

## Course Policy, Procedures, and Syllabus

*Building Construction Program, Georgia Institute of Technology*

<b>Course Title:</b>	Construction Technology I
<b>Course No:</b>	BC 2610
<b>Prerequisites:</b>	None
<b>Semester/Year:</b>	Fall 2010
<b>Instructor(s):</b>	Javier Irizarry, Ph.D., P.E.
<b>Assistant (if any):</b>	Arash Bozorgmehr
<b>Office:</b>	Dr. Irizarry: College of Architecture Annex (Building Constructing/GIS Building), Room 112 Arash: Building Construction Graduate Student Computer Lab
<b>Office Phone:</b>	Dr. Irizarry: 404-385-7609 Arash: 404-432-6008
<b>E-mail Address:</b>	javier.irizarry@coa.gatech.edu
<b>Office Hours:</b>	Dr. Irizarry: Mondays and Wednesdays 10am-11am or by appointment. Arash: By appointment
<b>Required Textbooks:</b>	<u>Building Construction: Principles, Materials, and Systems</u> , Madan Mehta, Walter Scarborough, Diana Armpriest. 2009 Update, Prentice Hall, 2010
<b>Recommended Readings:</b>	<u>Residential Building Design and Construction</u> , Jack Willenbrock, Prentice-Hall, Inc., 1998 <u>International One and Two Family Dwelling Code</u> , International Code Council, 2006 edition. Hand outs
<b>Course Description, Goal, and Objectives:</b>	<p>An introduction to the planning and physical development process for the construction of projects of residential and light construction scale. The goal of the course is to provide a broad background and general knowledge through the following objectives:</p> <p>To achieve a basic understanding of the construction industry and specifically, the residential segment.</p> <p>To understand the importance of soils and foundations as they relate to building construction.</p> <p>To understand the basic components of construction print reading and civil and architectural drafting and their application to residential construction.</p> <p>To become familiar with residential building systems</p>

### Assignment and Evaluation:

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Final grades will be based on an aggregate point total for exams, lab work, quizzes, classroom participation, and/or projects. **Grades will be curved to provide a balance of intellectual challenge and academic reward.** Course grading is as follows:

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

**Points:** The following table summarizes the points for this course. 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.

	<b>Points</b>	<b>Percent</b>
Lab Exercises	200	20
Field Trip Reports	125	12.5
Class Attendance and Participation	125	12.5
Midterm Exam	150	15
Final Exam	200	20
Group Project Presentation/Report	200	20
<b>TOTAL</b>	<b>1,000</b>	<b>100%</b>

**Un-announced quick assessments (quizzes):**

From time to time there will be un-announced assessments based on the material covered during class. Questions may be similar to the assigned review questions from the textbooks and/or other sources used in class. The points earned on these "quizzes" will be part of the "Class Attendance and Participation" points.

**Group Projects:**

There will be a group project this term. The project will be a design project in which students will design a sustainable residential structure or "Green House." More details about the project will be provided within the first month of class.

## Course Schedule\*

Text/Topic/Reading Assignment KEY:

Building Construction: Principles, Materials, and Systems, Madan Mehta, Walter Scarborough, Diana Armpriest. 2009 Update, Prentice Hall, 2010

Hand outs

Class	Date	Topic or Subject	Text/Topic/Reading Assignments
1	8-23(M)	Administrative Matters, Introduction and Course Overview (Roadmap)	
2	8-25(W)	Introduction to the Construction Process	CH 1
3	8-27(F)	Lab	Hand outs
4	8-30(M)	Government regulation on construction	CH 2
5	9-1(W)	TBD	
6	9-3(F)	Lab	Hand outs
7	9-6(M)	<b>NO CLASS – Labor Day</b>	
8	9-8(W)	Soils and foundations	CH 21
9	9-10(F)	Lab	Hand outs
10	9-13(M)	Soils and foundations	CH 21
11	9-15(W)	Loads on buildings	CH 3
12	9-17(F)	Lab	Hand outs
13	9-20(M)	Load resistance	CH 4
14	9-22(W)	Materials: Wood	CH 11
15	9-24(F)	Lab	Hand outs
16	9-27(M)	Materials: Wood	CH 12
17	9-29(W)	WLF Construction	CH 13
18	10-1(F)	Lab	Hand outs
19	10-4(M)	WLF Construction	CH 14
20	10-6(W)	SIP System construction	CH 15
21	10-8(F)	Lab	Hand outs
22	10-11(M)	Materials: Concrete	CH 18
23	10-13(W)	Concrete construction	CH 19

