Imperial Valley College

Welding Technology Program

MEMORANDUM

To: Efrain Silva, Dean of Economic and Workforce Development

Jose Lopez, Industrial Technology Chair

FROM: Gonzalo Huerta, Professor of Welding Technology

DATE: January 15, 2013

Subject: First Day of Instruction Information Sheets to Students for Spring 2013

WELD 100 Welding Technology 5 cr.

Professor G. Huerta (Tue, Wed, and Thurs; 8:05 a.m. to 11:15 a.m.; Room 1200)

I. Attached please find copies of the information sheets I distributed to my students and discussed during the first-day-of-class (01.15.2013) Spring Semester 2013.

These include;

1. Course Syllabus,
2. 2012-2013 Academic Calendar,
3. College Polices, Rules, and Regulations (Pages 32 – 36 IVC College Catalog),
4. Institutional Student Learning Outcomes,
5. WELD 100 Welding Technology (Professor G. Huerta) "Course Core Content",
6. Welding Career Experience and Profile,
7. Personal Individual Contact Information,
8. Welding Technology Spring Semester Study and Review Guide (Professor G. Huerta),
9. Welding Technology Program General Safety Rules (Prof. G. Huerta; Sp 13), and
10. Technical Literature Review Semester Paper Template and Outline.

II. On my First-day-roster I "DELETED" two No-Show Students and gave "Add Codes" to two students which still places my class in a Full/Closed condition.

If you have any questions, please do not hesitate to contact me. Thank you.

Imperial Valley College

Industrial Technology Department

Welding Technology Program

Course Syllabus,

WELD 100 (Welding Technology), Spring Semester 2013

Instructor: Gonzalo Huerta, BS, MA, AWS/CWI

I. Function and purpose for the course syllabus:

1. Establish an Early **Point-of-Contact** between Student and Faculty,
2. Establish an essential **connection** between Student and Faculty,
3. Set the **tone** for the teaching and learning experience,
4. Serve as a **General Orientation** for the semester,
5. Share educational **purposes, practices, procedures, and processes**,
6. Provide an opportunity for **networking** and team-building,
7. Acquaint Students with the **logistics** of the course,
8. Provide the college instructional calendar and **course calendar**,
9. Define **Student responsibilities**, and **Student Learning Outcomes,**
10. Define student participation leading to **successful course completion**,
11. Set **course parameters** and context for teaching and learning,
12. Describe available **learning resources** and support for learning,
13. Provide for **commitment** from the Faculty and from the Students,
14. Define mutual **obligations** between Faculty and Students, and
15. Serve as a **Teaching and Learning Agreement** between Faculty and Students.

II. Essential Details: Weld 100, Spring Semester 2013,

Course Title	**Welding Technology**
Course Number	**WELD 100**
Credit Hours/Units	5 cr. (3 lec. 2 lab.)
Semester	Spring 2013

Class Schedule

LEC: Tuesday 8:05 am to 11:15 am

LAB: Wednesday/Thursday 8:05 am to 11:15 am

Location

LEC 1200 Building

LAB 1200 Building

Faculty:	Gonzalo Huerta, Sr., BS., MA., AWS/CWI
Contact Information	760-562-7758 Cell
	760-355-6419 Office
	gonzalo.huerta@imperial.edu
Office Location	1200 Building
Division Office	1100 Building
Division Phone Number	760-355-6262
Division Chair	Mr. Jose Lopez
Division Secretary	Frances Arce-Gomez

III. Course Description: WELD 100,

The study of metals is an integral part of essentially all science and technologically based disciplines. This course will prepare the student for the specialized application of **Welding and Welding processes** within their chosen field of study. The student will establish a broad knowledge base and understanding of the **properties of materials** used in our technological world. **Industrial Safety** will be of paramount importance and will be practiced during all activities associated with this course. Emphasis will be placed on the **welding, metallurgical, mechanical, and physical properties** of materials. Skills development will be stressed during the laboratory portion of the course and will be based on Welding Industry accepted **practices, procedures,** and **techniques**.

IVC Catalog Description; A complete basic study of welding technology and safety, the student practices welding techniques for skills development in Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Oxy-Acetylene welding and cutting (OFW/OFC), and Plasma Arc Cutting (PAC). All the welding and cutting processes require proper use of Personal Protective Equipment (PPE) and the following of shop safety, electrical safety, and safe tools usage.

IV. Important Dates for Spring Semester 2013:

NOTE: Please refer to the Course Syllabus Addendum provided, the College General Catalog, the Spring Semester Class Schedule, and/or the IVC website (www.imperial.edu).

V. Course Goal(s): Weld 100, Spring Semester 2013

The goals to be achieved during the completion of WELD 100, Welding Technology are;

1. To have the **students acquire an understanding** of materials and materials science within the context of Manufacturing Processes and Welding Technology, and
2. To have the **students develop the fundamental skills set** applicable to Welding Technology and laboratory practices, techniques, and procedures.

VI. Course Objectives and Competencies: WELD 100,

Upon successful completion of WELD 100, Welding Technology the student will be able to;

1. Demonstrate knowledge of **materials** as related to Welding Technology,
2. Demonstrate knowledge of **Industrial Safety** (29 CFR 1910 General Industry),
3. Demonstrate **skill and knowledge** associated with SMAW, GTAW, GMAW, PAC, OFC, and OFW,
4. Demonstrate the necessary skills set to produce assigned **welding samples** per acceptable Welding Procedure Specifications **(WPS),**
5. Describe and discuss three fundamental groups of **materials' properties,**
6. Explain the importance of materials, their properties, their **microscopic** behavior, and their **macroscopic** behavior,
7. Describe the essential **components (T.T.T.)** of "Welding" to be controlled to attain desired results in mechanical treatment, thermal treatment, and service life of materials, and
8. Demonstrate an understanding of and use of **Terminology** associated with Welding Technology, Weld/Welding Symbols, Physical Metallurgy, and Manufacturing Processes Technology.

NOTE: All activities during the semester will have as a basis the IVC *Institutional Student Learning Outcomes* which are;

IVC Institutional Student Learning Outcomes

Communication Skills
Critical Thinking Skills
Personal Responsibility
Information Literacy
Global Awareness

VII. Welding Technology Program Mission Statement:

"It the **Mission** of the IVC Welding Technology Program to offer **Educational, Academic,** and **Skills Development** opportunities designed to assist the individual in mastering the necessary **technical competencies** and **skills sets** to meet the qualification **requirements** to develop professionally as **Welders** (Certificate of Completion Option) and/or as **Welding Technicians** (Associate of Science Degree Option)"

VIII. Teaching Philosophy to Facilitate Learning:

As a teacher, I believe it is my privilege and my duty to inspire my students to learn and it is my responsibility to challenge my students to reach their fullest potential.

