Course Syllabus
ENCE 426, Fall Semester 2015
Construction Documentation and BIM Applications in Engineering and Construction

COURSE DESCRIPTION
ENCE 426 Construction Documentation and BIM Applications in Engineering and Construction (3 credits) is intended for graduate and undergraduate students enrolled in the Project Management Program. The course will provide students with a basic understanding of construction documentation methods, with a particular emphasis on Building Information Modeling (BIM). Students will learn how construction documents are assembled, coordinated, and maintained, how BIM technologies are implemented into the design and construction processes, and will learn how to use Autodesk Revit 2015. The course includes lectures from PM faculty and guest lecturers from the construction industry.

TEXTBOOKS
“Building Construction Illustrated” — Ching
“Exploring Autodesk Revit Structure 2015” — Tickoo
“Exploring Autodesk Revit MEP 2015” — Tickoo

COURSE OBJECTIVE
Upon successful completion of this course, the student will demonstrate a sound understanding of construction documentation methods. The student will be able to read and coordinate construction drawings prepared by various project consultants, will have the knowledge to manage and implement BIM technologies in design and construction, and will have a working knowledge of Autodesk Revit 2015.

INSTRUCTOR
Jason Dreher PE, jdreher@umd.edu or jtdpsu@icloud.com
HONOR CODE

"The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit: http://www.studenthonorcouncil.umd.edu/whatis.html"

LEARNING ASSISTANCE SERVICE

If you are experiencing difficulties in keeping up with the academic demands of this course, contact the Learning Assistance Service, 2202 Shoemaker Building, 301-314-7693. Their educational counselors can help with time management, reading, math learning skills, note-taking, and exam preparation skills. All of their services are free to UMD students.

GRADING

Grading is based on comprehension and mastery of the material. Homework 25%, exam and course project 70% (midterm exam 25%, final project 45%), and attendance 5% (students with one unexcused absence will earn 2.5% and students with more than one unexcused absence will earn 0%).

CLASS SCHEDULE (Subject to change)

1. **Class 1**: Course introduction; Syllabus review; broad introduction to BIM and construction documentation, contract vehicles, project delivery methods, project specifications, construction drawings
2. **Class 2**: Construction materials, the building site and substructure, building shell.
3. **Class 3**: Building services, drawing coordination
4. **Class 4**: BIM introduction, parametric modeling, the BIM ecosystem, how and why people in the construction industry use BIM.
5. **Class 5**: BIM analytics, IPD, BIM in construction, the future of BIM
6. **Class 6**: Midterm Exam
7. **Class 7**: Computer lab—Revit
8. **Class 8**: Computer lab—Revit
9. **Class 9**: Computer lab—Revit
10. **Class 10**: Computer lab—Revit
11. **Class 11**: Computer lab—Revit
12. **Class 12**: Computer lab—Revit

**13. Thanksgiving Break**

14. **Class 14**: Computer lab—Revit
15. **Class 15**: Computer lab—Revit, course wrap-up, discuss final project