AEC 299-330  
Revit Arch Modeling-Digital  
Semester: Spring 2014

Instructor: Megan Robertson  
Class Location: Room T-1039  
Class Hours: Tuesdays 6:00 pm - 9:15 pm  
Email: mroberts@jjc.edu

COURSE DESCRIPTION

This course is a hands-on introduction to Building Information Modeling (BIM) by use of Autodesk’s “Revit Architecture 2014” software. Revit Architecture is becoming more and more one of the prevalent software used in the architectural industry today. The student will learn to create building models and use those models from design throughout the documentation process for a case study building. Students will learn Revit’s user interface, modeling techniques, building walls, floors, ceilings & roofs. For the documentation process to create various views (for sheets) such as floor plans, ceiling plans, elevations, sections, details and schedules.

COURSE TEXTBOOKS

REQUIRED: “Autodesk Revit Architecture 2014, No Experience Required”, by Eric Wing

COURSE SUPPLIES

- Binder/Folder for handouts/worksheets/projects
- Flash Disk, Jump/Thumb drive for saving and transporting digital files (2 gig)
- Notebook for taking notes during class
- Construction Calculator or Conventional Calculator
- Architect’s Scale
- Red Pen for drawing mark-ups

COURSE OUTCOMES

A primary objective of the course is to begin to develop competence in planning and producing an Architect’s graphic and written communications to a builder employing Building Information Modeling systems. The student will learn how to produce documents which are clear, logical, technically complete, and legally adequate.

Upon completing this class the student should be able to:

1) Understand the basic concepts of BIM.
2) Understand Revit’s user interface and the basics of how to use it.
3) Create walls, floors, ceilings, roofs, curtain walls and other components in the building model.
4) Manage views and control of their object visibility.
5) To create various plans, elevations, sections, schedules and legends. Then how to use those items in the creation of “Construction Documents” for a project.
6) To use various tags, annotation and dimensions to further the construction document process.
COURSE REQUIREMENTS

This course will utilize the books, materials and possibly training videos as integral learning tools for the student. There will be hands-on projects for students to gain first-hand experience with the software every class period. Attendance and participation in class projects, lectures and discussions are crucial to meeting the course objectives. The quizzes, project submissions and final exam will be comprised of skills derived from all material presented and discussed during the lectures, handouts and the reading assigned.

STUDENT REQUIREMENTS

The lectures in this course build on the previous class’s lecture; regular attendance is required to understand the material and processes taught. The student is responsible for completing all assignments, projects, tests and quizzes. Students are required to participate in all in-class activities.

The student needs to have knowledge of general Windows computer operations and file management procedures (Windows Explorer). Good saving and file backup procedures (flash disks, jump drives, etc…). All class work and data created by the student is the responsibility of the student. Any data that is lost, missing or corrupted will need to be recreated at the student’s expense. NO EXCUSES WILL BE ACCEPTED.

ATTENDANCE POLICY

Attendance is crucial to the development of the course’s material and students are expected to attend each class session. Lab and Lecture participation and attendance are 10% of your final grade. Lectures and material covered will not be repeated. It is the student’s responsibility to obtain missed lecture notes and handouts. Any items assigned for the missed class are still due at the time assigned. The student is responsible to make arrangements to turn-in the assignments.

The student must attend the complete laboratory session to receive full credit for attendance. Late arrivals or early departures must be confirmed with the instructor and obtain permission from the instructor. In the case of sickness or other emergency, contact the instructor by e-mail prior to the start of the missed class. If proper timely notice is given, and with permission from the instructor, the absence will be excused. If a student does not report and obtain permission from the instructor for an absence, it will be considered an unexcused absence. Make-ups for excused absences will require the class work be completed at the next attended class; unexcused absence forfeits the right for makeup work including assignments, and exams. There will be no make-up offered for weekly quizzes, under any circumstances.

PROJECT SUBMISSIONS, QUIZZES & FINAL EXAM

The student will be expected to spend outside time every week for reading and working on class work as assigned by the instructor. Please come to class prepared for discussions relating to the assigned item(s) for that week.

SUBMISSIONS:
Weekly or bi-weekly reviews will be based on particular tasks that have recently been covered in class. The “Project Submissions” as they are called are also a progression of your “Final Project”.

DUE DATES AND TIMES:
The Project Submissions are due at the beginning of a specified class session. Students should refer to the course schedule to determine assignment due dates. Students will be informed of any modifications to the schedule via class announcements, I-Angel, or email.

