Enrollment Management
10/15

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: ABT-225 Class/Lec t. Hours: 2 Lab Hours: 1 Credits: 3 Dept.: ARBT

Course Title: Introduction to Building Information Modeling (BIM) Semester: Fall Year: 2016

Course Description, Prerequisite, Corequisite:

An introduction to Building Information Modeling (BIM). BIM is changing the way projects are designed and constructed. Whether you are a designer or a contractor using BIM across an entire project or a subcontractor/consultant impacted by a specific BIM implementation, this emerging practice requires new approaches and technological proficiency. Expanding upon the skills acquired in ABT-125 and ABT-135, this course presents advanced topics in CADD/BIM software. Industry standard CADD tools such as Revit, AutoCAD, and NavisWorks will form the basis for the course.

Prerequisite: ABT-125, ABT-135

Corequisite:

OBJECTIVES/COMPETENCIES

Course Objectives	Competencies
1. Create and work with a 3D BIM model utilizing AutoDesk Revit	1. Ability to work in a 3-dimensional CADD environment and to create and work with 3D models of construction assemblies and buildings. 2. Ability to create a parametric building information model of a project where model component have "intelligent" behaviors and embedded data and know

	how to extract this data from a model. 3. Create construction documents (plans, elevations, etc.), MEP coordination drawings, schedules of materials, and project progress documentation from a model.
2. Utilize BIM for building design	1. Design a building utilizing BIM software 2. List the benefits and challenges of BIM design 3. Discuss the ownership of the BIM Model
3. Utilize BIM for construction management	1. Ability to create and/or work with a 3D building model in order to perform construction coordination across multiple trades. 2. Create materials schedules utilizing BIM software 3. Create coordination drawings utilizing BIM software 4. Utilize "Clash" detection software to aid in the construction process in the field. 5. Define how BIM fits into different project delivery methods 6. Define Integrated Project Delivery (IPD) 7. Define Lean Construction
4. Utilize BIM in the preconstruction phase	1. List the benefits and challenges of using BIM in the preconstruction phase 2. Create a project estimate utilizing BIM 3. Perform building analysis (energy, structural, other, …) utilizing BIM software
5. Utilizing BIM for Facility Management	1. Define Facility Management and how it has traditionally been accomplished