



## Introduction to Blueprint for Welders-1313

Course Syllabus: May Intersession 2017

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

### Marcos Sánchez

Office: BT: 110

Phone: 903-434-8179

Email: [msanchez@ntcc.edu](mailto:msanchez@ntcc.edu)

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; 9<sup>th</sup> 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:**

<b>Task Code</b>	<b>Task Description</b>
<b>1313.02</b>	<b>SKETCHING &amp; DIMENSIONS (F1, F5, F11, C5, C10, C18)</b>
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
<b>1303.03</b>	<b>Bill of Materials, Structural Shapes &amp; Weld-Symbols (F1, F5, F14, C9, C14, C18, C20)</b>
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
<b>1303.04</b>	<b>Basic Joints &amp; Second Part of Welding Symbols (F1, F11, F15, F17, C9, C15, C18, C19, C20)</b>
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

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)

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

**1303. 06** **Metrics & Fourth Part of Welding Symbols**  
(F1, F11, F15, F17, C9, C15, C18, C19, C20)

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

1306.14	Explain Inch-Millimeter Equivalent
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)**

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**

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%
<b>4. Sketching a Blue Print in a poster board as a FINAL TEST</b>	<b>40%</b>
<b>TOTAL</b>	<b>100%</b>

**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