A final exam will be issued at the end of the semester. The final will be based on quizzes, lectures, handouts, exercises and reading materials. Attendance for scheduled project submissions & final exam is mandatory.
Failure to notify the instructor prior to such submission or exam will result in an automatic 0 for that item, with no make-up offered. Prior notification and make-up will be at a prearranged time. All late submissions & exam (with prior notification) get an automatic drop of one letter grade for that item.

**Final Project**

Along with the learning of Revit, the student (throughout the semester) will be creating a project model and the documentation that goes with that model. The requirements of the “Final Project” will be issued by the instructor. Grades will be determined by the completion of the project and drawings conformance to accepted construction and architecture office standards (as discussed & issued by the instructor). In order to grade the project both electronic files and plotted drawings will be needed.

*NO FINAL PROJECTS TURNED IN LATE WILL BE ACCEPTED.*

**Grading**

The student’s final grade will be determined based on the following schedule; this is an estimate of the work that will be included in the final point total. Should items be eliminated or adjusted, the same percentages will stand for the adjusted point total. The averages per category will determine a final grade percentage and a letter grade will be given on that final grade. Attendance and class participation will assist in determining borderline grades.

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Submissions</td>
<td>40%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Lab/Lecture Participation and Attendance</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Project</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Grading Scale**

The student’s final grade will be determined based on the calculated overall course average percentage as described above. The grading scale is defined as thus:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Course Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>B</td>
<td>85-92</td>
</tr>
<tr>
<td>C</td>
<td>74-84</td>
</tr>
<tr>
<td>D</td>
<td>67-73</td>
</tr>
<tr>
<td>F</td>
<td>below 66</td>
</tr>
</tbody>
</table>

The letter grades are defined per the below:

<table>
<thead>
<tr>
<th>Letter grade of A</th>
<th>Exceptional or outstanding mastery: 1) demonstrates a total understanding of the subject material and is proficient in applying the information. 2) Applies the subject matter in a superior manner with no mistakes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter grade of B</td>
<td>Very good mastery: 1) similar to the elements of an “A” demonstrating a good proficient of the material 2) can easily apply</td>
</tr>
</tbody>
</table>
We will be using the ANGEL classroom support software this semester. You can access this via the Internet from any computer, home, workplace or at the college. It can be reached by going to the Joliet Junior College website http://www.jjc.edu and selecting the iCampus icon at the top of the page.

You will find announcements, course documents, assignments, current grades, etc. posted there for this course. You should access this information at least a few times a week to remain current with announcements. For technical assistance, visit the Online Help Desk at www.jjc.edu/help or visit the Resources tab in ANGEL. You may find a solution to your problem through frequently asked questions, various tutorials; live chat, email and 24/7 help line. To contact a support technician call (866) 281-3638. Personal face-to-face help is available in the iCampus Technology Center for Teaching and Learning in Room J-4019 on the Main Campus and can be reached at 1-815-280-2481.

ANGEL can be used for communicating via email to your instructor and classmates. Once logged into ANGEL, any awaiting messages can be read and new messages created. Please utilize this system for correspondence related to this course. You can set up your ANGEL account to forward any email received there to another account of your choice.

GENERAL JJC REQUIREMENTS

STUDENT CODE OF CONDUCT

All students enrolled at Joliet Junior College are expected to demonstrate qualities of integrity, honesty, civility and respect. These values are important to the learning environment and are expected to be exhibited in conduct of the entire college community, both in and out of the classroom setting. JJC recognizes the rights of its students guaranteed by the Constitutions of the United States and the State of Illinois, which include a student's right within the institution to freedom of speech, inquiry assembly, peaceful pursuit of an education, and reasonable use of services and facilities of the College. The College further recognizes each student's procedural right to due process, including notice, a speedy and fair hearing and appeal.

In the interest of maintaining order on campus and guaranteeing the broadest range of freedom, students must comply with the Code of Conduct. Each student is responsible for reading and complying with the Code of Conduct, which is printed in the college catalog and the student
handbook. Behavior found to be in violation of the code may become part of the student's educational record. Improper conduct will not be tolerated and will result in disciplinary action that may include dismissal and withdrawal from the course per the College’s Code of Conduct.

