



North South University
Department of Civil and Environmental Engineering (CEE)
CEE 310: Quantity Survey and Cost Estimating
Summer 2018

Course Outline

COURSE CODE: CEE 310

COURSE TITLE: Quantity Survey and Cost Estimating

COURSE INSTRUCTOR: Ms. Sifat Kalam

Lecturer, CEE

Room#SAC 738, Dept. of CEE

Email: kalam.sifat@northsouth.edu

CLASS HOURS:

SECTION: Sec 1	DAYS: MW	TIME: 09:40 AM - 11:10 AM	ROOM NO: SAC 207
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OFFICE HOURS:

ST 11:20 AM-12:50 PM

MW 11:20 AM-12:50 PM and 01:00 PM-02:00 PM

Prerequisites: CEE 110, CEE 214

Contact Hours: Lecture – 3 Hours/week

COURSE DESCRIPTION:

Overview of common Civil Engineering structures/projects and their components; basics of quantity measurements and estimating; quantity measurement of earthwork for roadway; earthwork computation from spot levels; analysis of plans, specifications, quantities, rates, and costing of residential building, septic tank, underground water reservoir, retaining wall, bridge/culvert, road, steel truss; and computer aided estimation.

COURSE OBJECTIVES AND OUTCOMES:

Course Objective:

1. To teach the students how to use the basic knowledge of mathematics, science, and engineering in quantity surveying and cost estimating of common Civil Engineering structures/projects
2. To introduce modern tools/software for quantity and cost calculation
3. To engage the students to demonstrate their understanding of different components of a civil engineering structure

Course Outcomes (COs):

CO1: Apply knowledge of mathematics, science, and engineering to estimate the quantities, and costing of different civil engineering structures/projects.

CO2: Develop skills to use modern tools/software necessary for engineering practice.

CO3: Function on multidisciplinary teams for the course project to build 3D model of common Civil Engineering structures.

TEXT BOOK:

Estimating in Building Construction (7th Ed) by Frank R Dagostino and Steven J Peterson

COURSE CONTENT:

1. Overview of common Civil Engineering structures/projects and their components.
2. Basics of quantity measurements and estimating.
3. Quantity measurement of earthwork for roadway.
4. Earthwork computation from spot levels.
5. Analysis of plans, specifications and rates, calculation/estimation of the quantities and costing of:
 - residential building,
 - septic tank,
 - underground water reservoir,
 - retaining wall,
 - bridge/culvert,
 - road, and
 - steel truss.
6. Overview of computer aided estimation.

AVAILABILITY OF COURSE MATERIALS:

All the lecture notes are available at the university common folder “Resource”. You can print them from there. Other than lecture notes, relevant materials like class schedule, course outline, reading materials, etc are available at different sub-folders of the same as well. Students are advised to check the folders at regular intervals.

ASSIGNMENTS AND CLASS ASSESSMENTS:

Assignments will be discussed during the class hours. Late submissions will be assigned a mark of zero. Also there may be pop quizzes (without prior notice) in the class to evaluate class performance. It is the student's responsibility to be present at the class regularly to attend these quizzes.

EVALUATION:

	Tentative marks (%)
Class participation and attendance	10%
Assignments and Projects	15%
Class tests	20%
Midterm Exam	25%
Final Exam	30%

Note:

- Class attendance must be more than **75%** to participate in **Final Examination**.
- A student must pass the final examination and submit all assignments to pass the course.
- No special permissions will be granted enabling a student to retain assignment or quiz marks from previous years.

EXAM POLICY:

For pop quizzes, not all of them will be considered for class test grading. **No Make-up class tests or Mid-term/Final exam will be arranged.** If needed, Class, quiz/ exam might be rescheduled due to unavoidable circumstances and prior notice will be given.

EXAM NOTICE:

Prior announcements for the exam will be made in the class, except for a sudden quiz. No excuse will be granted simply because someone was absent at previous class and did not know about the exam schedule.

GRADING POLICY:

NSU grading policy will be followed

CODE OF CONDUCT:

- Students are expected to arrive at class on time. RFID Attendance will be given if a student enters the classroom **within 10 minutes of class start because after that class room will be locked. Therefore no attendance will be given.**
- It is highly requested to maintain **discipline** in the class and to conduct in a professional and respectful manner.
- Please **turn off your cell phone** before coming to a class, tutorial, quiz or exam. Electronic devices (Cell phone, Laptops, Tabs etc. are not allowed in the class or exam hall.)
- **Cheating and Plagiarism** will be considered as a serious **crime**.

On the premises of the University or at a University-sponsored program, students must abide by the Student Code of Conduct: <http://www.northsouth.edu/student-code-of-conduct.html>

Lecture Schedule:

* One Day = 1.5 lecture hours, Total 26 days lecture = 39 lecture hours

Day*	Topics To be Covered	Activity
Day-1	Introduction & Basics concepts of estimating	Discussion & Lecture
Day-2	Earthwork for roadway	Lecture & Practice Problem
Day-3	Earthwork for roadway	Lecture & Practice Problem
Day-4	Earthwork for roadway	Lecture & Practice Problem
Day-5	Material Estimation	Lecture & Practice Problem
Day-6	Material Estimation	Quiz -1+Lecture
Day-7	Analysis of plans & Sections	Lecture & Drawing
Day-8	Estimation of a residential building	Lecture & Calculation
Day-9	Estimation of a residential building	Lecture & Calculation
Day-10	Estimation of a residential building	Lecture & Calculation
Day-11	Estimation of a residential building	Lecture & Calculation
Day-12	Midterm Exam	
Day-13	Estimation of a residential building	Lecture & Calculation
Day-14	Estimation of a residential building	Lecture & Calculation
Day-15	Estimation of a residential building	Lecture & Calculation
Day-16	Estimation of a residential building	Lecture & Calculation
Day-17	Quantity estimation	Lecture & MS Excel
Day-18	Analysis of rates & cost estimation	Lecture & MS Excel
Day-19	Cost estimation	Quiz -2
Day-20	Reinforcement estimation of a slab	Lecture & Calculation
Day-21	Reinforcement estimation of a slab	Lecture & Calculation
Day-22	Reinforcement estimation of a slab	Lecture & Calculation
Day-23	Estimation of a septic tank	Lecture & Practice Problem
Day-24	Estimation of a septic tank	Lecture & Practice Problem
Day-25	Review	Discussion
Day-26	Final Exam	