To this end;

1. I believe my purpose as a teacher goes beyond the teaching of Welding Technology and Physical Metallurgy. It is equally important; to help my students grow as individuals, to support their intellectual and professional development, to challenge their assumptions, and to expand their worldviews.
2. I believe that I succeed as a Teacher when my students are inspired to inquire, teach themselves to pursue knowledge, and learn-to-learn.
3. I believe in challenging my students to meet and exceed standards of performance.
4. I believe in providing students with the resources necessary to reach the prescribed standards.
5. I accept my role as Teacher seriously and I want my students to know that I am personally dedicated to their success because I care deeply that they learn, grow, and develop.
6. I believe that an important element of learning is building structure to support the learning process that will lead to critical thinkers and effective life-long learners.
7. I believe that I should continuously improve my teaching skills and enhance the content of my courses.
8. My love of teaching was not the first inspiration for me to pursue and participate in my Post-Secondary Academic career; Technology and Engineering was my High School Graduation goal.
9. After teaching Part-Time I discovered my true Vocation was teaching and I returned to University for my B.S. in Industrial Technology and my M.A. in Administration and Supervision.
10. For the past forty (42) years, teaching has been my vocation, my passion, my profession, and my contribution to the betterment of my students, our community and our society.

IX. Academic Integrity:

Integrity is the foundation of all actions in our world. Any student participating in acts of academic dishonesty including, but not limited to; copying the work of others, using unauthorized "crib notes", plagiarism, stealing tests, or forging an instructor's signature; will be subject to the disciplinary procedures and consequences as outlined in the IVC Student Code of Conduct.

X. Expectations and Responsibilities:

We (Faculty and Students) will cooperatively strive to create and maintain a **healthy teaching and learning environment**. **Civility and respect** for all individuals present during all of our activities will foster team dynamics and will nurture the fundamentals for success.

1. Any form of **HARASSMENT** against any individual will not be acceptable,
2. Anything contributing to a **HOSTILE ENVIRONMNET** will not be acceptable,
3. Any type of classroom/lab **DISRUPTION** will not be acceptable.
4. Unauthorized use of **ELECTRONIC DEVICES** will not be acceptable.
5. **CELL PHONE** ring tones, texting, chatting, etc. during class will not be acceptable.

XI. Teaching and Learning Elements for WELD 100:

The course topics and course content listed below constitutes the elements for the AWS profile of **Entry Level Welding Personnel.** These are the components for teaching and learning that will guide our progress throughout the semester. This listing is arranged by content as presented, in part, by the American Welding Society (AWS QC10-95); *Specification for Qualification and Certification for Entry Level Welders* and **should not be interpreted as chapters** in the textbook, units of instruction, or instructional modules.

1. Safety and Health Requirements, Practices, and OSHA References,
2. Applied essential Reading, Computational, and Technical skills,
3. Standard Welding Terms and Definitions (ANSI/AWS A3.0),
4. Knowledge of Welding **Technology,**
5. Theory and Knowledge of **Welding** and Cutting,
6. Technical Drawing, Welding Symbols, and Weld Symbol Interpretation,
7. Base and Filler Metal Identification,
8. Base and Filler Metal Selection,
9. Essential Welding Variables and Parameters,
10. Welding Procedure Specifications (WPS's),
11. Electrical Fundamentals,
12. Weld Assembly and Fabrication Principles and Practices,
13. Essentials of Qualification Welding Tests and Welder Certification,
14. Materials and Metallurgical Properties of Metals,
15. Macroscopic Properties of Materials and Metal Behavior, (continued)

16. Alloys and Alloying Processes,
17. Metal Strengthening Mechanisms and Processes,
18. Physical Properties of Metals,
19. Mechanical Properties of metals,
20. Chemical Properties of Metals, and
21. Thermal Treatment Processes.

XII. Methods of Instruction for Learning:

1. Lecture
2. Media Presentations
3. Laboratory Experience
4. Formal and Informal Discussion
5. Outside Assignments

XIII. Evaluation and Grading Criteria and Methods:

This course (WELD 100) is designed to be an essential part of the course sequence in the Degree and Certificate programs in **Welding Technology.** As such, it is to be a "For Credit" course. The cumulative effort and participation of the student throughout the semester will contribute to the outcome of an earned grade of, A, B, C, D, or F.

All assigned activities will be quantifiable and recorded based on a designated point value.

There will be a total point value per assignment/activity and there will be a total point value for the semester. Based on the cumulative points earned for the semester, the grade assigned will be as follows;

1. A grade of "A" represents EXCELLENT work and outcomes = 90 to 100% of Total Points in Lecture and Lab,

2. A grade of "B" represents GOOD work and outcomes= 80 to 90% of Total Points in Lecture and Lab,

3. A grade of "C" represents SATISFACTORY work and outcomes=70 to 80% of Total Points in Lecture and Lab,

   Note: The ACCEPTABLE/SATISFACTORY criteria for many Certification and Evaluation activities in Industry is set at the 70% rate to designate success with a notation of (Pass-Fail/Accept-Reject)

4. A grade of "D" represents LESS THAN SATISTACTORY work= 60 to 70% of Total Points in Lecture and Lab, and

5. A grade of "F" represents UN-SATISFACTORY work LESS THAN 60% of Total Points in Lecture and Lab.

XIV. Grading Activities, Behaviors, Elements, and Characteristics that impact Performance and Grading:

1. Student PARTICIPATION will generate points and will impact learning outcomes;
    a. Attendance is important and required,
    b. Attendance for First-Day-of-Classes is required,
    c. Tardiness and Absenteeism is not acceptable and will negatively impact the student's ability to participate, learn, and perform,
    d. WITHDRAWAL from class should be considered when students are unable to meet their commitment to the class, and
    e. Student conduct will be in accordance with the College Code of Conduct.

2. There will be four **Unit Exams** plus the **Final** exam during the semester;
    a. Unit Exams will be announced and will be closed book, 100 pts +/- each, Note: Any examination not completed by the student during the examination period must be "made-up" by the student **prior** to the next regularly scheduled class meeting.
    b. Final Exam will be Comprehensive Knowledge (Lecture/Lab) 250 pts +/-,
    c. **Quizzes** will **not** be announced 25 pts +/- each,
    Note: Missed Quizzes **cannot** be "Made-up."
    d. **Lab Exercise** Technical Reports will be 50 pts +/- each,
    e. One **Technical Research/Literature Review Paper** will be 250 pts +/-,

XV. Students with Disabilities:

Any student with a disability who may need accommodations should notify the Instructor to assure that arrangements for proper accommodations are made. Imperial Valley College provides academic accommodations to students with disabilities through the Office of Student Services. Disabled Student Programs and Services (DSPS) provides reasonable and appropriate accommodations to students who have documented disabilities. It is the responsibility of the student to make the Coordinator of DSPS aware of the need for accommodations in the classroom prior to the beginning of the semester. Students should follow-up with their Instructors once the semester begins. Please contact the Coordinator of DSPS at (760) 355-6312, (760) 355-4174 (TDD), and in the College Counseling Center (Building 100).

