

Appalachian State University
Department of Technology
Course Syllabus - - Spring, 2000
TEC 2708-101: Construction Technology

Meeting Time and Place: TR 9:30-11:45 am, Room 167

Credit Hours: 3

Professor's Name and Phone Number: Jeff Tiller, 262-6355 (office), 264-9542 (home)

Office Hours: Posted on the door

Course Description: This course will provide students with an introduction to technical, economic and managerial aspects of the construction industry. Primary emphasis will be on the tools, materials, and processes in residential construction with special attention to energy efficient methods.

Learning Goals:

- ⑧ To become acquainted with the tools, materials and processes used in the construction industry.
- ⑧ To develop skills in using tools and materials for residential construction. To develop some construction management experience.
- ⑧ To solve problems commonly encountered in construction. To be able to size structural elements, as well as design foundations, framed floors, walls, ceilings, rafters, and stairs.
- ⑧ To explore energy efficient construction practices.
- ⑧ To evaluate critically alternative construction techniques and materials.

Objectives:

1) Safely and correctly use the following tools:

transit level	framing square
water level	claw hammer
electric circular saw	mason's trowel and chisel
electric sabre saw	level
reciprocating saw	chalk line
router	coping saw
electric hand plane	nail sets
table saw	drywall blades
power miter saw	wood chisels

2. Accurately lay out a building using a transit and batter boards
3. Mix, place and finish concrete
4. Work on a small construction project
5. Place concrete blocks
6. Know some relevant codes and typical inspection procedures
7. Sketch and interpret construction drawings and sketches

Topical Outline:

1. Construction Process and Terminology
2. Structural Aspects of Construction
3. Building Layout and Site Development
4. Concrete/ Excavation and Foundations
5. Construction Management
6. Structural Sizing, Framing Techniques
7. Codes and Inspection Procedures
8. Exterior Sheathing and Finish
9. Roofing
10. Stair Design
11. Construction Safety
12. Air Sealing Techniques
13. Insulation
14. Moisture Protection
15. Windows and Doors
16. Administrative Procedures in Construction

Text: *Fundamentals of Building Construction*

Course Activities and Methods of Learning:

Lecture Discussion	Problem solving
Hands-on activities	Journal research
Site visits	Contacting local businesses

Hands-on Projects:

Students will participate in hands-on projects during class times. In addition, they will be expected to participate in other hands-on efforts, either organized within the department or as a volunteer with organizations such as Habitat for Humanity. Students who are Construction Technology majors are encouraged to join the Student Builder's Association and participate in their activities.

TEC 2708: Construction Technology Policies, Evaluation, and Classroom Rules

Course Requirements:

- Participate in hands - on project work
- Read textbook and other assigned readings
- Take notes during classroom discussions/lectures
- Complete and hand in outside assignments

Preliminary Course "Evaluation":

Active participation	10%
Tests (2 to 3)	30-40%
Reports/ Projects	5-15%
Final Exam	20-30%
Homework	10-15%

Hands-on Activity Schedule:

We will divide into three groups of five or six students for the semester. When conducting a hands-on activity, we will tend to follow these steps:

1. Unload and organize materials
2. Obtain tools for your group
3. Always follow safety procedures
4. Conduct hands- on activity
5. Clean up before end of period
6. All participate until the job is done!

Safety Rules (in brief)

Don't do stupid things

Safety Rules Summarized

- Make sure tools are in good working order before using them
- Always wear safety glasses when working near power tools
- Make sure all blades for tools are sharp
- Never horse around with tools
- Don't leave tools on top of ladders
- When working with people below, be extra careful not to drop anything
- Maintain a zone of safety with dangerous tools

Attendance Policy

This course is primarily oriented around hands-on activities and in-class discussion. As such, you need to come to class, on time. Three unexcused absences or five tardies will cost 5% off of your final average grade; six unexcused absences or ten tardies will cost 10% off of your final average grade, etc. .