COURSE TITLE **BLACKBOARD SITE**	ARC2813 - **Electronic Methods I**, CRN 1744 and CRN 1746 and CRN 1749 Fall 2012 – http://my.ltu.edu and select appropriate course
INSTRUCTOR	**Charles Oscar Reed** Adjunct Faculty – Lawrence Technological University Contact Information: E-mail: creedl@ltu.edu Business Phone: (313) 330-9609 Office: A-142 - Office Hours By Appointment
SCHEDULE	August 29, 2012 – December 21, 2012 See http://www.ltu.edu/registrars_office/calendar_final_exam.index.asp for LTU academic calendar information.
LEVEL/ HOURS **PREREQUISITE**	Undergraduate Degree / 3 credit hours No prerequisite requirements
REQUIRED TEXT (See Blackboard for additional resources)	Design Integration Using Autodesk Revit 2012 + Architecture, Structural, and MEP + by Daniel John Stine SDC Publications ISBN: 978-1-58503-678-3 Available for online purchase through LTU Bookstore at: http://lawrence-tech1.bkstore.com/bkstore/TextbookSelection.do?st=489
ADDITIONAL **RESOURCES**	LTU Online student resources: http://www.ltu.edu/ltuonline/ Tutoring – Academic Achievement Center: http://www.ltu.edu/aac/ Summer Schedule (See AAC-Tutoring tab on your Blackboard site page.)
TECHNICAL SUPPORT	Technical support for using Blackboard is provided by the Helpdesk. Visit www.ltu.edu/ehelp or 248.204.2330 or helpdesk@ltu.edu

EM1 - CATALOGUE DESCRIPTION

An introduction to the use of the computer to graphically generate databases as an aid in planning, management and design processes related to architecture and presentation. An introduction to system design, project work flow, project organization, integration, networking and awareness of Geographic Information System (GIS) database technology. Includes application theory and related terminology, with various CAD systems and analysis programs available to the architect/engineer. 3 hours credit

REQUIRED MATERIALS

The student is required to have a functional computer with internet connection with software supported by the LTU helpdesk along with the College of Architecture and Design. This class will require access to Revit Architecture, Revit Structure, and Revit MEP software. Also needed are the required book/s for the class. This textbook must be the current one stated in the Required Text area. All associated files with the textbook must be the current files provided with the textbook. A 2-button mouse with wheel, using a track ball or sensor pad can be inefficient when utilizing CAD programs.

COURSE SCHEDULE

This course begins with a course orientation period to familiarize yourself with the Blackboard learning environment and to contact via Blackboard with your instructor. Each subsequent week starts on a Monday and ends on a Sunday. Suggested events for the semester may change as we proceed.

Dates	Modules	Topics / Readings	Assignments Due
Week 1 August 29 – September 10	Module 0	1) Module 0 Students "Getting Started" 2) View Course Review Guide 3) Syllabus Review	Course Introduction Module .
Week 2 September 10 – September 17	Module 1	Chapters to be covered in the Revit Textbook 1. Introduction to Computers for CAD/BIM Users 2. Getting Started with Revit Architecture 2010 3. Quick Start: Small Office Building	Chp 1 Quiz, Chp 1 Exam Chp 2 Quiz, Chp 2 Exam Chp 3 Quiz, Revit Chp 3 File Submittal
Week 3 September 17– September 24	Module 2	Chapters to be covered in the Revit Textbook 4. Revit Basics: Overview of Line work and Modify Tools 5. Revit Basics: Drawing 2D Architectural Content	Chp 4 Quiz Revit Chp 4 File Submittal Chp 5 Quiz Revit Chp 5 File Submittal
Week 4 September 24– October 04	Module 3	Chapters to be covered in the Revit Textbook 6. Law Office: Floor Plans	Chp 6 Quiz Revit Chp 6 File Submittal
Week 5 October 04– October 08	Module 4	Chapters to be covered in the Revit Textbook 7. Law Office: Roofs, Floors, & Ceilings	Chp 7 Quiz Revit Chp 7 File Submittal
Week 6 October 08– October 015	Module 5	Chapters to be covered in the Revit Textbook 8. Law Office: Structural System	Chp 8 Quiz Revit Chp 8 File Submittal