XVI. Necessary Equipment, Materials, and Supplies:

1. Textbook; Per the textbook presented by the Instructor,
2. OSHA Certified and Acceptable Safety Glasses (ANSI Z-87),
3. Required Personal Protective Equipment (PPE)
   - Welding Cap,
   - Ear and Hearing Protection,
   - Welding Face Shield (Hood/Helmet),
   - Work Shirt,
   - Welding Jacket,
   - Work Pants,
   - Work Shoes (Ideally with Safety Toe),
   - Welding gloves, and
4. All other equipment, materials, and supplies that will contribute to the learning process and student success in the course will be provided.

XVII. Textbook

Welding Technology Fundamentals
Author: Bowditch, Bowditch, and Bowditch
Edition: Fourth (4^{th})
Publisher: The Goodheart-Wilcox Company, Inc
ISBN: 978-1-60525-256-8

XVIII. Standards and Specifications References for Welding Technology:

American Society for Metals (ASM International)
American Welding Society (AWS)
American Society of Testing and Materials (ASTM)
American National Standards Institute (ANSI)
American Society of Mechanical Engineers (ASME)
American Society for Nondestructive Testing (ASNT)

IXX. FREQUENTLY ASKED QUESTIONS (FAQ) in Welding:

1. Why do metals crystallize?
2. What does stress have to do with metals?
3. Carbon is it'; why worry about anything else?
4. Why would we want metals to be elastic and stretch out of shape?
5. Why wait for the weld to cool, use water or air to cool it down?
6. If you heat up the metal, won't that make it distemper?
7. Isn't it a fact that if a metal is hard it is strong?
8. What does metallurgy have to do with Welder Certification?
9. There are many types of Certifications, why not get the one that covers it all?
10. Why involve metallurgy in Welding Codes for welders?
11. Careers in Welding are for welders and why should the scientist get involved?
12. Why are there so many certifications?
13. Which is the "Life-Time" Welding certification?
14. What are Welding Codes and Welding Specifications?
15. What are the Health Hazards associated with Welding?
16. Is employment controlled by Unions and Apprenticeship Programs?
17. What educational levels are required for Careers in Welding?
18. What knowledge and skills do Welders, Inspectors, Technicians, and Engineers need to be successful in a Welding Technology related Career?
19. Other Questions???????????????

(To be discussed during orientation)

Notes:

IMPERIAL VALLEY COLLEGE

Academic Calendar 2012–2013

8. 20.12

2012 FALL SEMESTER

AUGUST 2012

Su	M	T	W	R	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Aug 2 - Summer Term II/Classes End
Aug 2 - Summer Term III/Classes End
Aug 17 - Orientation (Mandatory/All Campus)
Aug 20 - Fall 2012 Classes Begin
Aug 25 - Fall 2012 Saturday Classes Begin

SEPTEMBER 2012

Su	M	T	W	R	F	S
						1
2		4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Sept 3 - Labor Day (Campus Closed)

OCTOBER 2012

Su	M	T	W	R	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER 2012

Su	M	T	W	R	F	S
				1	2	3
4	5	6	7	8	9	10
11		13	14	15	16	17
18	19	20	21			
25	26	27	28	29	30	

Nov 12 - Veterans Day (Obsrvd/Campus Closed)
Nov 22-24 - Thanksgiving (Campus Closed)

DECEMBER 2012

Su	M	T	W	R	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Dec 7 - Fall 2012 Term Ends
Dec 10-14 - No Classes/Campus Open
Dec 17-31 - Winter Recess (Campus Closed)

2013 SPRING SEMESTER

JANUARY 2013

Su	M	T	W	R	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Jan 1 - New Year's Day (Campus Closed)
Jan 2-11 - No Classes/Campus Open
Jan 14 - Spring 2013 Term Begins
Jan 19 - Spring 2013 Saturday Classes Begin
Jan 21 - MLK Day (Campus Closed)

FEBRUARY 2013

Su	M	T	W	R	F	S
					1	2
3	4	5	6	7		
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

Feb 8/9 - Lincolns BD (Obsvrd/Campus Closed)
Feb 18 - President's Day (Campus Closed)

MARCH 2013

Su	M	T	W	R	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Mar 31 - Easter

APRIL 2013

Su	M	T	W	R	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Apr 1-6 - Spring Recess (Campus Closed)

2013 SUMMER SESSION I

MAY 2013

Su	M	T	W	R	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

May 10 - Spring 2013 Term Ends
May 11 - Commencement (Faculty/Mandatory)
May 20 - Summer Term One/Classes Begin
(23 days - Monday thru Friday)
May 27 - Memorial Day (Campus Closed)

2013 SUMMER SESSION II & III

JUNE 2013

Su	M	T	W	R	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Jun 10 - Summer Term II (8 Wks/No Fri) Begin
Jun 20 - Summer Term I / Classes End
Jun 24 - Summer Term III /Classes Begin

NEXT ACADEMIC YEAR

JULY/AUGUST 2013

Su	M	T	W	R	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Jul 4 - Independence Day (Campus Closed)
Aug 1 - Summer Term II /Classes End
Aug 1 - Summer Term III /Classes End

LEDGEND/KEY

Holiday(s)	=		Spring Break	=	
Orientation (Mandatory/All Campus)	=		Summer Session I (5 Wks)	=	23 Instruction Days
Commencement - Faculty (Mandatory)	=		Summer Session II (8 Wks)	=	31 Instruction Days
Fall Semester	=		Summer Session III (5 Wks)	=	23 Instruction Days
Winter Recess	=		Campus Open/No Classes	=	
Spring Semester	=		Campus Closed/Summer	=	

IMPERIAL VALLEY COLLEGE
2012-13 ACADEMIC CALENDAR

Fall Semester 2012

August	16	Thursday	Orientation (Service Day – All Faculty and Staff)
	20	Monday	First day of classes - Fall 2012 Semester Begins
	25	Saturday	First Day of Fall 2012 Saturday Classes
September	3	Monday	Holiday (Labor Day) – Campus Closed
November	12	Monday	Holiday (Veterans Day – Campus Closed
	22-24	Thursday-Saturday	Holiday (Thanksgiving) – Campus Closed
December	1-7	Saturday-Friday	Final Exams
	10-14	Monday-Friday	No Classes – Campus Open
	17-31	Monday-Friday	Winter Recess – Campus Closed

