

**MANAGEMENT OF CONSTRUCTION FROM THE OWNER'S PERSPECTIVE  
DEPARTMENT OF BUILDING CONSTRUCTION/COLLEGE OF ARCHITECTURE  
SPRING 2012 – GRADUATE LEVEL**

PROFESSOR: SCOTT JONES AIA, LEED AP BD+C  
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**Purpose:**

Learn the GOLDEN RULE of Program Management: HE WHO HAS THE GOLD MAKES THE RULES! There is a difference in working for those that have the gold and make the rules. Construction Management is very different depending on what hat you are wearing around the development table: the Architect/Engineer, the Contractor or the Owner – only one of those is the one paying the bills and therefore makes the rules. You will visit the three largest construction projects on the Georgia Tech campus and meet the people managing them. This course will put into perspective the differences in vision and practice of Construction Management from the Owner's perspective by comparing and contrasting the Architect's/Engineer's and Contractor's roles. The course will focus on construction management, not only for buildings but also for civil and infrastructure construction as well – all from the owners perspective.

**Learning Objectives and Outcomes:**

1. Objectives: Become Familiar with:

- The methods and processes of construction management in use by Owners
- Understand the differences and roles played for construction management from the architects, engineers, contractors, program managers and owners perspective
- The organization of Owners as they manage design and construction and what makes them tick
- Quality control from owner's perspective
- IT applications Owners use for management of projects

2. Objectives: Understand:

- The interrelated roles of all parties and *in particular* the role of the program manager representing the Owner in construction management
- The owners role in Safety programs, contracts and risk management
- How an Owner approaches construction management of both single and multiple building programs including FF&E installation, coordination of Commissioning, punch lists, warranties and hand-off to O&M

3. Outcomes: Be able to:

- Develop a simple Program Management Plan (PMP) with a budget and schedule for a hypothetical program or project
- Select a construction contract method for a project between Design-Bid-Build, Construction Management or Design-Build
- Describe, in general, the role of the program manager representing the Owner in all sectors (private corporations, government entities, private consulting firms)

This course is organized in both lecture and seminar format and will employ lectures by both the course instructor and outside practitioners. It will also involve visits to offices of companies (architects, engineers, construction managers, program managers and developers) involved in the industry as well as construction sites of on-going projects and programs.

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There are fifteen lecture periods of two hours and fifty minutes each.

**Evaluation:**

You are expected to attend class regularly, read the material assigned, prepare to discuss cases as assigned, and participate actively in the discussion periods. Your grade will be determined by your participation in class discussion, case presentations, a mid-term and final exam, and a group or individual project assignment.

- Class Participation, 20%
- Mid-term examination, 30%
- Final Exam, 20%
- Graduate Research Project 20%
- Group Project, 10% - Working in teams, you will be assigned a hypothetical project for which you will prepare a program management plan, to include program, budget, schedule, project approach, and other contents to be assigned in the course
- Case Presentations –These are hypothetical situations that you might encounter as a program manager. You will be asked randomly to discuss the case or cases and present your solution to the situation presented. These will be graded as a part of class participation.

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For policy information on Georgia Tech's Academic Honor Code, please see [http://www.catalog.gatech.edu/rules\\_regulations/#18](http://www.catalog.gatech.edu/rules_regulations/#18)].

**Reading Assignments and Course Outline:**

There is no single text of sufficient depth and breadth to adequately cover the subjects addressed in this course. Assignments will be made from the text below:

**A. Course Text :**

1. Construction Management Standards of Practice, 2010 Edition by CMAA (Construction Management Association of America)

**B. General Information and Additional Reading**

1. The Art of War, by Sun Tzu
2. Getting to yes: negotiating agreement without giving in, by Roger Fisher, William Ury, Bruce Patton
3. The Four Agreements: A Practical Guide to Personal Freedom (A Toltec Wisdom Book), by Don Miguel Ruiz

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**C. Graduate Research Project:**

1. In addition to the course requirements, an in-depth research project is required of the graduate students from the Owner's perspective on one of the following topics:
  - a. The impacts of BIM on the management of construction
  - b. The impacts of Integrated Project Delivery (IDP) on the management of construction
  - c. The evolution of sustainability as it is impacting the delivery of projects
  - d. Modularization as it is impacting construction
2. Format:
3. This project must be presented both as a paper and power point presentation. The presentation will be delivered to the class with Sr. Executive guests from the industry present.
4. This research should be typed in Calibri or Times Roman in 12 point font with 1.5 line spacing. Graphics and charts can be additional but should not be used to factor in the length or quality of the paper. APA format should be used when citing references.
5. Due Dates:
  - a. Topic selection 1/24
  - b. Outline 2/28
  - c. Final submission and presentation 5/1
6. Grading Criteria:

Criteria	Points Value
Depth of Supporting Information/Thoroughness of Research	150
Use and Analysis of Data	100
Conclusions & Recommendations	150
PowerPoint Presentation	100
TOTAL POINTS	500

7. Process:

No.	Process (Steps)	Description
1	Describe Research Objective	The objective of my research is to ...? Provide references for framing objective
2	Define Your Hypothesis	A statement describing your research investigation.

