



University of Alaska Southeast
School of Career Education

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**Tech Prep Articulation Agreement
Between
University of Alaska Southeast (UAS)
and
Juneau School District (JSD)**

**Construction Technology
School Year 2016-2017**

Purpose:

In addition to the general Tech Prep Agreement, the purpose of this articulation agreement is to outline the mutual understanding as we have agreed to the following process and criteria with respect to the program of Construction Technology.

Course:

The school district program will follow a curriculum coordinated with the administration and faculty of UAS pertaining to the following course:

Construction - Introduction to AutoCAD

CT S175 An introduction to Computer Aided Design and Drafting using the industrial standard AutoCAD software. Includes the basics of computer hardware and software, computer skills required for creating and editing drawings. **3 Credits (2+2) No prerequisite**

Although teaching methods may differ, this course will be subject to the instructional objectives and outcomes of the attached UAS syllabus.

Administration:

1. Students must have an overall 2.0 GPA to register for university credit.
2. It is recommended that course work be completed at a level of 3.0 GPA.
3. Students must successfully complete UAS – Introduction to AutoCAD with a minimum course 2.0 GPA prior to registering for university credit in UAS – CT S181 – Intermediate AutoCAD.
4. UAS program chairs shall review and approve all course syllabi and related curriculum documents to ensure they replicate the UAS course. This includes standardized course syllabi, course objectives, textbooks, tools, equipment, and methods for evaluation.
5. To receive concurrent credit, the student will register for the Tech Prep course at the beginning of the term in which the competencies will be completed. Registration for yearlong courses will take place during the fall semester.
6. The UAS grade posted will be the UAS grade earned for the course and submitted by the district instructor.
7. Student grades will be submitted by 5:00 p.m. of the final day of the district semester at uaonline.alaska.edu.
8. Any change in instructor requires suspension of this addendum.

Robin Gilchrist 8-17-16
Robin Gilchrist, Program Head Date
Construction Technology
University of Alaska Southeast

Collin Dukes 5/20/16
Collin Dukes, Instructor Date
Construction Technology
Juneau School District

Pete Traxler 8-17-16
Pete Traxler, Dean Date
School of Career Education
University of Alaska Southeast

Mark Miller 5/25/16
Mark Miller Date
Superintendent
Juneau School District

SYLLABUS
Construction Technology
CT 175 Introduction to AutoCAD
Fall 2014

Instructor: Robin Gilcrist
Phone: 907-796-6141
Email: robin.gilcrist@uas.alaska.edu
Office: Tuesdays and Wednesdays 1pm-4pm
Office Location: TEC 209, Technical Education Center

Classroom: TEC 212

Dates of Class: September 2, 2014-December 9, 2014
Tuesday: 6:00 – 9:45 pm

Course Description: Introduction to AutoCAD is a course for beginning users of the industry standard Computer Aided Drafting program AutoCAD LT. Students should have a basic understanding of the use of a personal computer. The course work is designed to introduce new users to the software used for drafting. Introduction to drafting will also be presented. At the completion of this course the student should be able to print out a simple construction drawing which conforms to industry accepted drafting standards using the AutoCAD LT program.

Required Text: Up and Running with AutoCAD 2014 by *Elliot Gindis*
Additional reading and resources will be available through the class website.

Course Schedule:

Week one:
Introduction and using scales

Week two: read chapter 1 & 2
AutoCAD fundamentals

Week three: read chapter 3
Setting up a Drawing

Week four: read chapter 4
Creating text

Week five:
Organizing your drawing

Week six: read chapter 5 & 6
Text and Dimensioning

Week seven: read chapter 7
Creating elevations

Week eight: read chapter 7
Working with hatches

Week nine: read chapter 8
Creating foundation and roof plan

Week ten: read chapter 9
Creating a site plan

Week eleven: chapter 10
Creating a site section

Week twelve: chapter 11
Putting it all together

Week thirteen:
Begin final

Week fourteen:
Working on final

Week fifteen:
Finish final

Student Responsibilities:

Students will be expected to **attend every class** or notify the instructor ahead of class. It is the student's responsibility to request handouts and instruction for missed classes. Missed class assignments must be turned in by a pre-arranged deadline approved by the instructor.

Most of the course work will be done during classes. **Reading** should be done ahead of class so that the student is familiar with lecture material. Be prepared to ask questions during opening lecture. Most of the class time will be dedicated to hands-on instruction at the computer. Additional time needed outside of class will be the student's responsibility.

Students are expected to **use UAS online:**

<https://uascentral.uas.alaska.edu/online/>

The class website provides a central location for communication outside of class between the student and the instructor. This is also where grades, announcements and assignments are posted. You are responsible for reviewing the class website on an on-going basis.

All completed assignments must be posted to the student's class portfolio for review and grading.

Computer Lab access:

The computer lab in TEC 212 is available for student use throughout the week, however there may be meetings taking place or other classes. The AutoCAD suite is available on the network from any UAS computer; which means you can access the program on campus as well as the Technical Education Center.

