

# NEW COURSE PROPOSAL

GRADUATE Level I \_\_\_\_\_ Level II X

UNDERGRADUATE \_\_\_\_\_

SCHOOL, DEPARTMENT, COLLEGE: Architecture

DATE: 8/6/07

1. Proposed Course Number: COA <del>XXXX</del> <u>6xxx</u> (Verify with Registrar's Office)		2. Hours: LECTURE <u>3</u> LAB/RECITATION _____ SEMESTER CREDIT <u>3</u>	
3. Descriptive Title: <u>History of the Construction Industry</u>			
4. Recommended Abbreviation for Transcript – (24 characters including spaces): <u>C O N S T R U C T I O N I N D H I S T O R Y</u>			
5. Catalog Description – (25 words or less) Addresses how today's construction industry is organized and its particular characteristics, how it evolved from early times and where it may be heading in the future.			
6. Basis: L/G <input checked="" type="checkbox"/> P/F <input checked="" type="checkbox"/> Audit _____			
7. Prerequisites: <u>Graduate standing</u>  Prerequisites with concurrency: <u>n/a</u>  Corequisites: <u>n/a</u>			
8. Has the course been taught as a special topic? Yes _____ If YES, When: <u>Spring 2007</u> Enrollment: <u>7</u>			
9. Is this course equivalent to another course (graduate or undergraduate) taught at Ga. Tech? If yes, list course number(s): <u>No</u>			
10. Are you requesting that this course satisfy: Humanities _____ Social Science <input checked="" type="checkbox"/>			
11. Expected Mode of Presentation:		MODE	% of COURSE
		Lecture	85%
		Laboratory Supervised	
		Unsupervised	
		Discussion	15%
		Seminar	
		Independent Study	
		Library Work	
		Demonstration	
		Other (Specify)	
12. Planned Frequency of Offering:		TERM TO BE OFFERED	EXPECTED ENROLLMENT
		Fall	
		Spring <u>2008</u>	
		Summer	
13. Probable Instructor(s) – Please mark with an asterisk any non-tenure track individuals. <u>Professor Brian Bowen* - Douglas C. Allen</u>			
14. Purpose of Course: <u>Relation to other courses, programs and curricula: Complements History of Design courses; relates to a key College strategic objective - AECP Integration</u>			
15. Required _____ Elective <u>X</u>			
16. Please attach a topical outline of the course			

# HISTORY OF THE CONSTRUCTION INDUSTRY

## Course Description and Objectives

This course centers on the construction industry in all its facets. The intention is to ensure that students taking it are provided with an in-depth understanding of how today's industry is organized, how the industry evolved and where the industry may be heading in the future. Equipped with this knowledge, graduates will be in a better position to understand their role in whichever sector of the industry they choose to build their careers, and to contribute to positive change and improvement in how the industry serves its clients. At the same time, the course will be a component in contributing to the College's strategic objective of AECIP integration. The course will be open to College of Engineering students

It should be emphasized that this course is neither a history of architectural or engineering design nor of construction technology, but concentrates rather on industry structure, organization and the way it delivers its products.

The course is organized around three themes:

1. Today's construction industry: the emphasis will be on identifying the particular characteristics that define the industry which make it distinctive from other sectors of the economy.

2. Historical evolution: how today's industry was formed, starting in ancient times and continuing through:

- medieval period (1100 – 1350)
- post-medieval (1350 – 1730)
- industrial revolution (1750 – 1850)
- global industrial consolidation (1850 – 1900)
- 20<sup>th</sup> Century to current times

While a chronological order will be followed, this will be overlaid at each period with specific industry issues, such as key stakeholders, legal framework, procurement, project management, quality control, training, time & cost control, regulation, etc. Throughout a broad global perspective will be given, i.e. the subject will not be addressed solely from a European and American viewpoint. Indeed, one of the sessions will focus on how selected country's construction industries have developed in different directions, and what can be learned from this.

3. Future trends and directions: arriving at the end of the story, today's industry will be re-examined by summarizing what has been learned, addressing current trends, speculating on future trends and brainstorming longer-term directions.

