

## Course Information

<b>Number and title:</b>	Arch 436 - Advanced Modeling
<b>Instructor info:</b>	<b>Alphonso Peluso</b>
<b>E-Mail:</b>	peluso@iit.edu
<b>Prerequisite(s):</b>	DC 3 or permission to take the course
<b>Text and Materials:</b>	All course resources will be provided on the portal.
<b>Tutorials Location:</b>	<a href="http://alphonsofeluso.com">http://alphonsofeluso.com</a>

### Course description:

This course will focus on 3D modeling of complex geometric components in Architecture and design. Concepts explored will concentrate on the advancement of digital design as an iterative process. Various modeling types covered are: Explicit Modeling, Nurbs Surface Modeling, Parametric Modeling, Generative Modeling & Responsive Modeling.

<b>Goals:</b>	Develop an in-depth understanding of NURBS Modeling
	Establish a deeper understanding of parametric modeling from the weekly assignment and Final Assignment process
	Create form found parametric models
	Develop a better understanding of the link between Virtual and Physical

<b>Software:</b>	Rhino	<a href="http://www.rhino3d.com/">http://www.rhino3d.com/</a>
	Grasshopper	<a href="http://www.grasshopper3d.com/">http://www.grasshopper3d.com/</a>
	Paneling tools	<a href="http://www.grasshopper3d.com/group/panelingtools">http://www.grasshopper3d.com/group/panelingtools</a>
	Kangaroo2	<a href="http://www.grasshopper3d.com/group/kangaroo">http://www.grasshopper3d.com/group/kangaroo</a>
	Weaverbird	<a href="http://www.giuliopiacentino.com/weaverbird/">http://www.giuliopiacentino.com/weaverbird/</a>
	Mesh +	<a href="http://www.grasshopper3d.com/group/mesh">http://www.grasshopper3d.com/group/mesh</a>
	Biomorpher	<a href="https://www.food4rhino.com/app/biomorpher">https://www.food4rhino.com/app/biomorpher</a>
	....and others	

### Students with Disabilities Statement:

#### Americans with Disabilities Act (ADA) Policy Statement

Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must go through the Center for Disability Resources office. The Center for Disability Resources (CDR) is located in Life Sciences Room 218, telephone 312 567.5744 or [disabilities@iit.edu](mailto:disabilities@iit.edu).

### Reading List:

**Polyhedra Primer** by Peter and Susan Pearce.

**The Function of Form** by Farshid Moussavi

**Tragsysteme = Structure Systems** by Heino Engel

**Parametric Architecture with Grasshopper: Primer** by Arturo Tedeschi

**Innovative Surface Structures \_ Technologies and Applications:** by Martin Bechthold

**Structural Engineering for Architects: A Handbook:** by Pete Silver, Will McLean & Peter Evans

**Grading:** Students will submit several homework assignments & a final

Final grade is based on the three percentages below:

**20% for attendance**  
(attendance is mandatory, signing in for someone and/or 3 unexcused absences will result in a failing grade)

**30% for Homework assignments**

**50% for the Final**

**Please note:** attendance, completion and submission of all course work on time is the minimum requirement and does not mean that you will receive an A grade. All grades are subject to the grade judging criteria below:

### Grades are determined by judging 4 different categories:

**Legibility** - Make sure that your assignments are clear and easy to read. Use spell check (all software apps have it). Your shared folder should be neat and organized with assignment #'s labeled **Firstname\_Lastname\_A0#**.

**Composition** - In addition to being legible you should apply all the concepts of composition that you have previously learned. Some suggestions including but not limited to are: all line drawings must demonstrate good line weights, assignments should include title and drawing names, all text should be placed with good layout & scale.

**Innovation** - Expand upon the skill sets taught in the course and apply them to the assignments. Research additional learning resources found on the Internet and in Libraries. Create your own way to apply the software tools and concepts discussed in the course.

**Originality** - Assignments will weigh heavily on *Originality*. Strive to satisfy the requirements of the assignments with creative and original solutions