Spring Semester 2013

January	2-11	Monday-Friday	No Classes – Campus Open
	14	Monday	First day of classes – Spring 2013 Semester Begins
	21	Monday	Holiday (Martin Luther King's Birthday) – Campus Closed
February	8-9	Friday-Saturday	Holiday (Abraham Lincoln's Birthday) – Campus Closed
	18	Monday	Holiday (Presidents' Day) – Campus Closed
April	1-6	Monday-Saturday	Spring Recess – Campus Closed
May	4-10	Saturday-Friday	Final Exams – Spring Semester 2013
	11	Saturday	Commencement

Summer Session 2013*

May	20	Monday	Summer Session I 2013 Begins
	27	Monday	Holiday (Memorial Day) – Campus Closed
June	10	Monday	Summer Session II 2013 Begins
	17-20	Monday-Thursday	Final Exams – Summer Session I 2013
	24	Monday	Summer Session III 2013 Begins
July	4	Thursday	Holiday (Independence Day) – Campus Closed
	29-1	Monday-Thursday	Final Exams – Summer Sessions II and III 2013

*Subject to Change

COLLEGE POLICES, RULES AND REGULATIONS

Academic Freedom

The common good of society depends upon the search for knowledge and its free exposition. Academic freedom is essential to both these purposes and is the right of reasonable exercise of civil liberties and responsibilities in an academic setting. As such it protects each person's freedom to express opinions both inside and outside the classroom, to practice one's profession as teacher and scholar, librarian, or counselor, to carry out such scholarly and teaching activities as one believes will contribute to and disseminate knowledge, to express and disseminate the results of scholarly activities in a reasonable manner, and to select, acquire, disseminate and use documents in the exercise of one's professional responsibilities, all without interference and all with due and proper regard for the academic freedom of others. Academic freedom does not require neutrality, but rather makes commitment possible. However, academic freedom does not confer legal immunity, nor does it diminish the obligations of practitioners to meet their duties, their responsibilities, and their scholarly obligations to base research and teaching on an honest search for knowledge.

Nondiscrimination and Sexual Harassment Policy

Imperial Valley College does not discriminate in the admission nor in the offering of programs and activities because of ethnic group identification, national origin, religion, age, gender, race, color, medical condition, Vietnam era status, ancestry, sexual identification, marital status, or physical or mental disability, or because he or she is perceived to have one or more of those characteristics.

All forms of harassment are contrary to basic standards of conduct between individuals and are prohibited by state and federal law, as well as this policy, and will not be tolerated. The District is committed to providing an academic and work environment that respects the dignity of individuals and groups. The District shall be free of sexual harassment and all forms of sexual intimidation and exploitation.

The District seeks to foster an environment in which all employees and students feel free to report incidents of harassment without fear of retaliation or reprisal. Therefore, the District also strictly prohibits retaliation against any individual for filing a complaint of harassment or for participating in a harassment investigation. Such conduct is illegal and constitutes a violation of this policy.

For more information please refer to the California Department of Fair Employment and Housing Website, **www.dfeh.ca.gov**, or the U.S. Equal Employment Opportunity Commission Website, **www.eeoc.gov.**

Limited English speaking students, who are otherwise eligible, will not be excluded from any vocational education program.

The coordinator for Imperial Valley College's compliance with Section 504 of the Rehabilitation Act of 1973 is the Associate Dean of Human Resources, Mr. Travis Gregory, P.O. Box 158, Imperial, CA 92251, **(760) 352-8320, Ext. 6212**, TTY **(760) 355-4174.** The Title IX officers for Imperial Valley College are Mr. Russell Lavery, Ext. 6202, and Ms. Olga Artechi, Ext. 6264, P.O. Box 158, Imperial, CA 92251, **(760) 352-8320.**

Family Educational Rights and Privacy (FERPA)

Release of Information
The Imperial Community College District (ICCD) releases directory information regarding current or former students unless students have specifically requested that directory information be kept confidential.

ICCD designates the following as directory information: name, address, phone number, class schedule, dates of attendance, major field of study, awards and degrees received, most recent institution attended, participation in official college activities and sports, weight and height of members of athletic teams, part-time or full-time enrollment status, and photographs.

In completing the admission application, students are provided the opportunity to request that their directory information be maintained as confidential. Students, who wish to change their request, may do so in writing to the Admissions and Records Office at any time to become effective within five to ten working days.

Right to Inspect and Review Records
All currently enrolled or former students have a right to inspect and review all student records relating to them. Student record is defined according to the Family Educational Rights and Privacy Act (FERPA). Students must submit written requests identifying the record(s) they wish to inspect to the Admissions and Records Office.

Access shall be granted no later than 15 school days following the date the written request is received. Within the same 15 school days, the student will be notified of the location of all official student records if not centrally located and qualified personnel will be made available to interpret records where appropriate.

Right to Request Amendment of Student Records
Students may file a written request with the Superintendent/ President to correct or remove information recorded in their student records which they allege to be: (1) inaccurate; (2) an unsubstantiated personal conclusion or inference; (3) a conclusion or inference outside of the observer's area of competence; or (4) not based on the personal observation of a named person with the time and place of the observation noted.

Within 30 calendar days of receipt of such request, the Superintendent/President, or his designee, shall meet with the student and the employee who recorded the information in question, if such employee is presently employed by the District. The Superintendent/President, or his designee, shall then sustain or deny the allegations.

If any or all allegations are sustained, the Superintendent/President, or his designee, shall order the correction or removal and destruction of the information. If any or all of the allegations are denied, the student may appeal the decision in writing to the Board of Trustees within 30 calendar days of the denial.

Within 30 days of the receipt of an appeal, the Board of Trustees shall, in closed session with the student and employee who recorded the information in question, if presently employed by the District, determine whether to sustain or deny the allegation(s). If the Board sustains any or all of the allegations, it shall order the immediate correction or removal and destruction of the information. The decision of the Board shall be final.

Records of these administrative proceedings shall be maintained in a confidential manner and shall be destroyed one year after the decision of the Board, unless the student initiates legal proceedings relative to the disputed information within the prescribed period.

If the decision of the Board is unfavorable to students, or students accept an unfavorable decision by the Superintendent/President, they shall have the right to submit a written statement of their objections which shall become part of their student record until such time as the information to which the objection is made is corrected or removed.

Disclosure of Education Records
The District may permit access to student records to any person for whom the student has executed written consent specifying the records to be released and identifying the party or class of parties to whom the records may be released.

The District may not permit access to student records to any person without the written consent of the student or under judicial order except:

1. To officials and employees of the District who have a legitimate educational interest to inspect a record.
   A school official is:
   - A person employed by the District in an administrative, supervisory, academic, research, support staff, or security position;
   - A person elected to the Board of Trustees;
   - A student government officer conducting student elections;
   - A person employed by or under contract to the District to perform a special task, such as the attorney or auditor.

