UNIVERSITY OF ALASKA ANCHORAGE

ARCHITECTURAL ENGINEERING TECHNOLOGY

Course Syllabus

AET A-121 Architectural Drafting

Sspring 2013

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Office
Rm. 129 University Center
M thru R – 11:00am, F – 10:00
other times by appointment or good timing

Course Identification
AET - A121 Architectural Drafting   (3 credits)

Course Description
Introduces technical skills needed by architectural drafters and technicians to work with architects. Includes office practices, staff relationships, and architectural drawing production. Develops computer-aided drafting skills in architectural drawing symbols, conventions, dimensioning systems, reference systems, sheet organization, code requirements, and research methods for detailing light commercial buildings.

Course Prerequisite
AET - A181 Intermediate CADD for Building Construction

Suggested Time of Student Involvement
    Lecture: 30 hours
        Lab: 60 hours
    Outside: 90 hours min.
        Total: 180 hours min.

Required course for the AAS degree in Architecture & Engineering Technology and the AET Architectural Drafting Certificate.

Suggested Textbooks
Goldberg, H. E. (2013). *REVIT® architectural 2012: A comprehensive guide*. Upper Saddle River, NJ: Pearson.

Autodesk is moving toward less and less printed documentation for their products i.e. books, texts, and user's Guides. On-Line User groups, internet student groups through Autodesk, and authorized YouTube.com videos are a constantly expanding resource for the latest information. The URL below is one of the best single portals for questions:

http://wikihelp.autodesk.com/Revit/enu/2012

Lab fees are assessed for this course.

Computer Requirements

For those students taking the class on-line, or working outside of the labs, the minimum computer requirements are:
    Intel® Core i7 2600 gHz processor
    16gB RAM
    500 MB Hard Drive Space
    Keyboard and three button mouse
    Microsoft 7 operating system

Microsoft Internet Explorer 6.0 or higher, Mozilla Firefox or Chrome browser. Dial up internet connection, 29.8 Kbps minimum. A high-speed connection is recommended

An e-mail account that you manage regularly. The university establishes an account for every registered student and this will be the default account address for this class. A discussion on not using Yahoo, Hotmail and other third party email servers has been provided in the initial contact letter.

A headphone with microphone system (approximately $8-15) is required for participation in the twice weekly Elluminate Live (eLive!) presentations.

There are many combinations superior to this which will increase the speed of communication. This combination will work; other combinations of CPU, operating system, internet browser, and internet connection may work. Your specific combination should be tested through the UAA Blackboard site before the class begins to avoid missing "class time". All of the computers in the AET labs exceed the requirements for this class.

An online testing of computer compatibility for Blackboard is found at: http://technology.uaa.alaska.edu/blackboard/
Compatibility for eLive!, along with speaker and microphone tests, is found at: http://www.uaa.alaska.edu/elive/

Computer problems, access questions, eLive! and Blackboard questions and their solutions can be addressed with the UAA Information Technology(IT) Call Center, Monday thru Saturday during extended business hours, at 907-786-4646 or Toll Free 877-633-3888.

Students will also be given access to the CDT Documents site within Blackboard. This is a common site for all classes within the AET and CM programs. The site contains sets of drawings, informational documentation, and other files that are commonly used across many classes. The site will appear on the student's Blackboard class list.

This course relies heavily on Blackboard, eLive!, and email.

Class Tools

Student work is accomplished using a variety of software tools. Software requirements include: current versions of Microsoft Word document processor, Excel spreadsheet and Adobe Acrobat, available as a download from the UAA Information Technology webpage. Depending upon the specific class, the graphics software requirements are: Autodesk AutoCAD, Autodesk Civil 3D, Autodesk 3D Studio, Revit Architecture, Revit Structural, and Revit MEP. These are expensive products to buy individually. They are available in the UAA labs for the AET program and the satellite labs across the UAA system. The packages are also available as time-limited free downloads from autodesk.com

Communication between students and the instructor is through the internet access to Black Board class announcements, eLive! sessions, the UAA email portal, phone/voice mail, 'snail' mail, and catching me in my office for a little face-to-face.

