Course Policy, Procedures, and Syllabus

Building Construction Program, Georgia Institute of Technology

Course Title: Construction Issues and Initiatives
Course No: BC 4670
Prerequisites: per course requirements
Semester/Year: Fall, 2011
Days/Times: Tuesdays and Thursdays, 9:35 a.m. to 10:55 a.m.
Classroom: Room 107, architecture east
Instructor: Marcel Granier, MS BCIPD
Instructor's Office: Hinman Research Building 234
Instructor's Office Phone: (404) 944-8247
Instructor's Email Address: *marcel.granier@gatech.edu*
Instructor's Office Hours: By Appointment

Required Textbook: *Mechanical and Electrical Equipment for Buildings,* (Eleventh Edition), Walter T. Grondzik, Alison G. Kwok, Benjamin Stein, John S. Reynolds, Wiley, ISBN: 978-0470195659

Course Description, Goal, and Objectives: During this course, we will learn the fundamentals of indoor comfort provided by properly designed, selected, installed, commissioned, and maintained mechanical and electrical systems.
There is no dispute that the construction industry is a world of increasing complexity. This complexity is articulated in fragmentation, rushing, adversity, and frustration with the product, the process, and the environment. The design, construction, and management of the built environment have regularly developed new ways of getting buildings designed, built, and utilized.

There are a variety of issues that require the construction professional and student to understand the emerging project delivery systems and the intricacies of the relationships, contractual and otherwise, among designers, constructors, and other players in this fascinating industry of creating the built environment.

This course will begin with a macro look at these various issues and building systems. Then continue with a focus on the complexities and relationships of the mechanical, electrical, and plumbing systems of a project. Design and construction limitations have traditionally been imposed by site care to characteristics of topography, orientation, and climate; the budget; owner preferences; and the legal conditions of codes and zoning restrictions in the area.

Today, energy efficiency is a strong influence, which must be carefully considered in the selection of a building's system components with regard to energy efficiency, and the selection of energy sources. With the advent of more and more complex systems, specialty consultants are required to design and handle the details of these technologies.

Assignment and Evaluation:

Final grades will be based on an aggregate point total for exams, homework, papers, quizzes, classroom participation, and/or projects. **Grades WILL NOT be curved to provide intellectual challenge and academic reward.** Course grading is as follows:

A	B	C	D	F
90% and above	80%-89%	70%-79%	60%-69%	<60%

Points: The following table summarizes the points for this course. If included, group presentations will be graded for the entire group, and evaluation of individual team members will become part of the final grade. Make-up exams/presentations are not allowed for any reason. All homework, projects, tests and exam grades will become final one week after they are returned in class. Class participation (discussion and quizzes) will contribute to the final grade. The final exam and project presentation/report are comprehensive.

	Points	Percent
Attendance	100	10
Homework/Assignments	150	15
Quiz 1	150	15
Mid-Term Exam	250	25
MEP Plan/Project	350	35
TOTAL	**1,000**	**100%**

COURSE POLICIES

In the following policies, 'you' indicates the 'student' and 'instructor' means 'faculty' or 'professor.'

Policies and Expectations: This course will be an intense and sometimes frustrating educational experience; it is necessary that we all contribute to its success by following the course policies. You should not only be in class, but also strive to participate in class discussions when appropriate.

Assignment Deadlines: All assignments given are due on the date indicated. All students are expected to complete any and all assignments given. The instructor reserves the right to modify assignments as necessary. You will not receive credit for late assignments (homework, projects, readings, and others). However, the instructor will accept and correct these assignments, in order to provide you with feedback that will be beneficial in the learning process.
NO EXCEPTIONS.

Class Attendance Policies: Attendance is mandatory for all class lectures, labs, site visits, and exams, unless you are ill or officially excused by the instructor as the result of participation in a university function. There are no "free cuts" permitted and there will be a penalty (as decided by the instructor) for not attending the class. If you attend fewer than 75% of the scheduled class meetings, you will not receive credit for the course. Any student arriving late for class or leaving early from class will be counted as absent from that class period. This policy is in your best interest, since attendance is essential for understanding some of the complex reasoning processes covered in this course which is critical for doing well in this class. In the case of unavoidable absences, you are responsible for making up the work done in class. It is not the instructor's responsibility to provide the student with that information outside of class. It is your responsibility to obtain any missed information or handouts given in class from a

classmate and you should exchange phone numbers or e-mail addresses with other students in the class to better facilitate note sharing, etc. No companions, friends, family, or pets are permitted in class.

Methods of Communicating: You can submit all written work to the instructor in class, in hard copy or by e-mail, if allowed by the instructor (the assignment must be received by the deadline given). You can also ask questions and ask for clarification by e-mail, in class, or by visiting the instructor by appointment at his/her office. Students are not permitted to discuss grades with the instructor via e-mail, only in-person.

Method of Instruction: The course may consist of a combination of lectures, discussion, guest speakers, site visits, videos, presentations by industry professionals, labs, and teamwork.

Readings, Preparation and Participation: The reading assignments, problems cases and discussion forums are an integral element of the course. Students are expected to complete readings and other assigned work prior to each class, in order to fully participate in the discussion. Learning is approached as a participatory process, which benefits from student/teacher and student/student interaction. The lectures may not explicitly follow the assigned book reading, but are designed to bring together diverse information from various sources.

