



Introduction to Blueprint for Welders-1313

Course Syllabus: May Intersession 2017

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

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| Office Hours | Monday | Tuesday | Wednesday | Thursday | Friday | Online |
|--------------|--------------|--------------|--------------|--------------|--------|--------|
| | 12:00-2:30pm | 12:00-2:30pm | 12:00-2:30pm | 12:00-2:30pm | | |

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Course Description for WLDG-1313: Three credit hours. A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes, including systems of measurement and industry standards. Interpretation of plans and drawings used by industry. Three hours lecture and four hours lab each week. . Students enrolled in his course must have a set of hand tools that they may furnish or lease from the college for \$40.00 per course per semester. Additional course fee: \$65.00.

Required Textbook(s):

Blueprint Reading for Welders, Bennett, A.E. and Siy, Louis J; 9th edition.

Publisher: Delmar, Cengage Learning

ISBN Number: ISBN-13: 978-1-4283-3528-8. ISBN-10: 1-4283-3528-5

Basic Principles and Applications, 7th edition, by Larry Jeffus

Publisher: Delmar, Cengage Learning

ISBN Number: ISBN-13: 978-1-111-03917-2. ISBN-10: 1-111-03917-8

Recommended Reading(s): None

End-of-Course Outcomes: Define terms and abbreviations; and identify and explain object views, lines, and dimensions. Identify, explain, and interpret weld symbols; identify structural shapes; demonstrate the proper use of measuring devices; read and interpret blueprints; read welding detail drawings; and calculate dimensions and material.

Lab Recommended

Exemplary Educational Objectives: N/A

SCANS Skills:**Course Objectives**

Upon successful completion of this course, the student will be able to:

Objectives for this course are listed in the handout that covers Competencies/tasks.

Lectures & Discussions:

| Task Code | Task Description |
|------------------|--|
| 1313.02 | SKETCHING & DIMENSIONS (F1, F5, F11, C5, C10, C18) |
| 1302.01 | Recognize basic lines |
| 1302.02 | Recognize basic views |
| 1302.03 | Demonstrate sketching |
| 1302.04 | Explain the purpose of dimensions |
| 1302.05 | Explain linear and angular dimensions |
| 1302.06 | Explain radius and arc dimensions |
| 1302.07 | Explain drilled hole dimensions |
| 1302.08 | Explain countersunk and counterbored holes and spotface dimensions |
| 1302.09 | Explain tolerance dimensions |
| 1302.10 | Recognize scale sizes |
| 1302.11 | Recognize thread dimensions |
| 1302.12 | Recognize dimensioning methods |
| 1302.13 | Explain other terms commonly used in dimensioning |
| 1302.14 | Explain geometric tolerancing and dimensioning |
| 1303.03 | Bill of Materials, Structural Shapes & Weld-Symbols (F1, F5, F14, C9, C14, C18, C20) |
| 1303.01 | Prepare a bill of materials |
| 1303.02 | Common structural shapes |
| 1303.03 | Views with conventional breaks |
| 1303.04 | Auxiliary views |
| 1303.05 | Use of both right side and left side views |
| 1303.06 | Alternate positions of side view |
| 1303.07 | Enlarged detail views |
| 1303.08 | Untrue projection |
| 1303.09 | Corrections and revisions on prints |
| 1303.10 | Explain full sections |
| 1303.11 | Explain half sections |
| 1303.12 | Explain revolved sections |
| 1303.13 | Phantom sections |
| 1303.14 | Aligned sections |
| 1303.15 | Broken out sections |
| 1303.16 | Demonstrate detail drawing |
| 1303.16 | Demonstrate assembly prints |
| 1303.17 | Demonstrate subassembly prints |
| 1303.18 | Demonstrate adjustable bumper hitch details |
| 1303.19 | Recognize welding symbol |
| 1303.20 | Recognize location of weld symbol |
| 1303.21 | Recognize additional welding symbol elements |
| 1303.04 | Basic Joints & Second Part of Welding Symbols (F1, F11, F15, F17, C9, C15, C18, C19, C20) |
| 1304.01 | Recognize obsolete weld symbols |
| 1304.02 | Recognize preferred symbols |
| 1304.03 | Demonstrate designation of member to be beveled |
| 1304.04 | Recognize the location of the welding symbol on orthographic views |