Email Policies

I get a lot of emails from many different sources. To insure that I understand who the email is from and its context, please follow these protocols.

- The subject line should include the course ID and the name of the project or assignment you are addressing. i.e. AET A102 Project 2
- The body of the email should be in complete sentences. I'm old and out of touch, so I do not understand instant messaging/texting abbreviations, emotographs, and slang. Hint: this is not texting a friend, this is a professional communication.
- Your first and last name should be used as a signature.

The instructor will reply to all student emails within twenty-four hours, Monday to Friday. That reply may be in the form of grouping together multiple emails from the same person or it may be an email sent to all students with personally identifiable content removed.

Living in eLive!

All scheduled presentations will be done through the eLive! presence, available through the class Blackboard site. If your elive! session crashes, try immediately to log back on. The participants section on my screen will show that you went away, not why. If the elive! session crashes for everyone, I know that too, because it happened to me. I typically send an email out quickly to reassure the nervous and indicate when (if I know) the session will be continued.   I also tend to place an announcement on the class Blackboard site for those not present for the session. It is my intent to record every eLive! session, but I do not guarantee, to record and archive each eLive! session for future review. You should not rely on these recordings. It is a courtesy to record the sessions, but not a right to expect them. Recordings have been lost for many reasons out of my control. A session will not be repeated because the failure is in the recording or archiving.

Naming conventions for documents

All projects, assignments and tests will be submitted electronically by email. The file formats that I can read are Rich Text format (nnn.rtf), Microsoft Word (nnn.doc and nnn.docx) and Excel (nnn.xls and nnn.xlsx). For drawings, Revit nnn.rvt and nnn.dwf as exported from the drawing file will be attached to emails.

DWF/DWFx
Creates DWF or DWFx files.

Other formats will be returned unopened and you will be asked to reformat and resubmit the file.

For every file that is submitted, name the file with your first and last name and the name of the assignment e.g. Brian_Bennett-Project1.rvt

Spaces, Hyphens, and Underscores are good separators in file naming protocols. Do **NOT** use parenthesis, periods, quotes, slashes, verticals, or asterisks ( ) . ", / \ | or * as these characters have special meaning to computers and you will not like their meaning. Other punctuation marks are discouraged.

Instructional Strategies
The strategies for the course involve two typical situations: (a) Integrated lecture and demonstration by the instructor on computer systems and white/black boards. (b) 'Laboratory' work of the student is done with the roaming support of the instructor to individuals and small groups. For eLearning classes the lab portion of the class will be on the student's own time.

Special Needs
General computer and access questions and solutions can be addressed with the UAA Information Technology (IT) Call Center, Monday thru Saturday during extended business hours, at 907-786-4646 or Toll Free 877-633-3888. Questions concerning the Blackboard course site: access, down loads, trouble shooting, etc. can also be addressed through the IT Call Center.

Revit is able to adjust for a relatively wide range of user abilities: visual acuity and colour discrimination, ambulatory stability, speed, and range of motion. The computer never gets tired or runs out of time or patience. The arrangement and application of components is flexible, able to accommodate left or right-handedness. Component connections are by umbilical cords: allowing for adjustments in height and location to accommodate physical challenges. Students are encouraged to discuss individual situations and needs as early as possible with the instructor. Conversations can be initiated in person, by letter, telephone, or email and will be held in confidence. Prior knowledge by the instructor can ease introduction to the setting and promote success in the course. Other questions of access and adaptive technology should be directed to Disability Support Services (DSS) at 907-786-4530 or 907-786-4536 (TTY).

Requests for reasons of personal faith should be discussed early, and will be honored without penalty.

Communication
If you do not like something that happens in class, let me know immediately. If I do not know about something, I cannot change it, fix it, explain it, or apologize for it. Please do not wait until the course evaluation for three reasons. The evaluations are anonymous, so I do not know who was in need. The evaluations are after the fact, so it is too late to do anything for that person. The evaluations

are out of context and I may not know, understand, or appreciate what you are talking about.

Changes to the Syllabus
Changes, though rare during the class, may be made to this syllabus at any time, throughout the term, to any part of this syllabus. All students attending class will be dutifully notified in advance of any change affecting their assignments or tests.