Per the Code of Conduct, the Responsible Student Should:

- arrive on time to class
- read the course syllabus
- demonstrate respect in expressing opinions and listening to others
- silence cell phone and no texting during class
- attend every class session
- come to class prepared; expect an average of 2 hours homework for every hour in class
- participate in classroom activities
- understand and demonstrate the instructor’s behavior expectations
- complete all assignments in a timely manner
- remain in class until dismissed
- give the instructor your full attention
- communicate with the instructor according to his or her instructions (phone, e-mail, etc.)
- notify the instructor regarding problems with any of the above
- Absolutely no surfing of the web including online messaging, email correspondence, etc. is allowed during the class unless working on an assigned project or at class break time

ACADEMIC HONOR CODE

The objective of the academic honor code is to sustain a learning-centered environment in which all students are expected to demonstrate integrity, honor, and responsibility, and recognize the importance of being accountable for one’s academic behavior.

Acts of academic dishonesty include:

- **Cheating**: Intentionally using or attempting to use unauthorized materials, information or study aids; use of any unauthorized assistance, resources, materials or electronic/cellular devices with or without photographic capability in taking quizzes, tests or examinations and the acquisition, without permission, of a test or other academic material belonging to Joliet Junior College, to any department, or to any staff. This includes opening, reviewing, copying or other tampering with computer files not belonging to the student.
- **Plagiarism**: The reproduction of ideas, words or statements of another person as ones’ own without acknowledgement or use of an agency engaged in the selling of term papers or other academic materials.
- **Unauthorized Collaboration**: Intentionally sharing or working together in an academic exercise when such actions are not approved by the course instructor.
- **Falsification and Fabrication**: Intentional and unauthorized falsification or invention of any information or citation furnished to any college official, faculty member or office.
- **Facilitation of Academic Dishonesty**: Permitting or attempting to help another to violate the academic honor code; Alteration or sabotage of another student’s work, such as tampering with laboratory experiments, copying networked computer files, etc.

Academic misconduct will not be tolerated in this class. Student’s found in violation of the College’s policy on Academic Dishonesty will receive a failing grade in the course, may be subject to course
withdrawal and will be referred to the Dean of Students for a violation of the Academic Honor Code for procedures as defined by the Code.

**SEXUAL HARASSMENT**

Joliet Junior College seeks to foster a community environment in which all members respect and trust each other. In a community in which persons respect and trust each other, there is no place for sexual harassment. JJC has a strong policy prohibiting the sexual harassment of one member of the college community by another. See Catalog or Student Handbook.

**COLLEGE STATEMENT ABOUT GRADES OF “F” AND WITHDRAWAL FROM CLASS**

Students may withdraw from a course by processing an add/drop form during regular office hours through the Registration and Records Office at Main Campus or Romeoville Campus, or by phone at 815-744-2200. Please note the withdrawal dates listed on your bill or student schedule. Every course has its own withdrawal date. Failure to withdraw properly may result in a failing grade of “F” in the course.

At any time prior to the deadline dates established, an instructor may withdraw a student from class because of poor attendance, poor academic performance or inappropriate academic behavior, such as, but not limited to, cheating or plagiarism.

**JJC POLICY FOR RESPONSIBLE USE**

In support of its mission of instruction and public service, Joliet Junior College provides access to informational resources for students, faculty, and staff within institutional priorities and financial capabilities. The Policy for Responsible Use of Information Technology at Joliet Junior College contains the governing philosophy for regulating the use of the College's information technology resources. It spells out the general principles regarding the appropriate use of equipment, software, and networks. By this policy, the College recognizes that all members of the College are also bound by local, state, and federal laws relating to copyrights, security, and other statutes regarding electronic media.

It is the policy of the Joliet Junior College that all members of its community act in accordance with these responsibilities, relevant laws and contractual obligations, and the highest standard of ethics. Access to the Joliet Junior College's information technology facilities is a privilege granted to students, faculty, staff, and business partners. It is not a right. The College reserves the right to extend, restrict, or deny privileges and access to its information resources.

Students found in violation of this policy are direct violations of the College's standards for conduct, as outlined in the Joliet Junior College's Student Handbook, and the Student Code of Conduct, and may also bring civil or criminal charges.
INTELLECTUAL PROPERTY

Students own and hold the copyright to the original work they produce in class. It is a widely accepted practice to use student work as part of the college’s internal self-evaluation, assessment procedures, or other efforts to improve teaching and learning and in promoting programs and recruiting new students. If you do not wish your work to be used in this manner, please inform the instructor.