   School officials have a legitimate educational interest if they are:
   - Performing a task that is specified in their position description or by a contract agreement;
   - Performing a task related to a student's education;
   - Performing a task related to the discipline of a student;
   - Providing a service or benefit relating to the student such as health care, counseling, job placement or financial aid.
2. To officials of another school or school system, upon request, in which a student seeks, intends, or is directed to enroll, including local, county or state correctional facilities where educational programs are provided;
3. To certain officials of the U. S. Department of Education, the Comptroller General, and state and local educational authorities, in connection with certain state or federally supported education programs;
4. In connection with a student's request for, or receipt of, financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid;
5. To other state and local officials or authorities to the extent that information is specifically required to be reported pursuant to state law adopted prior to November 19, 1974;
6. To organizations conducting certain studies for, or on behalf of, the College;
7. To organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, student aid programs, and improving instruction;
8. To accrediting organizations in order to carry out their accrediting functions;
9. To comply with a judicial order or a lawfully issued subpoena;
10. To appropriate persons in connection with an emergency if the knowledge of that information is necessary to protect the health or safety of a student or other persons;
11. To an alleged victim of any crime of violence that results in a institutional disciplinary proceeding against the alleged perpetrator of that crime, with respect to that crime;

Right to File Complaints with the Department of Education
Imperial Valley College students have the right to file complaints with the U. S. Department of Education concerning alleged failures by the College to comply with the Family Educational Rights and Privacy Act. Written complaints should be directed to The Family Policy Compliance Office, U.S. Department of Education, 600 Independence Avenue SW, Washington, DC 20202-4605; (202) 260-3887; FAX (202) 260-9001.

Access Log
A log or record shall be maintained for each student's record that lists all persons, agencies, or organizations requesting or receiving information from the record and their legitimate interests. The listing need not include any of the following:

- Students seeking access to their own records;
- Parties to whom directory information is released;
- Parties for whom written consent has been executed by the student;
- Officials or employees having a legitimate educational interest.

The log or record shall be open to inspection only by the student, the Chief Admissions and Records Officer or his/her designee, and to the Comptroller General of the United States, the Secretary of Education, an administrative head of an education agency, and state educational authorities as a means of auditing the operation of the system.

Changes in the Catalog

Any regulation adopted by the administration of Imperial Valley College shall have the same force as a printed regulation in the catalog and shall supersede, upon appropriate public announcement, any ruling on the same subject which may appear in the printed catalog or official bulletins of the college.

A student may be graduated under the catalog in effect at the time of initial enrollment provided a continuous enrollment status is maintained during each semester (excluding winter and summer sessions).

Campus Regulations

A speed of 10 mph on campus must be strictly observed. All non-district, self-propelled and/or any motor driven means of movement, other than wheelchairs, are prohibited from using campus sidewalks and playing courts.

Imperial Valley College is a tobacco and smoke-free campus.

Courseload Limits

An average courseload of 15-16 units each semester or term is necessary for a student to graduate within a two-year period. Students may carry a maximum of 19 units without restriction. A student who wishes to exceed the 19-unit maximum limit must file a petition for "Excess Unit" form. Petitions are available in the Hector J. Lopez Student Services Center, Building 100, and must be submitted to the Admissions and Records Office.

The Imperial Community College District does not specify a minimum load except when the student must meet certain eligibility requirements for financial aid, student employment, Social Security certification, veterans enrollment certification, insurance eligibility, international student status, athletic eligibility, or other special programs. Eligibility for veteran's benefits requires enrollment in the required units for each week of the certification period. The load requirement is as follows:

Full-time: 12 or more units
Three-quarter time: 9-11.5 units
One-half time: 6-8.5 units

Basic Skills Coursework Limit
Courses in the basic skills category include those courses that are non-degree applicable in writing, special services, and mathematics. In most cases students may not enroll in more than 30 semester units of basic skills coursework.

The following courses are exempted from this limitation:
1. English as a Second Language
2. Certain DSPS courses associated with Learn Disabilities.

The college may grant a waiver to the 30-unit basic skills course limitation to any student who demonstrates significant and measurable progress toward the development of the skills needed for successful enrollment in college level courses. Waivers are given only for specified periods of time or specified numbers of units. Students who have exhausted the unit limitation will be referred to appropriate noncredit education programs. For waivers or further information regarding this policy, students should contact the Admissions and Records Office.

Class Attendance

An instructor may drop students who fail to attend the first meeting of any class for which they have officially enrolled unless prior arrangements have been made with the instructor. Instructors may also drop a student from a class for excessive absences, defined as the number of continuous, unexcused absences exceeding the number of hours the class meets per week. Be aware, it is always the student's responsibility to withdraw officially from classes. In no case should students presume they have been dropped by the instructor.

Proficiency Enrollment

Once a student has completed a proficiency in a subject area with a satisfactory grade, he/she may not take a lower proficiency level in that subject area. For example: A student cannot enroll in English 099 (ENGL 099) after having successfully completed English 101 (ENGL 101). (This does not apply to vocational refresher courses.)

Cheating and Plagiarism

Dishonesty in the classroom is considered a very serious offense. Any form of cheating, turning in work which is not one's own (plagiarism), is grounds for disciplinary action. The consequences of these actions are severe and may include the possibility of expulsion.

Grading System

Grades are based upon the quality of work done; that is, upon actual accomplishment in courses offered for credit. Grades are issued at the end of each term.

Grade	Definition	Grade Points
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Less than Satisfactory	1
F	Failing	0
P	Pass (at least satisfactory - C or higher) Not included in GPA *(Formerly CR prior to Fall Semester, 2009)*	
NP	No Pass (less than satisfactory - D or F) Not included in GPA *(Formerly CR prior to Fall Semester, 2009)*	

Grade Point Averaging
The total number of units earned for courses in which a student has earned a grade of A is multiplied by 4. The same type of calculation is done for units earned of B, C, D, and F. The grade point average is then calculated by dividing the total number of grade points earned by the total number of units attempted in which grades of A, B, C, D, and F were assigned.

Grades for repeated courses will be included or excluded as indicated in the Course Repetition policies.

In calculating students' degree applicable grade point averages, grades earned in non-degree applicable courses shall not be included.

Non-Evaluative Symbols

I	Incomplete
IP	In Progress
RD	Report Delayed
W	Withdrawal
MW	Military Withdrawal

Symbol Definitions

P/NP Some courses may be taken for P/NP grades only; others may be designated by the appropriate divisions to be taken for either standard letter grades or for grades of P/NP. Students must select this option using the online registration system by the deadline to register for the course.