Evaluation
'The inference of knowledge by the observation of behavior.' Stice

Grades must be earned through hard work. A 'good grade' is not deserved because a student has completed the assignment(s). In order for work to receive a high grade, it must be complete in content, professional in presentation, and imaginative.

The instructor will be glad to review any assignment, time permitting, before it is due. An assignment, presented to the instructor, will be reviewed with the same criteria used for evaluation and then returned to the student for their use.

'Those that do well, take seriously the task of educating me.' T. Roethke

Assignments
Projects develop independently through each section of the text. We will use the text sections: two thru eight and ten thru thirteen, comprising of: Walls, Doors, Windows, Roofs, Floors, Stairs and Railings, Curtain Walls, Dimensions and Annotations, Details, Views, Components and Families, Site, Room Areas, and Rendering. The value of each section is 100 points each. Assignments from the text are not based on realistic whole problems that reflect architectural office procedures and terminology, but rely on individual knowledge "units" that can, and eventually must, be combined, reorganized, and repeatedly used to generate a conceptualized whole for any project. Thus, the format and approach of the text is to form a type of dictionary in presenting the use of the software. Students can then progress through the text to acquire new skills as well as return to previous topics as needed.

Grading criteria for the projects in each section will include:
> **Presentation**: (15 points) Lettering, spelling, consistency, appropriateness and necessity of view(s).
> **Completion**: (15 points) degree of completion of the topic at the time of submission.
> **Execution**: (35 points), neatness, consistency, and completeness.
> **Technical**: (35 points) drawing comprehension of assembly, application of knowledge materials, content, dimensions, accuracy, organization, and problem solving.

Each of the projects within a section is formatted for "A" size sheets with an appropriate titleblock. Work is submitted in plotted hard copy form.

A comprehensive design final problem will be introduced early in the course. This problem will demonstrate the need to combine, organize, and repeat the tasks presented from the text, forming a conceptualized whole solution for a specific problem. It is anticipated that the final project will be developed, worked on and refined throughout the class. As new skills are developed, they should be applied to relevant elements of the final project. As new knowledge is acquired it should be applied to the solution of the final project.

The Final project will be formatted and titled according to AIA and UDS standards for a "C" size sheet presentation set. There will be a formal presentation of the solution to the class and invited guests during the last meeting of the class.

Some thoughts on late assignments. "It is not our abilities that define who we are, it is our choices." Dumbledore in Harry Potter and the Chamber of Secrets.
The intent of the class is to provide experience common to the professional work experience. Professional bid/award contracts have time and date limitations that are not negotiable. No assignment, project, or exam will be accepted after the scheduled due date and time.

Unless prior arrangements are made with the instructor, all projects are due by the end of class, on the due date. Projects will be accessed 5 points for each class period late.

Portfolio (100 points total). The portfolio will be checked four times during the class, as part of the submission of each test and at the end of the class. 25 points may be earned for each notebook check. All course material will be assembled into an 8 ½" x 11", 3-ring binder. The cover and first page of all notebooks will be title sheets containing: Course, Department, Student name, and Semester. The body of the Course Notebook should contain, tabbed and titled, all of the class material including; handouts, notes, projects, tests, sketches, and any other reference material or information compiled by the student.   The student may organize the balance of all other material in the notebook as he/she sees fit. However, the organization should have a logical and recognizable structure. Notebook covers with creative art/graphics and a professional presentation will earn maximum points.

Sketches (100 points total). Students will produce twenty sketched images, one object or topic per 8½ x 11 page, one side only. Each subject is the student's choice, but the totality of the work should show a diverse range of subject, techniques, and projection. A reasonable proportion of the total number of sketches should be turned in with the notebook checks after each exam. The intent is to demonstrate proficiency in graphic communication thru differing

styles, projection techniques, and improvement over attempts. The final project provides an appropriate opportunity to satisfy this requirement.