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| 1304.05 | Recognize duplicate welds |
| 1304.06 | Recognize multiple reference lines and their applications |
| 1304.07 | Explain basic joints |
| 1304.08 | Discuss other kinds of joints |
| 1304.09 | Recognize joints commonly used with structural shapes |
| 1304.10 | Explain size of the legs |
| 1304.11 | Explain length of fillet welds |
| 1304.12 | Determine the extent of welding |
| 1304.13 | Recognize pitch and intermittent welding |
| 1304.14 | Recognize contour and finishing |
| 1304.15 | Recognize the use of fillet weld in combination with other symbols |
| 1304.16 | Explain size of backing and melt-thru welds |
| 1304.17 | Explain contour and finishing |
| 1304.18 | Explain applications of back or backing symbols |

1303. 05 **Basic Joints & Third Part of Welding Symbols**
(F1, F11, F15, F17, C9, C15, C18, C19, C20)

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| 1305.01 | Recognize size of plug and slot welds |
| 1305.02 | Recognize the angle of countersink |
| 1305.03 | Explain the depth of filling |
| 1305.04 | Recognize the number of plug and slot welds |
| 1305.05 | Explain pitch |
| 1305.06 | Explain contour and finishing |
| 1305.07 | Explain plug welds with three or more joints |
| 1305.08 | Explain surfacing welds |
| 1305.09 | Explain Applications of the edge-flange and corner-flange weld symbols |
| 1305.10 | Explain size of the legs |
| 1305.11 | Explain dimensioning the spot weld symbol |
| 1305.12 | Explain contour and finish symbols |
| 1305.13 | Recognize pitch and intermittent welding |
| 1305.14 | Recognize contour and finishing |
| 1305.15 | Recognize-flush contour symbol |
| 1305.16 | Recognize joint seam welds |
| 1305.17 | Explain contour and finishing |
| 1305.18 | Explain applications of back or backing symbols |
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1303. 06 **Metrics & Fourth Part of Welding Symbols**
(F1, F11, F15, F17, C9, C15, C18, C19, C20)

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| 1306.01 | Explain metrics |
| 1306.02 | Explain the structure of the metric system |
| 1306.03 | Explain metric prefixes |
| 1306.04 | Recognize ISO inch and ISO metric screw threads |
| 1306.05 | Recognize pipe thread designations on metric drawings |
| 1306.06 | Explain the materials in metric sizes |
| 1306.07 | Recognize the standard practices for presenting metric expressions and dimensions on metric drawings for weldments |
| 1306.08 | Recognize symbols for pipe layouts |
| 1306.09 | Dimensioning pipe layouts |
| 1306.10 | Recognize methods of representing a pipe layout |
| 1306.11 | Explain ISO symbology |
| 1306.12 | Explain ISO symbol |
| 1306.13 | Explain the dimensions applied to ISO symbols |

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| 1306.14 | Explain Inch-Millimeter Equivalents |
| 1306.15 | Explain the structural metal shapes |
| 1306.16 | Explain pipe dimensions chart |
| 1306.17 | Recognize drill dimensions chart |
| 1306.18 | Recognize steel rule diagram |
| 1306.19 | Explain metric threads-fine and course |

**1313.07 Reduced Prints
(F1, F5, F11, C5, C10, C18)**

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| 1307.01 | Explain hot water tank |
| 1307.02 | Recognize a chassis for utility trailer |
| 1307.03 | Recognize two trolleys for 20 ton ore bridge trolley drive motor support frame |
| 1307.04 | Recognize center sill assembly |
| 1307.05 | Recognize engine mount rear |
| 1307.06 | Recognize common types of lines used on a print |
| 1307.07 | Recognize standard gages-wire, sheet, plate |
| 1307.08 | Recognize size specifications for structural shapes |
| 1307.09 | Recognize material abbreviations |
| 1307.10 | Recognize letter dimensions for welding process |
| 1307.11 | Recognize letter dimensions for cutting process |
| 1307.12 | Recognize SI base units |
| 1307.13 | Recognize SI supplementary units |
| 1307.14 | Recognize derived units pertaining to welding |
| 1307.15 | Recognize the comparison of decimal numeration |