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24	10-15(F)	Midterm Exam	
25	10-18(M)	NO CLASS – Fall Recess	
26	10-20(W)	Materials: Masonry	CH 22
27	10-22(F)	Lab	Hand outs
28	10-25(M)	Techniques: Windows and Doors	CH 29
29	10-27(W)	Techniques: Roofing	CH 32
30	10-29(F)	Lab	Hand outs
31	11-1(M)	Techniques: Stairs	CH 33
32	11-3(W)	Techniques: Flooring	CH 34
33	11-5(F)	Lab	Hand outs
34	11-8(M)	Sustainable construction	CH 10
35	11-10(W)	Thermal properties of materials	CH 5
36	11-12(F)	Lab	Hand outs
37	11-15(M)	Air and water vapor flow properties	CH 6
38	11-17(W)	Fire-related properties	CH 7
39	11-19(F)	Lab	Hand outs
40	11-22(M)	Energy Audit for Residential Structures	
41	11-24(W)	Energy Audit for Residential Structures	
42	11-26(F)	No Class-Thanksgiving	
43	11-29(M)	Energy Audit for Residential Structures	
44	12-1(W)	Energy Audit for Residential Structures	
45	12-3(F)	Lab	Hand outs
46	12-6(M)	Student Presentations on Final Project	
47	12-8(W)	Student Presentations on Final Project	
48	12-10(F)	Student Presentations on Final Project: Last Class Meeting	
49	12-13 to 17	Final Exam (date and time TBD)	

**\*The Course Instructor reserves the right to modify the course schedule to better serve the needs of students.**

## 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](http://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](http://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.

#### **Exams:**

Exams are **closed book and closed notes** except for one (8 1/2" X 11") information sheet, both sides, with **no photocopying and no sharing**. Make up exams **will not be given**. If you miss an exam, the exams taken will be weighted to count for **the total of all scheduled exam points**.

#### **Grade Revision Requests:**

Any request for grade revision must be made in writing (typed and using formal language written like a business letter) and delivered to the course instructor or to department personnel in person (**no email, no fax**) before the one-week deadline. After the one-week deadline, students waive their rights for appeals. The request for grade revision must include the name of the student, the assignment or test in question, description of the item in question, and the reasons for requesting the revision. Students must present their argument clearly and substantiate with evidence. The course instructor will evaluate the request and take appropriate action.

#### **Review Questions:**

Review questions will not be collected or graded but similar questions may be included on exams so students are strongly advised to work all review questions assigned.

#### **Field Trip Reports:**

Field Trip Reports must be submitted (in both hard and electronic form) as indicated in the Course Schedule. Late submission will result in **no credit** being given for the report in accordance to the assignment deadlines section of the Course Policies.

**Specific Homework Requirements:**

Assignments must be prepared using computer software such as MS Word, MS Power Point and the specified multimedia application (i.e., body shall be typed in Helvetica, size 12-font, 1.5 line spacing, 1" margins). Cover sheets shall accompany all assignments submitted by students. Cover sheets shall list the course number, instructor, date, student names and e-mail addresses, and subject of report. Make sure the cover page information is centered horizontally and vertically and that you use Helvetica font 16pt size. All reports must include a table of contents, a table of figures and tables, and all figures and tables included in the report must use captions, which have to be referenced in the body of your report. Students are responsible for turning in assignments that are grammatically correct. Misspellings and grammar mistakes will be taken into consideration when assigning grades. Students shall proof-read their work before submitting it for grading. Specific details for content of homeworks will be provided at the appropriate time.

**Course Management:**

T-Square will be used for managing this course. All communications will be done using this system. The Forums tool will be used for course related questions or comments. Email may be used for other questions of a more individual or personal nature (grades and absences mainly). Please make sure that you include BC2610 in the subject line so my email filters identify the message. All course material will be available in the system as well as all grades for all work related to this course. Electronic communication by any other means will not be accepted. Allow **24 hrs** for a reply to your forum posting or e-mail message (in some cases I will respond before, but this is not guaranteed). E-mails that are received after 2:00pm on Friday will be answered on the following Monday.