STUDENT SUPPORT

http://jjc.edu/services-for-students/pages/default.aspx

a. Disability Services: http://jjc.edu/services-for-students/disability-services/Pages/default.aspx
   Student Accommodations and Resources (StAR): If you need disability-related accommodations, specialized tutoring, or assistive technology in this class, if you have emergency medical information you wish to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class or at my office. New students should request accommodations and support by scheduling an appointment with the Student Accommodations and Resources (StAR) Office, Campus Center 1125, (815) 280-2230.

b. Tutoring: http://jjc.edu/services-for-students

c. Counseling and Advising: http://jjc.edu/services-for-students/counseling-advising

d. Academic Resources: http://jjc.edu/services-for-students/academic-resources

e. Support Programs: http://jjc.edu/services-for-students/support-programs-services

f. Technology Support: http://jjc.edu/services-for-students/Pages/technology-support.aspx

SUMMARY

There is much information to learn in this class and a limited amount of time to do so. The instructor’s main goal is to present the material in such a way that the student can understand and enjoy learning about the Revit software. Please feel free at any time to ask questions, offer insight and contribute to you and your classmates learning process. This industry is founded on teamwork and if we take that approach in our classroom, we can all contribute to the success of this course.
## AEC 299 Topics
### Revit Arch Modeling-Digital
#### Spring Semester 2014

The instructor has the right to alter the course and schedule. The changes will be noted on a revised class schedule.

<table>
<thead>
<tr>
<th>Week Number</th>
<th>Dates</th>
<th>Topic</th>
<th>Assignment Due</th>
<th>Quiz</th>
<th>Text Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/16</td>
<td>Syllabus – Revit / BIM Introduction Revit Architecture Interface</td>
<td>None</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1/23</td>
<td>Creating a Model/ Views / Sheets / Printing / Review</td>
<td>Syllabus Sign. Page</td>
<td>Quiz #1</td>
<td>2,3</td>
</tr>
<tr>
<td>3</td>
<td>1/30</td>
<td>Revit Tools / Annotation / Review</td>
<td>Quiz #1</td>
<td>4,5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2/6</td>
<td>Structure / Review</td>
<td>Project Submission #1</td>
<td>Quiz #2</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>2/13</td>
<td>Floors / Roofs</td>
<td>Project Submission #2</td>
<td>Quiz #3</td>
<td>6,7</td>
</tr>
<tr>
<td>6</td>
<td>2/20</td>
<td>Ceilings / Interiors</td>
<td>Project Submission #3</td>
<td>Quiz #4</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>2/27</td>
<td>Stairs / Ramps / Handrails</td>
<td>Project Submission #4</td>
<td>Quiz #5</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>3/6</td>
<td>Schedules / Tags</td>
<td>Project Submission #5</td>
<td>Quiz #6</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>3/13</td>
<td>Views /Sheets / Printing / Review</td>
<td>Project Submission #6</td>
<td>Quiz #7</td>
<td>13,14</td>
</tr>
<tr>
<td>10</td>
<td>3/20</td>
<td>Rooms / Area Plans</td>
<td>None</td>
<td>None</td>
<td>15</td>
</tr>
<tr>
<td>11</td>
<td>3/27</td>
<td>NO CLASS – SPRING BREAK</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>4/3</td>
<td>Advanced Wall Topics / Families</td>
<td>Project Submission #7</td>
<td>Quiz #8</td>
<td>16,17</td>
</tr>
<tr>
<td>13</td>
<td>4/10</td>
<td>Site / Topography</td>
<td>Project Submission #8</td>
<td>Quiz #9</td>
<td>18</td>
</tr>
<tr>
<td>14</td>
<td>4/17</td>
<td>Rendering / Presentation</td>
<td>Project Submission #9</td>
<td>Quiz #10</td>
<td>19</td>
</tr>
<tr>
<td>15</td>
<td>4/24</td>
<td>Revit Collaboration / Review</td>
<td>Project Submission #10</td>
<td>Quiz #10</td>
<td>20,22</td>
</tr>
<tr>
<td>16</td>
<td>5/1</td>
<td>Final Exam</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>5/8</td>
<td>Open Lab / Final Project Due</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>5/15</td>
<td>Final Project Returned Grades Issued</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
Signature Page

After reading the following statement, please print your name, sign and date in the area provided.

I have read the syllabus for AEC 299-330 Revit Arch Modeling - Digital that was attached to this signature page. We discussed the syllabus in class. I have asked for clarifications of the items that I did not understand, were unsure of or needed clarification. The instructor presented answers that were clear and understandable. I understand that I may ask additional questions as they arise during the semester.

Student’s Name________________________________________________________

Signature__________________________________________Date_______________