Dates	Modules	Topics / Readings	Assignments Due
Week 7 October 15– October 22	Module 6	Chapters to be covered in the Revit Textbook 9. Law Office: Elevations, Sections, & Details	Chp 9 Quiz Revit Chp 9 File Submittal
Week 8 October 22 – October 29	Module 7	Study and prepare for Midterm Exams Written and Practical	Midterm Written Midterm Practical
Mid-Term Grades Will Be Posted To Blackboard			
Week 9 October 29 – November 05	Module 8	Chapters to be covered in the Revit Textbook 10. Law Office: Interior Design	Chp 10 Quiz Revit Chp 10 File Submittal
Week 10 November 05 – November 12	Module 9	Chapters to be covered in the Revit Textbook 11. Law Office: Schedules	Chp 11 Quiz Revit Chp 11 File Submittal
Week 11 November 12– November 19	Module 10	Chapters to be covered in the Revit Textbook 12. Law Office: Mechanical System	Chp 12 Quiz Revit Chp 12 File Submittal
Week 12 November 19– November 26	Module 11	Chapters to be covered in the Revit Textbook 13. Law Office: Electrical System	Chp 13 Quiz Revit Chp 13 File Submittal
Week 13 November 26– December 03	Module 12	Chapters to be covered in the Revit Textbook 14. Law Office: Site and Rendering	Chp 14 Quiz Revit Chp 14 File Submittal
Week 14 December 03– December 10	Module 13	Chapters to be covered in the Revit Textbook 15. Law Office: Construction Documents Set	Chp 15 Quiz Revit Chp 15 File Submittal
Week 15 December 10 – December 24	Module 14	Study and prepare for Final Exams Written and Practical	Final Written Final Practical

I encourage all students to keep up with the schedule as described in this syllabus. We have a lot of material to cover during the course of the semester. It is very easy to fall behind, so time management will be an important factor in the successful completion of this course.

STUDENT EVALUATION

The course has assignments as listed above in the course schedule. Additional instructions and information about each assignment will be posted in the weekly module at the start of each week. Your grades will be calculated with the percentage and point system detailed below.

Grade Computation Criteria	Point Totals
Revit Textbook Work Textbook Work @ 45% (3% for each chapter @ 15 chapters)	45 Points
***Revit Chapter Quizzes** Quiz Questions @ 15% (1% for each quiz @ 15 quizzes)	15 Points
Mid-Term Exam (Practical & Written) Revit Practical Exam @ 15% Revit Written Exam @ 5%	15 Points 5 Points
Final Exam (Practical & Written) Revit Practical Exam @ 15% Revit Written Exam @ 5%	15 Points 5 Points
Total Possible Points	**100 Points**

Class Points	Letter Grade
96 and above	A
90 – 95	A-
87 – 89	B+
83 – 86	B
80 – 82	B-
77 – 79	C+
73 – 76	C
70 – 72	C-
61 – 69	D (Undergrad Only)
60 and below	F

* Revit Chapter Quizzes are adaptively released. You must complete the chapter exam or chapter assignment and submit it for grading before the quiz will be available to you.

EDUCATIONAL GOALS

To learn Revit requires a significant amount of time and practical application. The goal of this course is to introduce the student to the basic skills required to produce architectural drawings using Autodesk's Revit (Architecture, Structure, and MEP) software. The textbook is tutorial based and purposed to take the student through a basic commercial building project. While performing the prescribed tasks, the student will become familiar with the tools, specific commands, and interface menus associated with the Autodesk Revit software.

STUDENT LEARNING OBJECTIVES

- Students shall execute fundamental modeling principles associated with 2D/3D architectural modeling.
- Students shall execute fundamental modeling principles and terminology of Building Information Modeling (BIM) by use of Autodesk's Revit (Architecture, Structure, and MEP) software.
- Students shall execute fundamental tools and techniques used in Autodesk's Revit Architecture software.
- Students shall execute techniques and methodologies of digital architectural modeling/documentation.

