

Pratt Institute Schools of Architecture / Art & Design  
Undergraduate Architecture & Interior Design Program

Fall 2005	Arch 413	Wood & Metal
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**Class Credits:** 5  
**Type of Course:** Research Seminar  
**Class Meetings:** M 2-5PM `UG Architecture  
**Prerequisites:** Arch & Int Des 301/ 302 or equivalent  
Architectural Materials & Assembly Systems Courses  
**Enrollment Capacity:** 10 interiors students + 10 architecture students  
**Instructor's Name:** Anthony Caradonna Architecture email = acaradon@pratt.edu  
**Location:** Higgins Hall South 2<sup>nd</sup> floor classroom 213

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**Course Overview:**

This course is an advanced Materials Research & Applications Seminar. Its main focus is as a support seminar course that is coordinated with the fall semester interdisciplinary 4<sup>th</sup> year design studio in architecture and interior design. Students research materials and investigate applications at full scale implemented in the design studio. This course attempts to introduce research methods and material applications & techniques.

**Learning Objectives:**

This course attempts to expand upon:  
Research skills  
Materials knowledge base  
Technology & Assembly Techniques  
Finish & Detail issues  
Application of research to full scale design proposals

The first half of the semester will be dedicated to researching materials related to specifying ceiling & lighting systems. This research will be linked to and parallel the design studio project. Students will develop a research notebook and data base and a final materials sample presentation. The second half of the semester students will expand upon research and the design studio project development and construct in-shop full scale mockups, detail models and drawings.

**Course Requirements:**

As per Institute rules, (3) three unexcused absences will result in an automatic failure of the course. Attendance and participation in midterm and final presentations are required. Successful completion of midterm and final project requirements and reviews is required and no make-up or postponed project submissions will be accepted except in the case of unforeseen circumstances and emergencies. Excused absences and project delays must be officially cleared, by professor, in advance, in order to be considered valid.

**Project Requirements:**

- 1 **Semester research, data base & specifications notebook**
  - Assemble Materials Research on specific material(s):
    - Ceiling Systems
    - Wall Panel Systems
    - Project /Concept Specific traditional/emerging Material samples
    - Lighting Systems
  - Consider:
    - Modularity, Geometry & Section***
    - Structure / Support & Supported***
    - Panel Systems & Material Options***
    - Joinery & Connections***
  - Research Engine data base: Assemble list of Research & Materials Sources
  - Outline of Material Specifications
  - Final Project Kit of Parts Budget
  
- 2 **Materials Sample Presentation (1-2 comparative choices)**
  - Kit of Parts: Actual Material Samples & Components
  - Organized and Catalogued Physically & Digitally
  - Selection Criteria Outline

### 3 Project Detailing & Specification

Full scale mockups, detail models and drawings  
½ & full scale detailing and joinery models and detail drawings  
Full, partial detailed scale materials exploration models  
Full scaled material samples  
Project Budget Outline

#### Week 3 Course Introduction

Research Engines:  
Thomas Registry, Sweets Catalogue, Internet  
Material Connexion, Robin Reigi

Company Catalogues, Specification Sheets & Price Lists

Product and Material (&pricing) samples

Traditional, Emerging, Recycling, Sustainability, Green Potentials & Processing

Week 4 Materials Research Pinups (&project parameters)

Week 5 Materials Research Pinups (&project parameters)

Week 6 Materials Research Pinups (&project parameters)

Week 7 Materials Presentation Draft Presentations

#### Supplementary Issues for Materials Research & Product Sourcing

##### Raw Material Origins

Natural  
Chemical  
Synthetic  
Hybrid  
Regions / Countries of origin

##### Material Properties & Characteristics

Opaque, Translucent  
Flexible, Rigid, Brittle etc.

##### Manufacturing Process – (i.e., from forest to paper products & dimensional availability)

Mining  
Harvesting  
Processing  
Cutting  
Melting  
Casting  
Dimensional Modules

##### Company List of Material Producers & Suppliers

Parent & subsidiaries  
Addresses  
Local distributors

##### Applications & Performance

Construction  
Assembly & detail characteristics  
Material Specifications

#### **Bibliography: In Development**

**Fall 2005 Schedule:**

Week 1	8/29 M	<b>No Class</b> - Studio Selection Day
Week 2	9/05M	<b>No Class</b> – Labor Day
Week 3	9/12M	Course Introduction: Research & Materials
Week 4	9/19M	Student Research Pin ups
Week 5	9/26M	Student Research Pin ups
Week 6	10/03M	Student Research Pin ups
Week 7	10/10M	(Columbus Day) Materials Presentation Draft Presentation
Week 8	10/17M	Notebook Drafts Submitted
Week 9	10/24M	Notebook Review
Week 10	10/31M	(Halloween) Detailing, Drawing & Mockups
Week 11	11/07M	Detailing, Drawing & Mockups
Week 12	11/14M	Detailing, Drawing & Mockups
Week 13	11/21M	Detailing, Drawing & Mockups
Week 15	11/28M	Detailing, Drawing & Mockups
Week 16	12/05M	Detailing, Drawing & Mockups
Week 17	12/12M	No Classes Final Review Week
Week 18	12/21M	Notebook due