Attendance

(100 points possible) The meaning of attendance is influenced by the methods of presentation. With the nature of the course, attendance and participation is a prime consideration. In (more than I would like to count) years of teaching experience the instructor has observed a correlation between participation and performance. The instructor will use both the scheduled lecture period and the laboratory period to offer appropriate comments on assignments and to demonstrate useful techniques to accomplish your tasks. Students are allowed two absences without penalty. For each succeeding absence, the instructor reserves the right of deducting three percent from the cumulative grade. It is considered an absence when a student is not present to sign the attendance sheet at the beginning of the class or not present near the end of class for the instructor's check of the attendance sheet. Prior knowledge will allow the instructor to get materials and assignments to the student before the absence, but will not change the fact or consequences of the absence. Absence will **not** change the due date for assignments or exams. No assignment, project, portfolio, or exam will be accepted after the scheduled completion of the class.

Attendance for on-line classes takes a different meaning and form than Face-to-Face class meetings. The on-line presentation of the course only alters the interpretation of "attendance", not the concept of "participation".

Tests and Exams

Three (3) tests will be offered for one-hundred (100) points each. The tests will include portions of short essay, multiple choice, T/F, and practical performance. The content and basis for the tests are cumulative over the course.

A make-up test to improve a grade may be taken one time for any one test. Choose wisely. Should a student wish to take a make-up test, they should notify the instructor on the day the original graded test is returned. Day and time of the make-up will be coordinated with the instructor. If the original test is missed, students are eligible only for the single make-up test.

Final Grades

All grades are determined by competency based criteria evaluation. Students are evaluated on individual performances against a professional standard, and are not graded in comparison with other students or a normal curve distribution. An "A" grade signifies that a student has achieved both comprehensive mastery of the required work and the minimum performance required for professional level competency as determined by industry standards for entry level technical positions. Grades will be determined by a combination of points earned in the course.   Grade requirements are as follows:

Grade   (% of points)   Description

A   (>92%)   Indicates creative and comprehensive mastery of
                        required work
B   (>85%)   Indicate high level of performance in meeting course
                        requirements
C   (>78%)   Indicates satisfactory level of performance
D   (>70%)   Minimal passing performance and results
F   (<70%)   Indicates unsatisfactory performance and result

Notes: Students are evaluated on an individual basis and compared to a professional standard. Students are not graded in comparison with other students or a normalized curve distribution.

Grades, other than those listed above, listed in the official university catalog will be used at the discretion of the instructor, determined by individual situations and circumstance. It is suggested that all assignments and projects be retained through the course in case questions arise. All discussions of grades, from projects or assignments, should be done outside of class, by appointment.   The instructor will **not** academically drop students for failing to attend the class. The student has paid for the right to attend the class, but it is their option whether to exercise that right. In all other matters, **it is the responsibility of the student to properly drop the class**. Faculty may initiate course withdrawal for non-attendance from the initial class or disruptive behavior pursuant to the current UAA policy and guidelines. See the University Academic Catalog.

Student Outcomes
- Demonstrate and understanding of class lab and safety procedures.
- Describe the role relationships between architectural drafters/technician, and architects.
- Identify and explain the process of coordination that exists between the architect and other consultants.
- Demonstrate a working vocabulary of architectural terminology.
- Demonstrate a familiarity with building codes, association standards, drawing conventions, and manufacturing information effecting architectural design.
- Recognize and differentiate plans, elevations, sections, details, schedules, general architectural notes, acceptable industrial standards, symbols and architectural standards, specifications and their format, change orders n both working drawings and specifications.
- Produce architectural floor plans, exterior elevations, building sections, wall sections, and architectural details using CADD.

Student Course Evaluation
The IDEA student course evaluation will be available through the Blackboard site for the course during the final week of the class. The responses are tallied

independently to assure anonymity. The intent is to improve this course, it is important, please take the time.

Ethics

"In accordance with professional practice for right conduct or practice." Miriam-Webster

It is easy to use the work of someone else. The computer makes it easy to copy the files(s), downloaded from the web or otherwise, of the work done by someone else. It is easy to catch only one attempt of eventually many tries. Student conduct, as expressed in various UAA formal documents, is expected to be met with respect to academic integrity and non-academic misconduct. The Vice-president for Student Conduct will be notified for his review and determination at each and every instance or suspicion. This instructor will suggest a fail grade be entered and letters of inappropriate conduct be placed in the permanent file of **ALL** students involved.

