

## EVDS 683.01 | Seminar & Workshop | H(3-0) BUILDING INFORMATION MODELING

Instructors:

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Mondays & Wednesdays 11:00-12:20, PF 2110

### Topics/Schedule (by week)

9/9	Introduction to BIM
9/11	Revit: Getting Started
9/16	BIM Concepts and Methods
9/18	Revit: Basic Concepts
9/23	Performance Analysis
9/25	Revit: Advanced Concepts and Data
9/30	Fabrication and Construction
10/2	Navisworks
10/7	Integrated Project Delivery
10/9	3D Laser Scanning
10/14	Thanksgiving (no class)
10/16	Block week (no class)
10/21	Project Health Check
10/23	<i>Presentation of proposals</i>
10/28	Guest Lecture: Alan Partridge (TBC)
10/30	<i>Project consultations</i>
11/4	Guest Lecture: Peter Bull (TBC)
11/6	<i>Work-in progress presentations</i>
11/11	Remembrance Day (no class)
11/13	<i>Project consultations</i>
11/18	Guest Lecture: Thomas Strong (TBC)
11/21	BIM Symposium (no class on 11/20)
11/25	Guest Lecture: Dale Sawyer (TBC)
11/27	<i>Project consultations</i>
12/2	<i>Final project presentations</i>
12/4	<i>Final project presentations</i>

Note: The schedule is subject to change.

### Introduction

This course explores Building Information Modeling (BIM) as a process involving generation and management of digital representation(s) of a building design. The resulting building information model becomes a shared resource to support decision-making about a building from earliest conceptual stages, through design, analysis, fabrication and construction, and then through its operational life. BIM is introduced as an enabling technological platform for integrated project delivery (IPD), an emerging process in the building industry, where all professionals, firms and organizations in a construction project work as one entity, creating better buildings, faster delivery times, lower costs, reduced scope for or no litigation and a more effective process for the entire team.

### Objectives

Students will learn about the essential concepts and methods associated with BIM (and IPD), the various ways in which BIM has been used currently in the building industry, and its broader implications for the profession. In addition, students will acquire practical skills in using Revit and NavisWorks, software programs made by Autodesk, which are widely used in the industry.

### Teaching Approach

The course will have both the seminar and the workshop format. Monday class meetings will be devoted mostly to lectures or discussions of assigned readings; there will be a number of guest lectures in the second half of the term by leading professionals in the industry. In general, Wednesday meetings will consist of demonstrations of essential concepts and modeling techniques in Revit and other software, which is freely available to students through Autodesk's website. During the course students will develop a "3Dplus" BIM model (i.e. geometry plus additional information) of either their own studio project from the Comprehensive Design Studio or a project provided by the instructors. Each student will present the BIM project in the last week of the class. In addition, each student will submit a short, two-page paper (1,000 words) addressing in critical fashion a BIM-related issue that should emerge out of seminar discussions.

### Means of Evaluation

The final grade will be based on BIM project's development (20%), outcome (30%) and its presentation at the end of the term (20%), plus the short, two-page paper (20%), and active participation in discussions (10%).

### Grading Scale

Final grades will be reported as letter grades, with the final grade calculated according to the 4-point range. Standard EVDS grading scale will be used in all evaluations.

## Notes

1. Written work, term assignments and other course related work may only be submitted by e-mail if prior permission to do so has been obtained from the course instructor. Submissions must come from an official University of Calgary (ucalgary) email account.
2. It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Student Accessibility Services, please contact their office at 220-8237. (<http://www.ucalgary.ca/access>) Students who have not registered with the Student Accessibility Services are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.
3. Plagiarism - Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:(a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),(b) parts of the work are taken from another source without reference to the original author,(c) the whole work (e.g., an essay) is copied from another source, and/or,(d) a student submits or presents work in one course which has also been submitted in another course(although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.
4. Information regarding the Freedom of Information and Protection of Privacy Act (<http://www.ucalgary.ca/secretariat/privacy>) and how this impacts the receipt and delivery of course material
5. Emergency Evacuation/Assembly Points (<http://www.ucalgary.ca/emergencyplan/assemblypoints>)
6. Safewalk information (<http://www.ucalgary.ca/security/safewalk>)
7. Contact Info for: Student Union (<http://www.su.ucalgary.ca/page/affordability-accessibility/contact>); Graduate Student representative( <http://www.ucalgary.ca/gsa/>) and Student Ombudsman's Office (<http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights>).