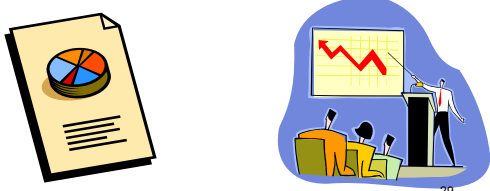
- ▶ E-mail is a very useful tool for intra- and inter-group communications
- ▶ The instructors in CIVL 1101 will use the university e-mail system to communicate with students
- ▶ If normally you use another e-mail account, then you need to go to <http://iam.memphis.edu> to make sure that mail sent to your U of M account is automatically forwarded to the account you do use.

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 What is CIVL 1101?

Technical Communications

- ▶ Technical writing
- ▶ Technical presentations



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 What is CIVL 1101?

Any questions?



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