Spring 2019

CET 416-002: Senior Construction Project

John A. Wiggins

Department of Engineering Technology
Construction Engineering Technology Program
Course Policy – Spring 2019

Title and Course Number:
CET 416 –Senior Construction Project, Section 102/section 002

Course Location and Hours:
Section 102 will meet on Saturday mornings , 8:30 AM –11:3000 A.M. , in GITC 1100; Section 002 will meet on Tuesdays and Fridays in Cullimore Lecture Hall 3, from 1:00 – 2:30

Course Description:
Capstone course in Construction Engineering Technology and Construction management Technology; Simulates the methods and procedures used to successfully manage a construction project. Provides familiarization with constructability analysis, value engineering, productivity improvement, quality control, advanced field and office administration techniques, problem solving, and construction automation. Extensive use of construction-related computer software. Written submittals and oral presentations required.

Prerequisites/Co-Requisites: CET415 Construction Project Management as well as Senior standing in construction engineering technology or construction management technology.

Textbooks and Course Materials:
Course Materials will be available on Moodle. The student will also need to have access to the software necessary for the course (Microsoft Excel, Project, Word and PowerPoint all of which are available free of charge from the NJIT homepage).

A Course Manual is available on the Moodle site as well.

Instructor
The instructor for this course is John A. Wiggins, P.E., J.D., F.ASCE. Professor Wiggins holds a BSCE degree (1973) from Newark College of Engineering, an MSCE degree(1981) from the New Jersey Institute of Technology and a Juris Doctor degree (1980) from the Seton Hall School of Law and is a full time member of the teaching staff at NJIT. In addition to his teaching duties, Prof. Wiggins is a practicing civil engineer. He holds Professional Engineer and Professional Planner licenses from the State of New Jersey and a Professional Engineer's license from the Commonwealth of Pennsylvania as well as being admitted to the New Jersey State Bar. He is also a PhD candidate in Civil Engineering at Rutgers University, New Brunswick, NJ where his principal area of study is Construction Management.

Office
The Instructor is available in his office, GITC 2107, for consultation at the times posted on the department webpage for office hours and by appointment only. Appointments can be made on line by visiting the department advising

webpage (http://ucs-vmserver3.njit.edu/et/et_scheduling/appointment_days.php?id_person=3) and reserving an appointment. Walk-ins are generally discouraged.

Concepts and Skills (Course learning Objectives)

Upon completion of the course, each student will be able to:

1. Read, understand and apply a construction contract and contract documents.
2. Understand, apply and prepare an estimate of costs, quantities and manpower as well as evaluate the suitability of materials for a construction project.
3. Utilize methods and understand the hardware and software that is appropriate in a construction project.
4. Understand and apply fundamental computational methods and analytical techniques the sub-disciplines related to construction engineering, specifically scheduling, structural analysis and construction safety.
5. Produce and utilize documents related to design, construction and operations
6. Perform economic analysis and cost estimates related to design, construction and maintenance of systems associate with construction engineering.
7. Understand and select appropriate construction materials and practices.
8. Apply the appropriate principles of construction management, law and ethics.
9. Understand ethical implications within the construction industry.
10. Understand and perform a standard analysis and design in a sub-discipline related to construction engineering.

Attendance Policy and Student Conduct

The class will be conducted in a professional atmosphere in an effort to acquaint the students with the atmosphere of a professional environment. Therefore, laptops are not permitted in class without prior approval of the instructor as is cell phone text messaging. Similarly, food is not permitted in class. A light beverage (i.e. coffee, a bottle of water, etc.) is permitted as would be in any business meeting.

It is the student's responsibility to attend class. If a class is missed, the student is responsible for all material and announcements provided during his absence. Assignments are posted on the course outline. Lecture attendance is not required but is encouraged and is a portion of the student's grade. Attendance will be taken during class for administrative purposes.

During the conduct of the class, professional courtesy is expected. This includes arriving on time as well as leaving during class. Similarly, "private" conversations with fellow students during a class are discourteous and inconsiderate to both your Instructor as well as your fellow students. You are encouraged to ask any questions that you feel further clarifies the material being presented or that will be to the benefit of class in general. Please feel free to ask any question at any time. Negative behaviors, such as texting or falling asleep in class, will be detrimental to your grade in the course.

Grading Criteria

In order to successfully complete this class, the following tasks must be completed:

1. Submission of all projects assigned this semester
2. Participation in all project teams and team activities
3. Completion of the Final Assessment Test

In determining the final grade for this course, all grades shall be weighted as follows:

Project Grades	*70%*
Homework	*20 %*
Attendance	*10 %*
Total	***100 %***

Grading Scale
Letter grades will be assigned based on the following scale

A	100 - 90
B	89 – 80
C	79 – 70
D	69 – 60
F	59 - 0

The grade of Incomplete will only be granted in the case of an extreme emergency on the part of the student, demonstrated by appropriate documentation. Your Instructor reserves the right to vary the above as necessary based on the results of the course.

Professional Communications
All communications between the student and Instructor (homework, reports, papers, emails, etc.) are professional communications and should be treated as same. Use of slang and computer short-hand are improper and should be avoided. Also, proper grammar and spelling should be employed at all times.

Inclement Weather
As the weather during the early part of this semester can result in dangerous conditions that might warrant the cancellation of class; students should check Moodle and their NJIT email by 4:00 P.M. prior to coming to campus. If a class is to be cancelled because of inclement weather, notice will be forwarded to the student via email by that time. However, as all assignments are due in Moodle, submissions will carry on as usual regardless of weather.

Course Reference Materials
Standard Specifications for Road and Bridge Construction, New Jersey Department of Transportation, 2007.

"AIA 201A General Conditions for Construction", American Institute of Architects, 2007.

"The Standard for Soil Erosion and Sediment Control in New Jersey," 2004, revised to 2017,the New Jersey Department of Agriculture — State Soil Conservation Committee.

"Occupational Safety Standards for the Construction Industry", CFR 1926.

"Manual on Uniform Traffic Control Devices", 2009, Federal Highway Administration.

"Steel Construction Manual, 15th Edition" American Institute of Steel Constructors.

"Formwork for Concrete, SP-4", American Concrete Institute.