1. P will reflect the student has earned the equivalent of a grade of C or higher.
2. NP will reflect the student has earned the equivalent of a grade of D or F.
3. P grades are permissible in the student's major field if permitted or allowed by the division or department.
4. Students applying for P/NP grading must adhere to the same class standards or regulations as a student receiving a standard letter grade.
5. If the course in which a P grade is earned is a prerequisite requirement for another course, the grade of P will satisfy the prerequisite requirement.
6. A maximum of 16 units taken on a P/NP basis may be applied toward a degree.

I An incomplete contract may be negotiated for UNFINISHED WORK, OTHERWISE PASSING indicating that because of medical or other sufficient reason an important assignment such as a term paper, final examination, or experiment is missing.

An incomplete ("I") grade, which is not made up by the end of the sixth week of the next regular semester, shall be converted to a letter grade. The letter grade shall be used in computing grade point average.

Incomplete symbols should be assigned for academic work under unforeseeable, emergency and justifiable reasons at the end of the term.

IP In progress "IP" symbol is used only when a course extends beyond the normal end of the academic term. A grade will be assigned at the end of the course.

RD The "RD" symbol may be assigned temporarily by the Admissions and Records Office when there is a delay in reporting grades due to circumstances beyond the control of the students.

W Students may withdraw (drop) courses up to 75% of the term, or the length of the course if short-term. No notation will be made on students' records for drops completed prior to census for the course. Symbols of W shall be recorded for courses dropped on census day through the 75 percent date.

Instructors may drop students for excessive absences up to the 75% date.

Letter grades shall be assigned to students who are not dropped by the 75% date.

Administrative drops may be done after the 75% date for verified extenuating circumstances which are clearly beyond the control of the student such as documented cases of serious accident, illness, or death of an immediate family member.

Drop procedures for students will be established by the Admissions and Records Office and published in the Class Schedule each term.

MW Military withdrawal occurs when students who are members of an active or reserve U.S. military service receive orders compelling a withdrawal from courses. The MW symbol will be assigned upon receipt of a copy of the student's official military orders.

Symbols of MW will not be used in the calculation of progress probation or dismissal.

Students will maintain "continuous enrollment" status for graduation requirements during their time of absence due to their military orders.

Refunds of fees paid, or reversal of fees still owed, will be made for the term in which military withdrawal occurs.

Scholastic Honors

Graduation Honors

"With Distinction" is granted to those graduates who, in the course of their entire college work, have achieved a grade point average of 3.5 or higher in degree applicable courses.

"With Honors" is granted to those graduates who achieve a grade point average of 3.0 in their college work in degree applicable courses.

Credit by Examination

The Board of Trustees of Imperial Valley College (IVC), in accordance with the provisions of Title 5, Section 55050 (IVC Board Policy BP 4235 6/15/11), authorizes the college to grant appropriate semester unit credit to any student who is currently enrolled and successfully passes an examination administered by an IVC faculty member or authorized personnel. A maximum of 15 units may be used toward graduation through this process. No more than 12 units per semester will be authorized.

Credit by Examination enables a student to receive academic credit by demonstrating mastery of subject matter, previous experience, and training or instruction equivalent to a specific Imperial Valley College course. Each academic division determines which course or courses that the "credit by examination" option may be used to earn academic credit and is responsible for developing and administering an appropriate comprehensive examination. It is the responsibility of the faculty in the discipline who normally teach the course to determine the nature and content of the examination.

Examinations will be comprehensive enough to reflect the appropriate depth and breadth of the material normally covered in the course for which credit is requested. The examination must clearly measure the student's mastery of the course content as listed in the Course Outline of Record. The examination may include oral, written, or skills tests, or a combination of all three, and will be sufficiently comprehensive to determine that the student has essentially the same knowledge and skills as a student who successfully completed the course.

Students wishing to attempt a course via "credit by examination" are encouraged to discuss the matter with a Counselor prior to initiating the formal process. Location: Hector L. Lopez Student Services Center, Building 100, Telephone: **(760) 355-6543**.

Transfer Credit

Imperial Valley College (IVC) grants credit for lower-division units earned at institutions of higher education regionally accredited by the Association of Schools and Colleges and/or hold another accreditation recognized by the Council for Higher Education Accreditation (CHEA).

To be considered for transfer credit, students must request that official transcripts be forwarded directly to the Admissions and Records Office from each institution where courses were taken, or present an official transcript in an unopened envelope sealed by the college/university. Transcripts that have been opened by anyone other than an IVC official will not be considered official and will not be evaluated.

Students should arrange for official transcripts to be received as soon as possible after they decide to attend IVC. In addition, an official evaluation to determine applicability of courses to IVC degree or certificate requirements is essential for effective advisement.

Official transcripts from all institutions attended must be on file and evaluated by the Admissions and Records Office before students apply to receive a degree, certificate, or general education certification to a California university.

Questions regarding specific courses for which a student is seeking transfer credit should be addressed to the Counseling Center or Transfer Center at IVC.

Credit for Upper Division Course Work

Transfer credit for upper division courses completed at a four-year college or university will not be granted unless an equivalent course is offered at IVC. To be considered, students must complete a petitioning process requiring the recommendation of a counselor and the Division Chair of the appropriate academic subject area.

Credit for Correspondence and Extension Courses

Students may petition to be awarded a maximum of six transfer units for courses completed through correspondence or an extension program. Only lower division courses from regionally accredited institutions will be considered. These units will be applied toward IVC degree or certificate requirements as appropriate.

Credit for Military Service

Students who complete at least 180 days of active duty including basic training may receive credit for HE 100 (2.0 units) and PE 110 (2.0 units). Instructions for obtaining the credit will be provided by the Veterans Coordinator in the Financial Aid Office. A copy of the DD214 is required.

Up to a maximum of 12.0 additional units may be awarded for work completed successfully in military service schools beyond basic training as recommended by the American Council on Education in the Guide to the Evaluation of Educational Experiences in the Armed Services.

Students must provide a copy of the DD214 or military service school transcript with a petition for evaluation of military service.

A maximum of 16.0 units will be granted for military service including two (2.0) units each for HE 100 and PE 110, and up to 12.0 additional units for service schools/training completed.

Credit for Advanced Placement (AP) Examinations

Credit will be granted for scores of 3, 4, or 5 on exams of the Advanced Placement Program of the College Entrance Examination Board (CEEB) as listed below. Official transcripts sent directly from the CEEB to the Admissions and Records Office is required.

Credit toward an IVC associate's degree (AA/AS or AA-T/AS-T) will be granted according to the chart below. Credit will be granted only after students are enrolled in classes at IVC. After credit has been awarded, if students successfully complete the same course(s) for which they were granted AP credit, the AP credit will be removed from their transcript. Credit cannot be earned twice for the same course.