PREREQUISITE SKILLS

Desire To Learn Through Self-Effort

INSTRUCTIONAL METHODS AND COURSE ORGANIZATION

Blackboard Learning Environment – Blackboard at my.ltu.edu contains the syllabus, all assignments, narrated mini-lecture videos, written lecture notes, chapter questions, links to Web resources, and discussion forums. You will submit all assignments via Blackboard and are expected to participate in the Revit Questions Forum. Please take time to familiarize yourself with the organization of the Blackboard site. You will want to check the site frequently for announcements reminding you of new resources and upcoming assignments.

Student/Instructor Conversations – Students main contact method with the instructor will be the Blackboard Revit Questions Forum. If contact is need for matters of a personal nature, the contact may be via e-mail. Even though I will monitor the Revit Question Forum on a regular basic, I will be scheduled at the Revit Discussion Forum to answer questions about course material on Tuesday and Thursday night from 8:00 p.m. to 9:00 p.m. Eastern Time (US & Canada). All other appearances at the Revit Question Form will be strictly random.

Self-Assessments – Self-assessment tools will help students measure their skills during the course.

Required Reading – Textbook chapters should be read according to the schedule outlined in the syllabus.

CLASS POLICIES AND EXPECTATIONS
Here are some general expectations regarding this course:

Each student has a LTU email account. If you wish to use a different email address for this course, please **change your email address in Blackboard under "Blackboard Tools", then "Personal Information"**.

Readings and assignments must be completed according to the class schedule. It is important to contact the instructor as needed to discuss personal needs regarding course requirements and assignments.

All assignments must be submitted on schedule, via Blackboard, and completed using appropriate software. If you need to submit an assignment via email for any reason, contact the instructor in advance.

Assignments must be completed to an adequate standard to obtain a passing grade. Requirements for each assignment can be reviewed by checking the rubric posted with each assignment. This rubric can be accessed in the MyGrades area of your Blackboard site. Please Note: Chapter 1 and Chapter 2 do not require a rubric.

Be prepared to log into Blackboard at least once each day. Please focus your online correspondence within the Blackboard Revit Question Forum discussion so that your colleagues can learn from you. At the end of the course, you will be invited to participate in a University evaluation of this course. Your feedback is important to the University, to LTU Online, and to me as an instructor and I encourage you to participate in the evaluation process.

It is important for you as students to know what to expect from me as your instructor:

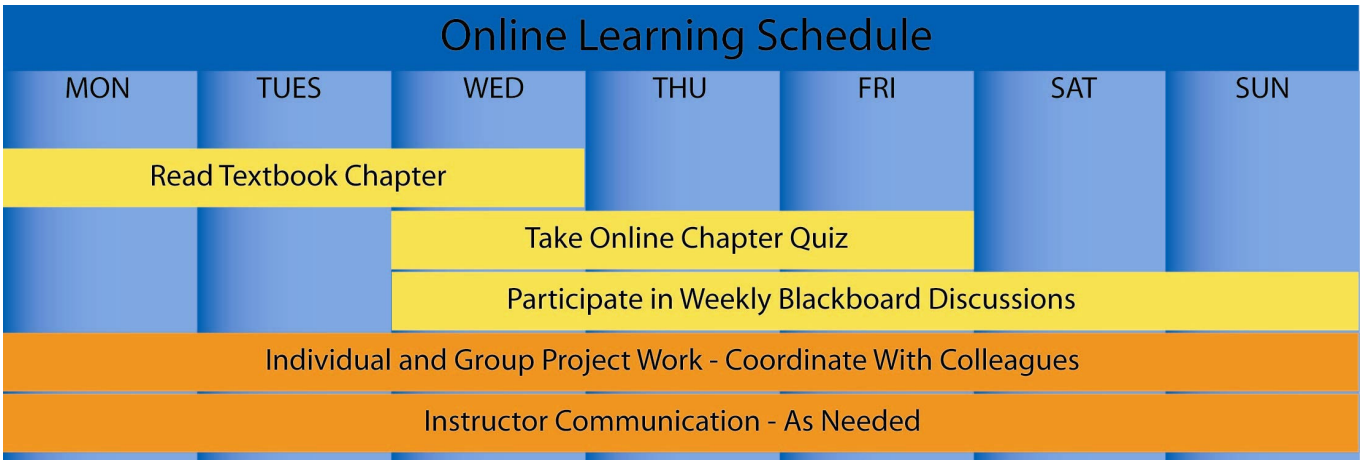
• I will be available to you via Blackboard Revit Question Forum and will personally reply to your messages.
• Tutors are available at the Academic Achievement Center for face-to-face appointments if necessary.
• I will maintain the Blackboard web site with current materials, and will resolve any content-related problems promptly as they are reported to me.
• I will return all assignments to you, and may include individualized comments and suggestions with your assignments.
• I will hold our personal communications in confidence. I will not post any of your assignments for viewing by the class without requesting your approval in advance. (Submitting any project in this class becomes University property and you agree to the University's terms and conditions)
• I will treat all members of the class fairly and objectively.
• If any of these points need clarification, or when special circumstances arise that require my assistance, please contact me so that we can discuss the matter.