Grading:

This course is offered through the School of Career Education and will be graded on the standard academic scale based on the following: participation, completeness of assignments, comprehension of course materials and improvement in overall understanding of the course work.

Each assignment will be given points depending on the completeness and proper application of the program commands. Each assignment will be graded on a 1-10 scale. All drawings are to be posted to the portfolio. Students are responsible to check the portfolio review for needed corrections.

Weekly assignments = 120 points

Final assignment = 30 points

A	150-135 points
B	134-120 points
C	119-105 points
D	104-90 points
F	89 or less points

Drop/Withdraw:

Students who miss three consecutive classes or four total classes will be dropped from the course.

Last date to drop course (100% refund) is September 16, 2014

Last date to withdraw from course is November 21, 2014

Note:

The above schedule and procedures are subject to change.

Expect to spend two hours minimum outside of class reading and preparing for the lecture and lab sessions.

Students must take responsibility for their learning.

CT 175 Introduction to AutoCAD

Learning Outcomes

The final project for this course will be evaluated on the following competencies.

Understand AutoCAD Environment

Objective:

Create new drawings, open existing drawings and save drawings.

Required knowledge and skills:

Locate and use commands from toolbars and access pulldown menus.
Modify Dialog boxes. Create and save new drawings as templates

Working with Drawing Basics:

Objective:

Create basic geometry and utilize basic editing commands.

Required knowledge and skills:

Use the line, circle, arc, polyline, polygon, rectangle, and ellipse commands to draw simple geometric shapes. Understand coordinate systems and specify points needed to draw in the AutoCAD environment.

Create accurate drawings:

Objective:

Create and manage grid system, snap, and polar snap tools.

Required knowledge and skills:

Create and modify grid and snap spacing. Understand and modify drafting settings. Use object snap and polar tracking to create accuracy within the drawing.

Working with Layers and Linetypes:

Objective:

Create, manage, and alter the display of color, layers, and linetypes and lineweight in a drawing.

Required knowledge and skills:

Access the layer dialog box, create layers and change settings of layers. Place objects on layers based on the course standard.

Working with Editing Basics:

Objective:

Utilize basic editing commands.

Required knowledge and skills:

Use the move, copy, rotate, scale, stretch, explode break, trim and extend commands.
Use different methods of selecting objects to be edited.

Annotations:

Objective:

Create, manage and alter the display of annotation in a drawing.

Required knowledge and skills:

Create and modify text styles, create Mtext, demonstrate knowledge of scaling text.

Create Reusable Content

Objective:

Create, manage and alter the display of blocks in a drawing.

Required knowledge and skills:

Create symbols as blocks. Understand saving storage and retrieval of blocks. Use blocks in a drawing. Use the design center to add block to drawings.

Layout and Views:

Objective:

Create and manage layouts, viewports and page setups.

Required knowledge and skills:

Create layouts, viewports, scaling viewports.

Creating Output:

Objective:

Plot drawings to scale.

Required knowledge and skills:

Create plots that are accurately scaled with appropriate linetype scaling and lineweights. Place drawings in a title block within an accurately scaled viewport with appropriate layers visible.

Final Requirements:

The final will consist of a set of drawings of the student's choosing. These drawings will include a standard class title block on each drawing sheet; demonstrating the entire course competencies list above.

Three of the following drawings must be included in the set of drawings.

- Site plan
- Floor plan
- Elevation
- Foundation plan
- Floor framing plan
- Roof framing plan
- Typical detail
- Specific detail
- Section
- Top view
- Side view

Students submit a final proposal form by the deadline indicated on the form (handout the last month of class). Instructor will review proposal, comment and return form. Final will be graded on completing the agreed upon proposal and the student demonstration of the above listed competencies.

CT 175 Introduction to AutoCAD
Student Competencies

UAS faculty has defined six competencies (communication, quantitative skills, information literacy, computer usage, professional behavior, critical thinking) in which students will be assessed periodically during their studies at UAS. Aspects of these competencies will also be integrated in the teaching approach, class structure, and curriculum of this course.

Communication which includes the ability to:

- read the assigned chapters before class and be prepared to communicate major ideas of the assigned reading;
- listen during lecture to improve understanding of major ideas present in each assigned reading;
- discuss application of concepts introduced through course

Quantitative skills which includes the ability to:

- make mathematical calculations relating to scale of drawings created;
- understand functional relationships of scale and model/paper space;
- evaluate a problem and apply several expectable solutions.

Information literacy which includes the ability to:

- use library and computer to gather information;
- complete and discuss reading assignments;
- demonstrate knowledge of available resources pertinent to coursework

Computer usage which includes the ability to:

- use computer to complete assigned tasks;
- process and store information;
- use UAS Online for storing and retrieving assignments.

Professional behavior which includes the ability to:

- complete assignment on time;
- demonstrate professional work habits;
- exercise ethical choices;
- assume leadership role when appropriate

Critical thinking which includes the ability to:

- compare, contrast and evaluate ideas;
- evaluate, and analyze options for completing assignment;
- apply concepts and theories to complete projects