Credit for AP Exams differs with each college or university. Although IVC grants credit for AP Exams, there is no guarantee institutions to which students transfer will do the same. Students will need to have their official AP results re-evaluated by the institution to which they transfer.

Institutional Student Learning Outcomes

The graduates of Imperial Valley College will demonstrate communication skills, critical thinking skills, personal responsibility, information literacy, and global awareness as a result of their educational experience at this institution.

IMPERIAL VALLEY COLLEGE	
Strive for Five: Defining Student Learning Outcomes	
The college maintains educational standards as measured by student learning outcomes. Upon completion of a degree, program, or certificate a student will complete coursework demonstrating competency in the following areas:	
INSTITUTIONAL LEARNING OUTCOMES (ILOs)	**STUDENT LEARNING OUTCOMES (SLOs)**
Communication Skills (ILO1)	A student will demonstrate effect communication skills by: • Listening • Speaking • Reading • Writing • Interpreting Art • Creating Art
Critical Thinking Skills (ILO2)	A student will demonstrate the ability to think critically by: • Analyzing • Problem Solving • Creative Thinking • Computing
Personal Responsibility (ILO3)	A student will demonstrate responsible behavior by: • Being Self-Aware • Self-Motivating • Demonstrating Workplace Skills • Striving for Personal Health and Wellness • Meeting Deadlines and Completing Tasks • Using Student Services as Needed • Demonstrating Fiscal Literacy
Information Literacy (ILO4)	A student will demonstrate the ability to seek and use information by: • Researching • Using Technology
Global Awareness (ILO5)	A student will demonstrate awareness of their place in this world by: • Respecting Diverse People and Cultures • Protecting the Environment • Engaging in or assessing artistic endeavors • Describing one's place in history

IMPERIAL VALLEY COLLEGE

Industrial Technology Department

Welding Technology Program

WELD 100 Welding Technology Course Core Content

1. Welding Technology Defined (Applied Science)
2. Welding Defined (Training and Education)
3. Welding and Joining Defined (Welding Processes)
4. Industrial Safety (Hierarchy of Hazard Analysis)
5. OSHA Defined (29 CFR 1910 General Industry)
6. Material Safety Data Sheets (Interpretation/Application and OSHA HAZ-COM)
7. Welding Chemistry Defined (Periodic Table of Elements, C eq., Carbide Solution)
8. Technical Literature Review Summary (Template and Outline)
9. Oxyfuel Welding and Cutting Defined (C2H2+02, equipment, and Safety)
10. Oxyfuel Welding, Brazing, and Soldering (OFW, Carburizing, Neutral, and Oxidizing)
11. Oxyfuel Cutting (OFC, manual cutting, piercing, and machine cutting)
12. Plasma Arc Cutting (PAC, Power Supply, Consumables, Gas Supply, and manual cutting)
13. Arc Air Gouging (Back Gouging, Back Welds, and Weld Repairs)
14. Welding Physics (Physical, Chemical, and Mechanical Properties of Ferrous Materials)
15. Fundamentals of Ferrous Metallurgy (Iron and Iron-Carbide Alloys and Eq. Diagrams)
16. Fundamental Weld and Welding Metallurgy (Ferrous Alloys, T.T.T., and Bain "S")
17. Elements and Parameters of Weldability (Chemistry of Base, Fillers, and Processes)
18. Welding Electrical Fundamentals (Electron flow, Primary/Secondary Circuits, Transformers, Rectifiers, Diodes, Current, Volt/Amp Relationship, Welding Circuits, CC/CV PS's, and Polarity)
19. Shielded Metal Arc Welding (Theory, Equipment, Materials, Consumables, Electrodes, and Welding Techniques)
20. Technical Drawing (Interpretation and Sketching)
21. Weld and Welding Symbols (PQR's and WPS's)
22. Weld Quality and Welder Certification (NDT and Inspection)
23. Quality management (5 M's and their relationship to welding root-cause-analysis)
24. Welding Quality (Cost of weld Repairs)
25. Welding Codes (AWS D1.1, ASME Section IX, and API)
26. Gas Tungsten Arc Welding (Theory, Equipment, Materials, consumables, and Techniques related to steel A36, AISI 4130, stainless AISI 310, and Aluminum 4043 filler)
27. Gas Metal Arc Welding (Theory, Equipment, Materials, Consumables, and Techniques)
28. Flux Core Arc Welding (Theory, Equipment, Materials, Consumables, and Techniques)

Imperial Valley College

Industrial Technology Division

Welding Department

WELD 100 Welding Technology
MTWR/ 8:00 am

Student Inventory; **Career Experience and Profile**

Please respond to the statements below. The purpose of the inventory is to promote a well planned set of activities for WELD 100 to best meet the needs of the students and their plans for a rewarding future in the Welding Industry and related Career Pathways.

1. What do you want to accomplish in this Welding Technology class (WELD 100)?

2. What type of Welding experience do you have?

3. What type of Career do you want to develop and engage in within Welding?

4. What factors contributed to your decision to enroll in Welding Technology?

Imperial Valley College
Industrial Technology Division

Personal Individual Contact Information

Student Name:	_____
Phone Numbers:	Day: _____ Work (if allowed): _____ Message: _____
Emergency Contact Information:	Name: _____ Phone: _____ Name: _____ Phone: _____

The above information is for use by the instructor and will be held in confidence for the semester. This information sheet will be destroyed at the end of the semester.

I, _____ (Print Student Name) on this day _____ (Date)

give permission to _____ (Print Instructor Name),

_____ (Subject) Instructor at Imperial Valley College, to use the above information for business related to my _____ (Class Title) class activities.

Signature: _____ (Student Signature) Date: _____

IMPERIAL VALLEY COLLEGE

Industrial Technology Department

Welding Technology Program

WELD 100 Welding Technology Spring 2013 Semester Study and Review Guide

Upon reading the listed terms associated with **Welding Technology,** you should be able to;

(1) **Recognize** the term,

(2) **Define** the term and if appropriate **associate** it with a Welding Process or technique,

(3) **Explain the term** within the context of **Welding Technology,** and

(4) **Integrate** the term into the parameters of the field of Welding Technology.

If these **cognitive indicators** do not readily come to the forefront, it is recommended that a brief review of the term be conducted to reaffirm your ability to **recognize, define, explain,** and **integrate** the term within the context of Welding Technology.