Grading will be based on attendance record, class participation, a mid-term exam and a final research paper.

## Topical Outline

### A. Today's Construction Industry

1. Construction industry overview
2. Financing and delivering projects, procurement & contracts
3. Key players
4. Risk management, estimating, quality control

### B. Historical Evolution

1. Classical times: Egypt, Greece, Rome
2. Medieval period: England and France
3. Renaissance: Florence, N.Europe & Spain
4. 17<sup>th</sup> Century: England & France
5. 17<sup>th</sup> Century: Colonial America
6. Industrial Revolution: Great Britain & Europe
7. 18<sup>th</sup> Century: America
8. United States: 1800 to Civil War

9. United States: Industrial revolution to 1900
10. United States: 1900 to WW II
11. United States: WW II to current times
12. International Directions: 19<sup>th</sup> & 20<sup>th</sup> century trade in construction & design services
13. International Directions: Three country case studies – Great Britain, France & Japan

### **C. Future Trends and Directions**

1. US Construction Industry Today
2. Short and Long Term Trends
3. Future Challenges (Industry Panel)

### **Required Reading**

There are no suitable texts. Extracts from selected books and papers (Listed below) will be posted on the Library course folder. Reading will be assigned from *The Penguin Atlas of World History* (2003 issue) to provide a broad historical background prior to each class.

### **Construction History in General**

*Construction History, Journal of the Construction History Society*, 1984 –  
*Proceedings of the International Congresses on Construction History*, First Congress – Madrid 2004, Second Congress – Cambridge 2006

### **Classical Times**

*How the Great Pyramid was Built*, Craig B. Smith, 2004  
*The Greek Temple Builders at Epidauros*, Alison Burford, 1969  
*Roman Builders, a Study in Architectural Process*, Rabun Taylor, 2003

### **Medieval Period**

*The Cathedral Builders*, Jean Gimpel, 1961  
*Building in England down to 1540; a Documentary History*, L.F. Salzman, 1967

### **Renaissance**

*The Building of Renaissance Florence: An Economic and Social History*, Richard A. Goldthwaite, 1980

### **17<sup>th</sup> Century**

*London – Rebuilding the City after the Great Fire*, T.M.M.Baker, 2000  
*Versailles, le chantier de Louis XIV 1662 – 1715*, Frederic Tiberghien, 2002

### **Industrial Revolution (GB)**

*Fair and Reasonable: Building Contracts from 1550*, by James Nisbet, Chapter 2  
*A Proper Price: Quantity Surveying in London 1650 to 1940*, by James Nisbet, Chapter 2  
*Building in Britain: The Origins of a Modern Industry*, by Akira Satoh, 1995, Parts One & Three (HD9715.G72.S25)

### **18<sup>th</sup> Century America**

*The Courthouses of Early Virginia*, by Carl Lounsbury, 2005, Chapter 4  
*Architects and Builders in North Carolina*, by C. Bisher & others, 1990, Chapters 1 & 2  
*From Craft to Profession*, by Mary N. Woods, 1999

#### **United States: 1800 – Civil War**

*The American Architect*, by Cecil D. Elliott, 2003, Parts II & III

*The American Civil Engineer – Origins and Conflicts*, by Daniel Calhoun, 1960

*Structures in the Stream*, by Todd Shallat, 1994

*Making Houses, Crafting Capitalism – Building in Philadelphia 1790-1850*, Donna J. Rilling, 2001

#### **United States: to 1900**

*Norcross, Fuller and the Rise of the General Contractor in the United States in the Nineteenth Century*, Sara E. Wermiel. Proceedings of the Second International Congress on Construction History 2005, pages 3297 – 3313

#### **United States: 20<sup>th</sup> Century**

*Skilled Hands, Strong Spirits, a Century of Building Trades History*, Grace Palladino, 2005

*Builders for Progress – The Story of the General Contractors of America*, Booth Mooney, 1965

*Architects to the Nation*, Antoinette Lee, 2000

#### **International**

*Projecting Capitalism*, Marc Linder, 1994