PRACTICAL GUIDELINES FOR CLASS LOAD EXPECTATIONS
A three-credit course generally requires at least nine hours per week of time commitment. Here are some practical guidelines to help you schedule your time for this course:

- The semester requires a considerable time commitment to successfully complete all readings, activities, assignments, and texts as described in this syllabus.
- You should reserve at least 9 hours per week to read the required textbook chapters and resources, participate in the Blackboard Revit Question Forum, review presentation materials, and work through online quizzes.
- You should organize your time to roughly correspond with the point value of each major assignment.

These guidelines may not reflect the actual amount of outside time that you, as a unique individual with your own learning style, will need to complete the course requirements. The number of hours each week will vary based on assignment due dates, so please plan ahead to insure that you schedule your academic, work, and personal time effectively.

The following graphic can be used to guide you in planning your weekly course work to remain on schedule:



Assignments

ASSIGNMENT DETAILS
Course assignments and evaluation criteria are detailed below. Please review these requirements carefully. See the section Academic Resources / Assessment Guidelines for information about assessment of written and oral presentations.

Details for all assignments are shown below. All assignments will be submitted using the Blackboard Assignment submittal procedures. Please make sure when submitting assignments that you actually click the submit button and not just the save button. You will know an assignment has been submitted successfully when you see a green box (with a check mark) appear in that assignment category when viewing the MyGrades area on Blackboard.

TEXTBOOK WORK
All chapters will be covered in a sequential order as detailed in the weekly module. The procedural requirements for completing and submitting textbook work will be stated in the weekly module posted on Blackboard.

CHAPTER QUESTIONS
All chapters will be covered in a sequential order as detailed in the weekly module. The procedural requirements for completing and quizzing of chapter questions will be stated in the weekly module posted on Blackboard.

LATE ASSIGNMENTS
In most cases late assignments will not be accepted. In those cases where late assignments are accepted, the late assignment will result in a grade reduction of 33 1/3% for that assignment. Under no circumstances will an assignment be accepted more than one week late. The work for the class compounds, which means that each assignment builds on the previous week's assignment. It will behoove the student to keep pace with the schedule.

ASSIGNMENT SUBMISSIONS
I will be using the Autodesk's Revit "history" feature to make sure that students are submitting their own work. This tool allows me to view, by student initials and number, who worked on a file and when. If more than one user is listed, or a user name different than one assigned to you, the assignment will receive a grade of zero. Also all quizzes and exams related to that assignment will receive a grade of zero. If it is found that a student is submitting files worked on or belonging to someone else, that student will be reported to the University and be subject to the consequences deemed appropriate. Submitted assignments that require starter files must use the current starter files provided with the current textbook. Starter files from past versions that are used for assignments will not be accepted for grading.

When digital files are required to be submitted, they must comply with the established class file naming standard for the course and be in the format requested. Any files that do not adhere to these requirements will be deemed a non-submittal. All digital files for submittal are to be prefaced with your initials and student ID_(underscore) then the name of file.

Example: Student ID: CR000000204 Filename: Chapter 3-4.rvt

Thus the file that you would upload would be named CR000000204_Chapter 3-4.rvt.
The name of the file to be submitted for the chapter work will be state in the weekly module content. Typical this name will be taken from the textbook chapter work for that module.

