McWHORTER SCHOOL OF BUILDING SCIENCE
AUBURN UNIVERSITY
BSCI 7156: HEAVY CIVIL CONSTRUCTION

SEMESTER: SPRING 2015

INSTRUCTOR: Dr. Anoop Sattineni, anoop@auburn.edu, Off: 334-844-5385, Cell: 334-329-0357

OFFICE HOURS: By appointment only. Send me an email and we will schedule that is convenient for both of us.

PRE-REQUISITES: BSCI Graduate Program Officer Approval

LEARNING OUTCOMES:
The overall purpose of this course is to explore issues related to heavy civil construction projects.

Upon completion of the course, students will be able to:

- Understand issues related to selection of heavy civil equipment including economic, productivity and site conditions.
- Understand heavy civil construction procedures including excavation, paving, drilling and temporary construction.
- Understand the principles of heavy civil construction projects including airports, highways, water treatment facilities and pipelines.
- Develop construction execution strategies for heavy civil projects including project budgets, contracts, value engineering scenarios, safety, schedule and site management plans.

TOPICS COVERED:
The following issues related to heavy civil construction will be discussed in this course:

- Project Management Issues
- Construction Engineering & Equipment Issues
- Types of Heavy Civil Construction
- Heavy Civil Construction Project

COURSE POLICIES:
There will be three scheduled tests and one final project. These must be taken at the time and date that has been specified. There will be no make-up tests except in the cases of pre-approval obtained from the instructor. In those cases, arrangements to make up missed assignment or test must be initiated by the students, within one-week of the said occurrence. Where possible, students must contact the instructor at the earliest opportunity to discuss any situations keeping them from meeting course deadlines.

Students will be required to attend the mandatory residency at Auburn University at the

beginning of the semester. In addition students are expected to attend online audio-visual lectures on Wednesday evenings from 6:00 to 8:00 PM via Web-Ex. Students who are unable to attend a lecture must contact the instructor prior to the lecture and make arrangements to get lecture materials, assignment information and deadlines from fellow students or the instructor. Students will have access to the Auburn University library resources (instructor will show the class during the residency week) while they are away from campus, by using the VPN access provided by Auburn University. In addition students will also have access to the CADCIT resources relevant for this course.

GRADING:

SCALE	**SCHEME**		
90 +	A	Quizzes (3 x 15%)	45%
80 – 89	B	Assignments + Final Paper	30% + 15% = 45%
65 - 69	D	Group Project	15%
< 65	F	TOTAL	100%

TENTATIVE SCHEDULE:

Date	**Topic**
Residency	Syllabus Overview Construction Project Delivery Methods Construction Cost Estimation & Control Construction Contracts For Heavy Construction Planning and Scheduling for Heavy Construction Value Engineering Geotechnical Engineering Overview of Construction Equipment Equipment Economics, Selection & Productivity Quiz 1 (Friday, AM)
Week 1	Equipment Economics, Selection & Productivity
Week 2	Equipment Economics, Selection & Productivity
Week 3	Equipment Economics, Selection & Productivity
Week 4	Equipment Economics, Selection & Productivity
Week 5	Equipment Economics, Selection & Productivity
Week 6	Excavating Projects, Quiz 2
Week 7	Paving Projects
Week 8	Foundation Engineering & Construction Methods
Week 9	Caissons & Coffer Dams
Week 10	Construction Dewatering , Group Project Due
Week 11	Highway Construction
Week 12	Airport Construction, Quiz 3
Week 13	Water Treatment Facilities
Week 14	Dams / Bridges / Levees / Misc. Final Paper Due
Week 15	Dams / Bridges / Levees / Misc.

Academic Honesty Policy:
All portions of the Auburn University student academic honesty code (Title XII) found in the Tiger Cub will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Please remember the BSCI Code of Ethics:
As a member of the McWhorter School of Building Science at Auburn University, I pledge to:

- *Through my conduct, demonstrate honesty and integrity in my academic and professional endeavors.*
- *Treat students, faculty and staff with courtesy and respect.*
- *Respect and protect school policies and property.*
- *Strive to improve and uphold the reputation of the School and the construction profession.*

DISABILITY ACCOMMODATIONS:

Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Halley Center, 844.2096 (V/TT) or email: scw0005@auburn.edu