Evaluation and Grading

The grades you will receive for this class will be based upon these areas:

Assignments:

Review Questions: At the end of the assigned units by your instructor

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| 1. Professional reading assignments | 10% |
| 2. Quizzes and assignments | 20% |
| A minimum of 3 tests covering class lectures, text material, assigned readings, films, | |
| 3. Handouts and competencies/task shop work. | 30% |
| 4. Sketching a Blue Print in a poster board as a FINAL TEST | 40% |
| TOTAL | 100% |

SLEEPING IN CLASS WILL RESULT IN A ZERO FOR THE DAY!

Other Course Requirements:

Each student will lease a welding tool set from the school for \$40.00 per semester. **The toolbox will be issued to and inventoried by the student and he/she is responsible for it.** *This tool set cannot leave the shop area and students will not be allowed to share too boxes.* The student will be required to pay for any tools lost or intentionally damaged.

General Classroom and Lab Policies

The Mechanical Power Technology program, like most other vocational programs, has policies that must be followed. These policies will give you, the student, a better opportunity to learn the mechanical power trade. *The general classroom and lab policies are in the Mechanical Power Technology Shop Safety Manual.* The instructor may have additional policies for their class.

General Safety Policies

Anyone with extremely long hair must have some way to keep it up (hair net, hat). There will be no open-toe shoes worn in the shop (sandals, flip flops). Each student will be required to have a pair of safety glasses to be at all times. *The general safety policies are in the Mechanical Power Technology Shop Safety Manual.* The instructor may have additional safety policies for their class.

Student Responsibilities/Expectations:

It is important to present a professional image in the work place. Therefore, students are required to wear 100% cotton long sleeve shirts. They may be purchased in the bookstore or you can purchase in town. If your employer furnishes uniform shirts, they may be worn in place of the school shirt. These shirts should be clean and neat at all times. You must have an approved uniform Welding Clothing by the second week of class. If you do not, you will not allowed to start any hands-on welding in the lab and 10 points will be deducted from your professionalism grade each class period proper welding clothing is not worn. **Shorts and sandals are not allowed. Professional appearance is part of your grade**

NTCC Academic Honesty Statement:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Conduct of Course

Attendance Policy

Regular and punctual attendance at all scheduled classes is expected. Attendance is necessary for successful completion of course work. If you are absent, you are responsible for initiating procedures for make-up work. All course work missed, regardless of cause, is to be completed to the satisfaction of the instructor. Every time the student comes late to class will be adding deduction points into his final grade. *More than three absences are considered excessive!* **It is up to you to initiate a course drop in the Office of Admissions and Records.** (At the discretion of the instructor, a student with nor more than two absences and with an "A" average will be exempt from the final exam.)

Academic Ethics

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

Family Educational Rights And Privacy Act (Ferpa):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Other Course Policies:**LOCKERS AND TOOLS BOXES AT THE END OF EACH SEMESTER**

Each student has to clean up his/her own locker, take all personal items out the locker box and return ALL WELDING TOOLS. IF ANY WELDING TOOL IS MISSING, HE/SHE WILL NOT RECEIVE A FINAL GRADE UNTILL ALL THEM ARE RETURNED BACK AS THEY WERE ISSUED AT THE BEGINNING OF THE SEMESTER.

I HAVE READ THE SYLLABUS FOR THIS COURSE AND UNDERSTAND WHAT IS REQUIRED TO PASS. I UNDERSTAND THE EVALUATION AND GRADING POLICIES IN THIS COURSE.
I WILL FOLLOW ALL SAFETY AND CLASSROOM POLICIES BOTH WRITTEN AND VERBAL.
ALL QUESTIONS I HAD WERE ANSWERED BY THE INSTRUCTOR TO MY SATISFACTION.
COURSE WLDG 1313.

Student Signature

Date