Quizzes, Exams, and Online Participation

Revit Weekly Quizzes and/or Exams
There will be weekly Self-Exam & Review Questions quizzes for each chapter covered in the weekly module. If a module covers two or more chapters, then there will be two or more Self-Exam & Review Questions quizzes to complete. In the event that a chapter does not require a digital file submittal for chapter work. There will be an additional exam to evaluate the student's basic understanding of the material covered in that chapter. The point value of this exam will be 3% (3 points) as state in the Grade Computation Criteria area. The point value of all quizzes will be 1% (1 points) as state in the Grade Computation Criteria area.

* Please Note: Quizzes are adaptively released. You must complete the chapter exam or chapter assignment and submit it for grading before the quiz will be available to you.

Revit Midterm Exam
The Revit Midterm Exam will be part written and part practical in order to evaluate the student's basic understanding of the material covered in the textbook. The point value of the written exam will be 5% (5 points) as state in the Grade Computation Criteria area. The point value of the practical exam will be 15% (15 points) as state in the Grade Computation Criteria area.

Revit Final Exam
The Revit Final Exam will be part written and part practical in order to evaluate the student's basic understanding of the material covered in the textbook. The point value of the written exam will be 5% (5 points) as state in the Grade Computation Criteria area. The point value of the practical exam will be 15% (15 points) as state in the Grade Computation Criteria area.

Participation Requirements
Each student is expected to actively participate in the Blackboard Revit Question Forum.

SYLLABUS ADDENDA
Please see the LTU Online "Current Students" web site http://www.ltu.edu/ltuonline/ for comprehensive information about Lawrence Tech's academic services, library services, student services, and academic integrity standards. The content of this web site is explicitly included as syllabus requirements.

LTU Academic Honor Code:
Academic integrity and honesty are basic core values of Lawrence Technological University. In carrying out its academic mission, Lawrence Technological University, like all universities, depends on the honesty and integrity of its faculty, staff, and students, and for this reason every member of the Lawrence Technological University community is charged with upholding the Academic Honor Code. Actions that breach the Code erode the trust of those who look to universities for honest evaluations of academic work arrived at through honest processes. Violations may also cause individual harm in that reports of performance made to post-graduate schools, professional societies, and employers would inaccurately represent a student's progress. Lawrence Technological University is committed to creating an academic community that values both individual and collaborative efforts

that promote learning and discovery. Such a community expects honesty and integrity in the work of all its members. The Academic Honor Code speaks to the work of individual students within the community. It should not be construed as arguing against the important collaborations that also occur among students on campus.

Students, faculty, and staff are expected to follow established standards of academic integrity and honesty. Academic misconduct entails dishonesty or deception in fulfilling academic requirements and includes but is not limited to cheating, plagiarism, or the furnishing of false information to the University or a University affiliates in matters related to academics. An affiliate of the University is any person, organization, or company who works in conjunction with Lawrence Technological University for the purposes of assisting students in fulfilling their academic requirements. It is therefore this institution's stated policy that no form of dishonesty among its faculty or students will be tolerated. Although all members of the University community have an obligation to report occurrences of dishonesty, each individual is principally responsible for his or her own conduct.
Full text of the LTU Academic Honor code can be found at: http://www.ltu.edu/currentstudents/honor_code.asp

Plagiarism:
From Lawrence Institute of Technology Catalog, pg 17:

"Academic dishonesty includes plagiarism, cheating, forgery, or other acts that deceive or defraud in regard to a student's own academic work or that of others. Questions of academic dishonesty are reviewed by the Dean of the School responsible for the courses in which they occur. When necessary, cases of academic dishonestly may be referred to the Student Discipline Committee. The usual penalty for academic dishonesty is failure in the course on the first offense and expulsion from the College on the second offense."

-- Full text adapted from the LTU College of Arts & Science documents. More information and full text is located at: http://www.ltu.edu/arts_sciences/humanities_ss_comm/plagiarism.asp

Retention of Student Work:
As noted in the University's undergraduate catalog, "all two and three dimensional drawings, as well as reports and other written studies submitted in satisfaction of any required or elective courses become the property of the University. When such work is kept, arrangements will be made for the student to receive suitable photographic copies as a record of his or her design work." Exemplary examples of student work may be retained for Open House, for accreditation visits, for Honors exhibitions, or as examples for future classes.