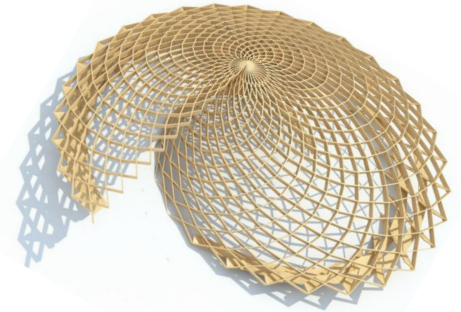


**College of Architecture  
University of North Carolina at Charlotte**



**Spring 2019**

**Course Number:** ARCH 4304 / ARCH 5304  
**Title:** Structural Systems  
**Schedule:** Tuesday | Thursday 8:30-9:45 AM. COLVD 3120  
**Classification:** Required Architectural Technology Course (B.Arch., M.Arch.)  
**Instructor:** David J. Thaddeus, AIA, Professor  
: Office Hours : By Appointment  
Room 247, Storrs Hall, (704) 687-0130, [Thaddeus@uncc.edu](mailto:Thaddeus@uncc.edu)

**Abstract:** This course builds on the information already covered in *Materials and Assembly* and *Structural Principles*. This course offers an exploration of the structural design parameters that are involved in the design of buildings using several material palettes including wood, steel and concrete. The course is organized in four sections and a synopsis as follows:

- Overview of Statics and Strength of Materials
- Equilibrium, Stability, Strength and Stiffness
- Load Path Analysis Applications: Beams and Columns
- Synopsis: Assemblages and connections of disparate materials

**Skills and Outcomes:** One of the objectives of this course is to introduce an awareness of the nature and logic of structural analysis. An exploration of the strengths and limitations of different materials is at the center of this course. The main objective of this course is to enable the student to identify and select an appropriate structural system in response to a set of architectural requirements.

**Methodology:** The content of this course will be presented through lectures, work sessions, projects, and assignments. There will be several homework assignments and pop quizzes for each segment of the course. Each segment will conclude in an exam covering topics from that segment. The synopsis segment will be evaluated by an individual design project

**Evaluation:** The following values for student evaluation and progress are tentative,

For Undergraduate Students:

- |                        |      |
|------------------------|------|
| ▪ 2 Exams x 20% Each   | 40 % |
| ▪ Final Exam           | 20 % |
| ▪ Homework Assignments | 8 %  |
| ▪ Pop Quizzes          | 12 % |
| ▪ Individual Project   | 20 % |

For Graduate Students:

- |                               |      |
|-------------------------------|------|
| ▪ 2 Exams x 20% Each          | 40 % |
| ▪ Final Exam                  | 20 % |
| ▪ Homework Assignments        | 5 %  |
| ▪ Pop Quizzes                 | 12 % |
| ▪ Individual Project          | 20 % |
| ▪ Additional graduate project | 3 %  |