CourseNo: ARCHA4812_001_2013_1
Meeting Location: AVERY HALL 600
Meeting Time: T 06:00P-08:00P

Instructor Information:
Walter F. Negro

The advent of BIM has brought about a lot of change to architectural design and construction delivery methods. One aspect that has been directly affected (for the better) is an architect's capacity to communicate design intent. Model-based communication is quickly becoming an important area of focus within the umbrella of BIM. Nowhere is this more relevant than in the back and forth between designers and fabricators or builders. A common workflow in the industry today is the use a BIM as a central repository of a project's documentation with other platforms providing specialized solutions where needed. A feature based parametric modeling platform such as CATIA is one of these tools and is often used as a means to manage highly complex subsets of a larger structure. This workshop will explore reasons why parametric workflows not only make the digital fabrication process possible, but enhance it.

Object based modeling, digital prototyping and data outputs will be explored as devices for convergent thinking as we take a design from an idea into a structured assembly. Your project will be described in components that can be easily explained to a fabrication shop or added into a set of construction documents. Focus will be placed on refining an existing design, as opposed to exploring further options.

We will begin with a focus on modeling basics in CATIA, then slowly build up complexity. We will explore the differences between surface and solid modeling; learn the concepts behind a 'wireframe' model; proper product assembly organization; creating parent-child relationships; clash detection and systems coordination; understanding and creating parametric objects; drawing and data output. We will also explore different types of physical prototyping techniques.