



Thornton Tomasetti Foundation sponsors senior thesis program at Penn State University

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The Thornton Tomasetti Foundation has become a sponsor for Penn State University's Department of Architectural Engineering capstone senior thesis program utilizing Integrated Project Delivery and Building Information Modeling (IPD/BIM).

"We are pleased to sponsor the engineering senior thesis program at Penn State, which has an engineering program that is second to none," said Joel Weinstein, P.E., vice chairman of the Thornton Tomasetti Foundation. "Thornton Tomasetti has a strong history of supporting and encouraging education in engineering. We hope our assistance in this program further cultivates the talent pool of future innovators."

"We are grateful for the Thornton Tomasetti Foundation's sponsorship of our program," said Kevin Parfitt, P.E., associate professor of architectural engineering at Penn State University. "The senior thesis program allows our students to gain valuable real world experiences and will help the graduates to become leaders in the rapidly changing architectural, engineering and construction industry."

The innovative educational project involves the development of a year long pilot capstone senior thesis organized and managed around IPD/BIM concepts by a multidisciplinary team. The New York Times Building, for which Thornton Tomasetti provided structural engineering, was selected as the study model for the first year of the initiative that will serve as a case study for the students. The objective of the program is to use the building as a project framework learning experience with state-of-the-art examples of engineering and architectural challenges.

The program involves three project teams consisting of four students from all four architectural engineering sectors: construction management, lighting/electrical, mechanical and structural. Project tasks will examine architectural issues, facade coordination, engineering design, energy analysis, high-performance green building concepts, cost estimating, scheduling, constructability, lighting analysis, coordination among disciplines, site utilization and planning and clash detection. In addition to project work, students will study current applications of IPD/BIM to building design, current BIM software and IPD/BIM trends in the design and construction industries. The students will also have the opportunity to travel to New York to visit The New York Times Building and meet with the Thornton Tomasetti team that worked on the building.

The primary focus of the course will be the integrated engineering design projects, which the teams will present to a jury of faculty and practitioners. Awards will be provided to the team that develops the best integrated design and demonstrates appropriate IPD/BIM technologies and management techniques.