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3	Significance of Your Research	What are the expected outcomes, conclusions, findings, discoveries, benefits to society, the research community or the owner.
5	Identify Sources of Data	Industry, government, research organizations, military, people, etc.
6	Define and Classify the Type of Data Needed	Make sure this type of data is available, accurate and reliable. Interviews with subject matter experts are also acceptable (Delphi method).
7	Conduct an Extensive Background Study	Focus on the relationship to present state of knowledge in your field of research – what is the relation of your research to the progress elsewhere in related work?
8	Define the Scope of Your Research and the Expected Contributions	How is your research different than all the others (better, more accurate, easier to use?).
9	Collect Data	Questionnaires, tables and matrixes, databases, etc.
10	Analyze the Data	Nature of the data.
11	Make Conclusions and Recommendations for Future Research	Look for: trends, relation between variables, new policies/guidelines, new findings, etc.
12	Cite Your References	Use APA format when citing your references.

**Additional Information:** All cell phones should be turned off during class.

In case of emergency (i.e. fire, accident, criminal act), please call the Georgia Tech Police at 404-894-2500. Please note that Perry Minyard, IT Support Administrator is also a firefighter and an Emergency Medical Technician (EMT) certified in performing CPR.

Students with disabilities requiring special accommodations must obtain an accommodations letter from the ADAPTS Office [[www.adapts.gatech.edu](http://www.adapts.gatech.edu)] to ensure appropriate arrangements.

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**Course Schedule (all dates 6:05 to 8:55 pm)**

Lecture	Book	Date	Topic Summary
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Number	Chapter		
1	---	1/10	<p>Introduction to Management of Projects from the Owners Perspective: What are the different types of Owners and what it means to be a leader.</p> <p>Presentation: Colin Powel's Primer on Effective Leadership</p>
2	1 & 2	1/17	<p>Project Management – The key elements for success managing projects on behalf of the Owner, contract types &amp; range of services</p> <p>Site Visit: Draper Associates office - Program Manager providing PM assistance for AMC</p>
3	3	1/24	<p>Cost Management – Compare the Roles of Architect, Engineer, Contractor and Program Manager in Management of Projects. Put into perspective the differences in vision and management practice Owner's perspective by comparing and contrasting the Architect's/Engineer's and Contractor's roles</p> <p>Site Visit: Woolpert's office</p>
4	4	1/31	<p>Time Management – Contract and methods of Construction an Owner uses – Design Bid Build, Select Bid, Agency CM, CM at Risk, Design Build and IPD. Risk analysis of the different types and how an Owner determines when to use each one.</p> <p>Guest Speaker: Jason McFaden Barton Marlow; case study Football facility, use of Design Build and BIM to compress schedule</p>
5	5-6	2/7	<p>Quality Management &amp; Contract Administration – Advantages and disadvantages for different forms of contract.</p> <p>Site Visit: Project tour of the AMC Replacement Facility and discussion with Trevor Pitt from Whiting Turner and Jim Weiner from MAKE Architecture; Schedule issues including how Owner's conduct their own work such as FF&amp;E and commissioning prior to the work being finished</p>
6	7	2/14	<p>Safety and Environmental Hazards – How an Owner needs to</p>

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			<p>ensure compliance with a comprehensive environmental and safety program;</p> <p>Guest Lecturer: Mark Demyanek.</p>
7	8	2/21	<p>Program Management – Preconstruction and understanding the Owner's BOD and how it drives the process</p> <p>Site Visit: McCarthy's office the Engineering Bio-systems Building CM</p> <p>Launched first class project – Mason CM RFQ &amp; selection</p>
8	8	2/28	<p>Program Management – How do we keep track of it all – the IT systems used by Owners for Management of Projects</p> <p>Guest lecture: David Goldfarb</p>
9	9	3/6	<p>Sustainability – Carbon Neutral Energy Solutions Laboratory – a Design build LEED Platinum targeted facility at Georgia Tech; How the Owner's BOD and contracting methods shaped the outcome.</p> <p>Site Visit to CNES</p>
10	---	3/13	<p>Class project presentations and final selection for Mason RFQ for CM services</p> <p>Mid Term Exam</p>
---	---	3/19-23	Spring Break
11	---	3/27	<p>Second Class project initiated: Hinman case study Owner's manipulation of PMP, scope OBD, preliminary Budget and Schedule and how it affects the A/E &amp; CM team.</p> <p>Guest lecture: JJG – Mike Hall – how a full services Program Manager is organized for a multi-project program using Tech Square as a case study</p>
12	---	4/3	How estimates and schedules are put together from the OBD.

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			Site Visit: Cooper Carry – Engineering Bio-systems Building Architects & Engineers
13	10	4/10	Planning for extensive site work & how it shapes logistics; Tennis Complex case study  Site Visit: New South's office CM's for
14	10	4/17	What happens when the horses get in the ditch? An analysis of what can go wrong; case study GT Family Housing- how to learn from your mistakes.  Presentation: An Instructive Analysis II  Guest lecture: Randall M Hawkins
15	11	4/24	Presentations for class project and Research Papers
16	---	5/1	Presentations of Research Papers  Final Exam