



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**BLUEPRINT READING
INR3717 3 Credit hours**

Student Level:

This course is open to students on the college level in either the freshman or sophomore year and to area high school vocational students.

Catalog Description:

INR 3717 BLUEPRINT READING (3 hrs)

A course designed to study the basics of blueprint drawings and to practice obtaining desired information from blueprints. Includes: types of drawings, lines, dimensions, tolerances, specifications, and sketching techniques.

Prerequisites:

This course is open to all students who are accepted in technical programs.

Controlling Purpose:

This course is designed to help the student increase their knowledge concerning reading blueprints and making sketches.

Learner Outcomes:

Upon completion of this course, the student will be able to read and interpret basic blueprints.

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents.

Units Outcomes and Criterion Based Evaluation Key for Core Content:

The following defines the minimum core content not including the final examination period. Instructors may add other content as time allows.

Evaluation Key:

- A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.
- B = All major goals have been achieved, but the student has failed to achieve some of the

less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.

- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.
- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

UNIT 1: Print Lines						
Outcomes: Upon completion of this unit, the student will be able to successfully identify seven different types of lines used in blueprints.						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Identify object lines, hidden lines, center lines, extension lines, dimension lines, projection lines, and section lines.

UNIT 2: Understanding The Three View Drawing						
Outcomes: Upon completion of this unit, the student will be able to successfully identify views in orthographic drawings.						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Define orthographic.
						Identify the six possible views in orthographic drawings.
						Identify specific information on a given blueprint.
						Identify holes in side views.
						Read and explain dimensions and how they relate in different views.

UNIT 3: Identifying Tolerances

Outcomes: Upon completion of this unit, the student will be able to successfully identify and locate tolerances given on blueprints.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						The title block to locate tolerances.
						Demonstrate the use of tolerances charts.
						Explain bilateral and unilateral tolerances.
						Determine maximum and minimum tolerances.
						Demonstrate the understanding of angler tolerances.

UNIT 4: Understanding Section And Auxiliary Views

Outcomes: Upon completion of this unit, the student will be able to successfully identify and locate information in auxiliary and sectional views.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Define a sectional view and give its purpose.
						Determine where a sectional view originates.
						Identify dimensions using sectional views.
						Locate tolerances in sectional views.

UNIT 5: Drawing Sketches

Outcomes: Upon completion of this unit, the student will be able to successfully draw both two dimensional and three dimensional views from given information.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Draw and dimension a three-view sketch of a given object.
						Draw a 3 dimensional sketch of the above drawing.

UNIT 6: Understanding Aircraft Blueprints

Outcomes: Upon completion of this unit, the student will be able to successfully identify and locate information using aircraft blueprints.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Define a mole line.
						Demonstrate the location of a station line on a given print.
						Explain a waterline in reference to aircraft prints.
						Explain what a milliard is.
						Explain what a butt-line is on an aircraft print.

UNIT 7: Understanding Welding Symbols

Outcomes: Upon completion of this unit, the student will be able to successfully indentify, locate, and explain information concerning welding symbols.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Explain the use and meaning of the welding symbols.
						Demonstrate the use of the welding symbols charts to determine the symbols meaning.

Projects Required:

As assigned.

Textbook:

Contact Bookstore for current textbook.

Materials/Equipment Required:

None

Attendance Policy:

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:

The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:

Based on classroom occupancy

Course Timeframe:

The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability, which may impact work in this class which requires accommodations, contact the Disability Services Coordinator.