

**CourseNo:** ARCHA4124\_001\_2012\_3  
**Meeting Location:** AVERY HALL 115  
**Meeting Time:** W 09:00A-11:00A

**Instructor Information:**  
[Christopher J. Gembinski](#)

## **ARCH A4124 Structures, Systems & Materials I**

**Avery 115 (Wednesday) and 114 (Friday) Wednesdays & Fridays 9:00-11:00 AM**

**Chris Gembinski, George Wheeler, Norman Weiss, Richard Pieper, Mary Jablonski, John Childs Fall 2012**

### *Description*

This course is the first in a two-semester sequence and focuses on historic architectural materials (stone, brick, terra cotta, metal, concrete, cast stone, mortar, paint, wood). The course model is to explore: sourcing and production of the materials, identification, use in the fabrication of architectural elements, basic properties that limit or allow their use and performance as architectural materials. This course also serves as the foundation for the subsequent material-based conservation courses such as: 1. Architectural Metals, 2. Concrete, Cast Stone and Mortar, 3. Brick, Terra Cotta and Stone, 4. Architectural Finishes in America, and, 5. Wood.

### *Readings and Assignments*

Readings are posted to the *Shared Files* folder in *CourseWorks*. Students should be prepared to answer questions on the readings during class.

### *Grades*

Attendance & class participation 20%

Assignments 30%

Examinations 50%

### *Schedule*

05 September Introduction to Course and Field Trip Faculty Team

07 September Stone: extraction, production and historical use Wheeler

12 September Stone: properties and identification Wheeler

14 September Stone: deterioration Wheeler

19 September Stone: Field Trip Wheeler

Assignment 1: identification of stone samples

Due 26 September

21 September Brick and Terra Cotta: raw materials and production Weiss

26 September Terra Cotta: Properties and historical use Weiss/Allen

28 September Brick: properties, typologies, historical use and bond Weiss

03 October NO CLASS - APT Conference in Charleston

05 October Brick and Terra Cotta: deterioration Weiss

10 October Brick and Terra Cotta: Field Trip Weiss/Allen

Assignment 2: identification of materials and bonds

Due 17 October

12 October Metals: raw materials, production, identification Pieper

17 October Metals: properties, performance and historical use Pieper

19 October Metals: Field Trip Pieper

Assignment 3: identification of metal samples

Due 26 October

24 October IN CLASS MIDTERM EXAMINATION

26 October Mid-Semester Summary Gembinski

31 October Lime, Gypsum and Cement: raw materials and production Weiss

02 November Concrete, Mortar and Plaster: production and historical use Weiss

07 November Concrete and Cast Stone: properties and performance Weiss

09 November Concrete and Cast Stone: Field Trip Weiss et alia

Assignment 4: TBD

Due 16 November

14 November Paint and Finishes Technology: raw materials and production Jablonski

16 November Paint and Finishes Technology: historical use Jablonski

21 November Paint and Finishes Technology: examination and analysis Jablonski

Assignment 5: TBD

Due 28 November

23 November NO CLASS: Thanksgiving Vacation

28 November Wood: extraction, production and historical use Childs

30 November Wood: properties and identification Childs

05 December Wood: performance and deterioration Childs

07 December IN CLASS FINAL EXAMINATION

12 or 14 Dec Introduction to Structures, Systems and Materials II Prudon



syllabus