COURSE DESCRIPTION & AGENDA

Day 1 - Introduction to BIM and BIM-based Modeling
Chuck Eastman sets the stage for the course by discussing what BIM is, where it originated and where it’s going. Students learn about modeling facts by completing a hands-on exercise and are introduced to the fundamentals of Autodesk Revit 2016. They learn how to navigate a BIM model, share design models, and work collaboratively. A quantity take-off session provides students with tools to efficiently manage contemporary BIM environments, with the purpose of taking off material quantities.

Day 1 Agenda
- Introduction to BIM (Prof. Chuck Eastman)
- Revit Basics and Model Navigation (Daniel Baerlecken)
- Modeling facts (Daniel Baerlecken)
- Collaboration, Model Sharing and Design Management (Daniel Baerlecken)
- Quantity Take-off & Cost Estimation (Prof. Daniel Castro)
- Day 1 assessment (Quiz 1)

Day 2 - BIM and Construction Management
This portion of the course teaches attendees how to use a BIM tool in construction management. Students get a hands-on introduction to Autodesk Navisworks’ interface, file management, navigation and views. They also study how Autodesk Navisworks Manage facilitates accurate and effective coordination processes, and practice 4-D sequencing. In addition, students discover the value of integrating schedule information into their building information models. They also learn how to use BIM as a collaboration tool for evaluating and communicating important project information, such through safety and constructability reviews and logistics planning.

Day 2 Agenda
- Navisworks Basics (Oliver Smith with Skanska)
- Coordination and Clash Detection (Oliver Smith with Skanska)
- 4-D Sequencing (Oliver Smith with Skanska)
- Safety, Logistics and Communication (Oliver Smith with Skanska)
- Day 2 assessment (Quiz 2)

Day 3 - BIM and Field-Related Technologies
Laser scanning is an emerging technology that can rapidly and accurately capture the shape of physical objects. On the third day of the course, students study laser scanning, data collection, data interpretation, and ways to apply them to the construction industry. Students also study cloud-based BIM tools and workflows, and learn how to use tablets for visualizing and navigating the model. Additionally, they discover how to use cloud-based communication tools (e.g., BIM 360) for collaborative project management and learn how to apply this technology to unmanned aerial systems (UAS) or drones and incorporate it into BIM projects.

Day 3 Agenda
- Laser Scanning and Data Collection (Dr. Yong Cho)
- Working with Laser Scan Data (Dr. Yong Cho)
- Tablets and Visualization (Dr. Yong Cho)
- Drones Applications for BIM (Dr. Javier Irizarry)
- Day 3 assessment (Quiz 3)
Day 4 - BIM for Facility Management, BIM Standards and Future Progression
On the final day, students will be introduced to BIM for facility management services and asset tracking with a review on case studies. Then, we will review the owner's perspective on BIM deployment. Students also learn about BIM standards and interoperability, which is the ability to exchange data between BIM applications and change workflows. This includes available data-exchange methods and current U.S. and international efforts to create data-exchange standards. In addition, Chuck Eastman discusses the future of BIM and some of the practical ways in which it will likely evolve and integrate with BIM practices over the next decade.

Day 4 Agenda
- Facility and Asset Management and a Case Study (*Josh Miller with Skanska*)
- The Owner’s Perspective (*Scott Jones*)
- Standards and Interoperability (*Donghoon Yang*)
- Future of BIM (*Prof. Chuck Eastman*)
- Closing (*Prof. Chuck Eastman*)