



COURSE OUTLINE

CONTINUING EDUCATION TECHNOLOGY

COURSE NAME: Revit Architecture I

COURSE CODE: CADE 9132

CREDIT HOURS: 36

PREREQUISITES: Basic Computer Skills

EFFECTIVE DATE: Sept. 01, 2016

TEACHER:

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PLAR ELIGIBLE: YES (X) NO ()

FOR OFFICE USE ONLY		
ORIGINATOR:	SIGNATURE	DATE
CHAIR:	SIGNATURE	DATE
DATE OF REVISION:		

EQUITY STATEMENT: George Brown College values the talents and contributions of its students, staff and community partners and seeks to create a welcoming environment where equity, diversity and safety of all groups are fundamental. Language or activities which are inconsistent with this philosophy violate the College policy on the Prevention of Discrimination and Harassment and will not be tolerated. The commitment and cooperation of all students and staff are required to maintain this environment. Information and assistance are available through your Chair, Student Affairs, the Student Association or the Human Rights Advisor.

George Brown College is dedicated to providing equal access to students with disabilities. If you require academic accommodations visit the Disability Services Office or the Deaf and Hard of Hearing Services Office on your campus.

STUDENT RESPONSIBILITIES: Students should obtain a copy of the *Continuing Education Course Guide* and refer to it for additional information regarding the grading system, withdrawals, exemptions, class assignments, missed tests and exams, supplemental privileges, and academic dishonesty. Students are required to apply themselves diligently to the course of study, and to prepare class and homework assignments as given. Past student performance shows a strong relationship between regular attendance and success.

COURSE DESCRIPTION:

The REVIT architectural modeling program comprises intelligent building components, views, and annotations. This introductory course will lead the user through the basic procedures of designing an integrated building model. New topics will include: Project creation, navigation and display concepts, designing with components, working with levels, creating and editing walls, adding doors and windows, creating floor and roof objects, working with view properties, object styles, loading and modifying family components, adding dimensions and annotations, adding and modifying drawing sheets, and plotting procedures.

COURSE OUTCOMES:

1. Create and modify wall types with Revit
2. Create and modify parametric components with Revit
3. Create and modify parametric, 3D building models with Revit
4. Work with the Revit display system to create floor plans, reflected ceiling plans, and presentation plans from a single building model.
5. Extract and annotate Floor plan drawings from a 3D Building model.
6. Extract and annotate Elevation drawings from a 3D building model.
7. Extract and annotate Section and Detail drawings from a 3D building model.
8. Generate camera views of a 3D building model.

DELIVERY METHODS:

The delivery format of this course is DVD based video lectures and demonstrations with supplemental notes, samples, and other support files delivered electronically through internet access. Support is facilitated through email and website access.

LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:

Required Text

Revit Architecture 1 - Handbook 2016
by Kevin Brown

Required Study Aid

Revit Architecture 1 – Course DVD set 2016
by Kevin Brown

TESTING POLICY:

There are no formal tests in this course. The Course Evaluation is based entirely on assignments.

ASSIGNMENT POLICY:

1. There are two assignments, each of which will be clearly delineated in handouts. Students are to submit all assignments within their course duration.
2. Assignments to be submitted within the course duration of 90 days. Late assignments received after the 90 day period end will be penalized 10% for each week they are late. Assignments will not be accepted later than 4 weeks past the final day in the course duration.

EVALUATION SYSTEM:

Assignment #1 – 40%	Due: Class 6
Assignment #2 – 60%	Due: Class 12

GRADING SYSTEM

The passing grade for this course is: 60%

A+	90-100	4.0	B+	77-79	3.3	C+	67-69	2.3	D+	57-59	1.3	Below 50	F	0.0
A	86-89	4.0	B	73-76	3.0	C	63-66	2.0	D	50-56	1.0			
A-	80-85	3.7	B-	70-72	2.7	C-	60-62	1.7						

Excerpt from the College Policy on Academic Dishonesty:

The *minimal* consequence for submitting a plagiarized, purchased, contracted, or in any manner inappropriately negotiated or falsified assignment, test, essay, project, or any evaluated material will be a grade of zero on that material.

To view George Brown College policies please go to www.gbrownc.on.ca/policies

TOPICAL OUTLINE:

Topic	Outcome	Content	Chapter/ Reference
1	1,2,3,4	Introduction to BIM concepts and Revit Architecture concepts. Exploring the parts of the Revit interface and using basic Revit element creation procedures.	Handout
2	1,2,3	Introduction to Revit view controls. Setting view properties and using Visibility/Graphic overrides. Exploring 3D view navigation controls. Introduction to view creation.	Handout
3	1,2,3	Using dimensions and constraints. Methods for selecting and manipulating content. Introduction to editing tools.	Handout
4	1,2,3,4	Exploring the concept of Categories, Families, Types and Instances. Accessing family libraries and loading families into a project. Introduction to sketching and sketched features.	Handout
5	2,3,4,5	Creating and working with levels. Creating 3D perspectives with Camera Views. Introduction to sheet creation and drawing views.	Handout
6	1,2,3,4	Introduction to Sections and methods for creating building sections, wall sections, and detail sections. Using callout views.	Handout
7	2,3	Custom project templates. Customizing project settings and options.	Handout
8	2,3	Introduction to Compound structure and creating custom wall types. Methods for working with vertically compound walls.	Handout