It is far more convincing and impressive to find and acknowledge the existence of authoritative figures that agree with or support your point of view. This is commonly called quoting, citing, summarizing, paraphrasing, and referencing. To be effective and acknowledged, it must be formally done. It is nearly always suspicious when yours is the only opinion expressed.

Professional practice goes beyond criminal behavior to include participation and presentation. The instructor suggests reading the article "Going Pro", available through the Class Blackboard site.

As your first point worthy assignment, please complete the acknowledgement below and return only this page to the instructor within the first week of the semester.

I, _____ [printed name] agree to the following:

I have received and read the course syllabus for AET/CM A102.

I have daily access to computer(s) and the Internet with capabilities for active participation in the class.

I understand that this class has components that require students who are interested in active, self-directed, self-motivated learning.

I agree that the time-flexibility that will allow me to complete activities, assignment, and tests at time that best suit my daily and weekly schedule and learning preferences will also demand that I plan and manage my time efficiently.

I take responsibility to actively use the on-line material and to manage my time so that I complete and submit assignments, projects, and tests before posted deadlines.

I accept that material necessary for successful completion of projects, assignments, and test will come from a variety of sources, some self-discovered.

I understand that, depending on my skill and experience level, the time required in utilizing the on-line materials will vary among students.

I am willing to spend the time required, perhaps more or less than others, to initially familiarize myself with the on-line course environment.

I understand that it is my responsibility to use the on-line course Blackboard site, its contents, and the eLive! presentations regularly, in order to stay informed regarding course announcements, assignments, projects, tests and due dates.

Signature: _____ Date: _____

AET - A121 Architectural Drafting *(The 7.5 Week Pace)*

Rm. 121   Time: 5:30 - 7:00pm   Sec. 201   CRN 36725

Class dates of the course

Topics	1/14	1/16	1/21	1/23	1/28	1/30	2/4	2/6	2/11	2/13	2/18	2/20	2/25	2/27	3/5	Glbg Chp.
Walls				■							Topic work days					3
Doors		░		■							Exercise Due days					4
Windows			░	■												5
Roofs				░		■										7
Floors					░	■										8
Massing						░	■									15
Curtain Walls							░				■					9
Stairs/Railing/Ramps								░			■					10
Dimensions/Annotations									░		■					12
Drafting/Details										░	■					12
Views											░			■		16
Components/Families												░		■		6
Site												░	■			15
Rendering													■			19
Final Project	I		░ V					P						■		
Test 1					▣											
Test 2									▣							
Test 3															▣	
Notes	A	B		C	D/R	E	M	P	Q	L	G/H	K	J	F		
more Notes	I	III-XV		VI	XI	XIV	XIII	X	V	VII	VIII	IX	II	IV	XII	
CAD Topics		5			1						4			3		

(MLKing Day — 1/21 column)

Notes

A Review	**I** Basic Skills
B The Architect in the Bldg. Enterprise	**II** Schedules UDS Format
C Architectural Technicians' Training	**III** Office Functions
D The Builidng Exterprise	**IV** Appendix A - Specifications
E Introduction to Architecture	**V** Dimensions
F Schedules	**VI** Floor Plans
G Elevations	**VII** Elevations
H Exterior Elevations	**VIII** Buiding Sections
J Sections	**IX** Wall Sections
K Detail Assemblies	**X** Stair, Ramp, Elevators
L Window/door Tags	**XI** DetailsSteel Wall Framing
M Projection	**XII** Solar Design & terminology
P Human factor	**XIII** Projection
Q Finding Your Way	**XIV** Roof Variations
R Bubble diagrams/Space Allocation	**XV** Anthropormorphic Data

CAD Topics

1 Projection
2 Links: Linked vs. Embedded
3 Layer AIA Std.
4 Linetypes
5 Scales

Topics for additional study

Style
Property set definitions

Final

I Introduction of Problem
V Client Visitation: Project review
P Prelilminary Presentation
F Final Presentation