Field Trips: Field trips visits are mandatory and are meant as an enrichment experience. Field trip locations will be announced prior to the scheduled visit. It is the student's responsibility to wear hard-toed shoes, hard hats, protective eye cover (on certain sites) and long trousers/slacks during the field trip. Students are required to fill out and sign the Georgia Tech's "Release and Waiver of Liability" form, as well as any other forms required by the company whose site is being visited.

Laptop/Handheld Computer Use: Laptop/handheld computers may be used in class to take notes ONLY, but not for other purposes, such as e-mail, Web site searches, chat, or other personal uses. Students using computers during class for work not related to that class must leave the classroom for the remainder of the class period. Abuse of this policy will result in the prohibition of laptop use by this student.

Cell Phones: All communication devices must be turned off in the classroom. The use of cell phones, beepers, or other communication devices is disruptive, and is therefore prohibited during class. No personal listening devices or personal transportation devices are permitted.

Make-up Exams: There will be no make-up exams under any circumstances, except medical reasons. Provide your instructor with a letter from your medical doctor to schedule a make-up exam.

Food and Drink in the Classroom: Students are not allowed to bring food or drinks into classroom unless approved by the instructor.

Class Discussions: Your active and productive participation in class discussions is encouraged. Various viewpoints and opinions are encouraged and welcome. Questioning the ideas of others, including the instructor, is similarly welcome. However, the instructor will exercise his/her responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion. If your conduct during class discussions seriously disrupts the atmosphere of mutual respect, you will not be permitted to participate further.

Instructor's Absence or Tardiness: If the instructor is late in arriving to class, you must wait a full 20 minutes after the start of class before you may leave without being counted absent, or you must follow any written instructions the instructor may give you about an anticipated absence or tardiness.

Plagiarism: Students are expected to do their own work in this course. To use another writer's or speaker's ideas without giving proper credit by means of standard documentation is plagiarism. All course papers, notes, homework, and projects submitted to the instructor are subject to textual similarity review for the detection of plagiarism. All submitted papers will be included as source documents in the reference database for the purpose of detecting plagiarism of such papers. The instructor will follow the Institute's policy for plagiarism.

Academic Misconduct/Honor Code: Students in this course are responsible for behaving in accordance with the Georgia Tech Academic Honor Code. The Institute Student Honor Code is printed in the Georgia Tech General Catalog, as well as available on the Web at: www.honor.gatech.edu.

Disabilities: Any student that may need an accommodation for any sort of disability should contact the ADAPTS Office: Assistant Dean/Coordinator for Students with Disabilities, Smithgall Students Services Building, Suite 221. The phone number is (404) 894-2564.

Computer Specifications: For information on computer specifications to meet Georgia Tech standards, visit www.coa.gatech.edu/computing/comp_specs.htm. Internet access is required for this course, as is an e-mail account for communication with the instructor.

Policy Changes: Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.

Supplemental Policies:

The following supplemental policies (if any) will supersede the previous policies listed above, at the discretion of the instructor.

BC 4670 CONSTRUCTION ISSUES AND INITIATIVES Course Syllabus

Class	Date	Subject	Reading	Assignment Due
1	8/23	Course overview & Introduction to MEP, energy, …	Chapter 1	
2	8/25	Introduction to mechanical and electrical systems:…	Chapter 1	
3	8/30	HVAC fundamentals	Chapter 7	Requirements
4	9/1	Heat Flow	Chapter 7	Chap. 7 questions
5	9/6	Design for Heating and Cooling	Chapter 8	Chap. 8 questions
6	9/8	HVAC for Small Buildings	Chapter 9	Chap. 9 questions
7	9/13	HVAC for Large Buildings	Chapter 10	
8	9/15	Quiz #1 and Heating production equipment & systems	Chapter 10	Chap. 10 questions
9	9/20	Lighting Fundamentals	Chapter 11	Chap. 11 questions
10	9/22	Visit GT mechanical plant		
10	9/27	Light Sources	Chapter 12	Site visit report / Chap. 12 questions
12	9/29	Lighting Design Process	Chapter 13	Chap. 13 questions
13	10/4	Quiz #2		
14	10/6	Daylighting Design	Chapter 14	
15	10/11	Electric Lighting Design	Chapter 15	Chap. 15 questions
16	10/13	Electric Lighting Applications	Chapter 16	Chap. 16 questions
17	10/14	Drop Day – Fundamentals of Acoustics	Chapter 17	Chap. 17 questions
	10/18	No Class – Fall Recess		
18	10/20	Sound in Enclosed Spaces	Chapter 18	Chap. 18 questions
19	10/25	Building Noise Control	Chapter 19	Chap. 19 questions
20	10/27	Water and Basic Design	Chapter 20	Chap. 20 questions
21	11/1	Water Supply	Chapter 21	Chap. 21 questions
22	11/3	Liquid Waste	Chapter 22	Chap. 22 questions
23	11/8	Solid Waste	Chapter 23	Chap. 13 questions
24	11/10	Fire Protection	Chapter 24	Chap. 24 questions
25	11/15	Signal Systems	Chapter 30	Chap. 30 questions
26	11/17	Principles of Electricity	Chapter 25	Chap. 25 questions
27	11/22	Electrical Systems and Materials – Service and Utilization	Chapter 26	Chap. 26 questions
	11/24	No Class - Thanksgiving Holiday		
28	11/29	Electrical Systems and Materials – Wiring and Raceways	Chapter 27,28	Chap. 27,28 questions
30	12/1	Final Presentation - Oral		
31	12/6	Dead Week	Review	
32	12/8	Dead Week	Review	
33	12/15	Final Presentation - Written	8:00 to 10:50 a.m.	