9	2,3,4,5	Creating and modifying footprint roofs. Joining roofs and attaching walls to roofs. Extruding roofs and creating dormer roofs.	Handout
10	2,3	Editing wall profiles. Joining and cutting geometry. Adding wall openings. Using hosted sweeps and sweep profiles with walls and roofs.	Handout
11	2,3	Creating and working with floors. Editing floor edges. Creating foundation walls and structural foundations.	Handout
12	4,5,6,7	Creating stairs by sketching runs. Creating stairs by sketching boundaries and risers. Using stair calculation rules and modifying stair properties.	Handout

DVD Training Video Index

REVIT 1 –Lesson 1	94 minutes	Disk 1
1- Introduction to BIM and Revit Concepts	(00:00)	
2- Exploring the Parts of the Revit Interface	(15:49)	
3- Working with the Revit Interface Basics	(43:35)	
4- Assignment 1 – Office – Preliminary Layout	(73:22)	
REVIT 1 –Lesson 2	146 minutes	Disk 1
1- Introduction to View Controls	(00:00)	
2- Render, Crop and Visibility Settings	(30:18)	
3- View Properties and Visibility Graphic Overrides	(56:27)	
4- 3D Views, View Creation, and Navigation Controls	(78:30)	
5- Assignment 1 – Office – View, Visibility and Graphics Overrides	(105:34)	
REVIT 1 –Lesson 3	102 minutes	Disk 1
1- Introduction to Dimensions and Constraints	(00:00)	
2- Selecting and Manipulating Elements	(26:34)	
3- Editing Tools – Align, Trim, Split, and Offset	(59:35)	
4- Assignment 1 – Office – Dimensions and Constraints	(75:55)	
REVIT 1 –Lesson 4	96 minutes	Disk 1
1- Categories, Families, Types and Instances	(00:00)	
2- Family Libraries and Loading Families	(24:18)	
3- Introduction to Sketching and Sketched Features	(47:14)	
4- Assignment 1 – Office – Types, Families and Sketched Features	(65:29)	
REVIT 1 –Lesson 5	115 minutes	Disk 1
1. Creating and Working with Levels	(00:00)	
2. Creating Perspectives with Camera Views	(25:18)	
3. Introduction to Sheet Creation and Drawing Views	(33:56)	
4. Assignment 1 – Office – Working with Levels, Perspectives and Sheets	(54:36)	
REVIT 1 –Lesson 6	99 minutes	Disk 1
1- Introduction to Section Views	(00:00)	
2- Callout Views and Details	(23:34)	
3- Assignment 1 – Office – Creating Sections and Callouts	(35:49)	
4- Assignment 1 – Office – Completing the Sheets and Views	(60:19)	
REVIT 1 –Lesson 7	148 minutes	Disk 1
1- Project Templates and Customizing Project Settings	(00:00)	
2- Project Settings – Fill Patterns, Materials and Object Styles	(27:34)	
3- Project Settings – Line Settings and Annotation Settings	(61:38)	
4- Assignment 2 – Custom Template and Project Setup	(90:48)	
5- Assignment 2 –Laying out the Project Walls	(119:28)	

REVIT 1 –Lesson 8	89 minutes	Disk 1
1- Compound Structure and Custom Wall Types	(00:00)	
2- Vertically Compound Walls	(26:58)	
3- Assignment 2 – Custom Exterior Wall Types	(46:48)	
4- Assignment 2 – Adjusting Wall Conditions and Interior Walls	(63:28)	
REVIT 1 –Lesson 9	96 minutes	Disk 2
1- Creating and Modifying Footprint Roofs	(00:00)	
2- Joining Roofs and Attaching Walls	(23:08)	
3- Extruding Roofs and Dormer Roofs	(35:43)	
4- Assignment 2 – Adding the Main Roofs	(45:28)	
5- Assignment 2 – Adding the Low Roof and Dormer Roofs	(73:28)	
REVIT 1 –Lesson 10	120 minutes	Disk 2
1- Editing Wall Profiles and Joining / Cutting Geometry	(00:00)	
2- Adding Wall Openings and Hosted Sweeps for Walls and Roofs	(16:55)	
3- Assignment 2 – Wall Profiles, Wall Joins, and Joining Geometry	(53:28)	
4- Assignment 2 – Wall Openings and Bay Windows	(78:58) E	
REVIT 1 –Lesson 11	95 minutes	Disk 2
1- Creating and Working with Floors and Floor Edges	(00:00)	
2- Creating Foundation Walls and Footings	(27:48)	
3- Assignment 2 – Adding Floors	(40:38)	
4- Assignment 2 – Adding Foundation Walls and Footings	(68:48)	
REVIT 1 –Lesson 12	146 minutes	Disk 2
1- Introduction to Stairs and Stair Properties	(00:00)	
2- Creating Stairs with Component Runs	(24:48)	
3- Assignment 2 – Adding Exterior Steps and Stairs	(59:38)	
4- Assignment 2 – Adding the Interior Stairs – Main and Back Stair	(85:45)	
5- Assignment 2 – Adding the Interior Stairs – Basement Stair	(123:45)	