1. Weld	2. Welding Processes	3. Manual Welding
4. Semiautomatic Welding	5. Welders and Inspectors	6. Certification
7. Welder Qualification	8. Hazard	9. Safety
10. Incident/Accident	11. Ultraviolet, visible, infrared	12. PPE
13. Hierarchy of Hazard Control	14. ID, Eliminate, Administer, Engineer, and PPE	
15. ANSI (Z-87)	16. TLV, PEL, db's	17. Ventilation
18. Natural/Forced Ventilation	19. Fire Watch	20. Flammable Gases
21. Welding Current	22. AC and DC Current	23. Welding Polarity
24. OCV,	25. Amperage and Voltage	26. Resistance
27. Time, Temperature, and Transformation (TTT)		28. DCEN and DCEP
29. Transformers	30.Rectifiers and Diodes	31. NEMA Rating
32. Duty Cycle	33. Input and Output Current	34. SMAW

WELD 100 Welding Technology Spring Semester 2012 Study and Review Guide

35. SMAW Welding Circuit components
36. Electric Arc
37. Arc Length
38. SMAW Electrode
39. Arc Voltage
40. Electrode Angle
41. Back Hand/ Fore hand
42. Leading Angle
43. Trailing Angle
44. Whip, Weave, Stringer
45. Lo-Hi Electrode
46. SMAW Electrode ID; E- (X)XX Y Z example E-6010
47. Welding Positions
48. Welds (Grooves and Fillets)
49. Equal pressure torches
50. Pre-Heat flame
51. Cutting by oxidation
52. Kindling Temp
53, Kerf, Drag
54 Neutral, carburizing, oxidizing
55. PAC Torch
56. HF Start Circuit
57. Spray transfer
58. Short Circuit Transfer
59. Above/Below 20V
60. Shielding Gases
61. Wire Speed/ Amperage
62. Back hand
63. Fore hand
64. Contact Tip
65. Flow meter
66. CFH
67. Inert Gases
68. Non-Consumable Electrodes
69. HF Start/Continuous
70. Remote Amp
71. Weld types (G and F)
72. Butt, Lap, Tee, Corner
73. WPS
74. PQR
75. Weld Positions 1, 2, 3, 4
76. Weld Symbols
77. Inspection Methods
78. Welding Codes, AWS D 1.1, ASME, API
79. Ferrous alloys
80. Material Properties
81. Mechanical Properties
82. Iron Carbide Phase Diagram
83. Metal ID Numbers (SAE/AISI)
84. Heat Treatments
85. Pressure Regulators
86. Single /Two Stage Regulators
87. Line /Working Pressure
88. Gas Cylinders
89. Carbon Air Arc

Imperial Valley College

Industrial Technology Department

Welding Technology Program

Welding Technology Program General Safety Rules (Sp '13)

The Imperial Valley College Welding Technology Program within the Industrial Technology Department and the Economic and Workforce Development Division believes in creating and maintaining a safe Teaching, Training, and Learning Environment for the well being, health, and safety of all students associated with activities within the Welding Technology Program.

Welding Technology Program **Practices, Procedures, and Safety Compliance Activities** are based on and reference the Code of Federal Registry (CFR);
Occupational Safety and Health Act (OSHA); 29 CFR 1910 General Industry Standards.

The goal and purpose of the **Welding Technology Program General Safety Rules** is to:

> ***"Protect all students in the IVC Welding Technology facilities with specific regards to general industrial and welding technology hazards."***

To that end, the most applicable of 29 CFR 1910 General Industry Standards to the Imperial Valley College Welding Technology Program General Safety Rules are;

Subpart Q- Welding, Cutting, and Brazing,
Subpart I- Personal Protective Equipment,
Subpart L- Fire Protection, and
Subpart D- Walking and Working Surfaces.

Other specific 29 CFR 1910 General Industry Standards that are most accessed are;

Blood borne Pathogens 1910.1030
Hazard Communication 1910.1200
Respiratory Protection 1910.134
Occupational Noise Exposure 1910.95
Confined Spaces 1910.146
Lockout/Tagout 1910.147
Guarding Floor/Wall Openings 1910.23
Personal Protective Equipment 1910.132

The posted essential **IVC Welding Technology Program General Safety Rules** that will be referenced, applied, and observed during assignments within the Welding Technology Program facilities and during learning activities are as follows;

1. **All individuals associated with the IVC Welding Technology Program are responsible for their part in hazard control and management of hazards.**
2. Only **authorized and trained individuals** shall be permitted to be present in and use the welding facilities and equipment in the Welding Lab (Building 1200).
3. **Direction and operating instructions** will be provided to individuals for welding procedures, processes, and the proper use of equipment.
4. **Supply vessels and delivery devices** shall be color coded and/or properly labeled,
5. **Gas Regulators** (Pressure Reducing Devices) shall be used only for the gases for which they were intended and designed.
6. **Appropriate Ventilation** (Natural or Forced Air) will be implemented.
7. **Confined Space** work shall be conducted in accordance with the accepted Permitting Procedures.
8. Only **approved equipment,** in good repair shall be used (torches, regulators, valves, grinders, etc.).
9. **Open Circuit Voltage** of welding machines will be as low as possible and will not exceed recommended limits.
10. **Welding machine** frames shall be grounded.
11. **Empty compressed gas cylinders** shall be properly marked, stored, and their valves closed.
12. **Compressed gas cylinders** will be checked for defects and obvious signs of potential hazards before putting into service.
13. **Compressed gas cylinders** will be handled in such a way as to prevent damage to shut off valves, safety valves, relief valves, and regulators.
14. **Installation and removal of gas regulators** will be done in accordance to acceptable safe practices.
15. **All components** associated with compressed gases will be kept clean and free of dirt, oil, or grease.
16. **Compressed gas cylinders** will be kept away from means of egress, designated walkways, and stairs.
17. **Compressed gas cylinders** shall not be used for any purpose other than the delivery of gases.
18. **Compressed gas cylinders** shall not be dropped, struck, or become part of an electrical circuit.
19. Unless gas cylinders are secured and in use, mounted on special carts, or secured at a work station, **regulators shall be removed and safety caps shall be in place.**
20. **While in storage,** fuel and oxygen cylinders shall be separated by distance or a fire resistant barrier, shall have their safety caps in place, and shall be restrained.

21. **All PPE** (personal protective equipment) **shall be approved**, functional, and in good repair.
22. All individuals in the Welding Technology facilities will be required to wear **appropriate PPE** (Personal Protective Equipment) for the given activity;

    a. Safety glasses (ANSI Z-87) **to be worn at all times during lab activities**,
    b. Head protection (Welding Cap),
    c. Full Face Shields, clear and/or shaded,
    d. Welding Helmets with the proper shaded filter plate,
    e. Hearing protection (as needed),
    f. Respiratory protection (as needed),
    g. Protective clothing,
    h. Welding Gloves, and
    i. Proper Footwear and Foot protection,

23. Precautions shall be taken to prevent the **mixture of oxygen and fuel gases** except at a burner or standard welding torch.
24. **All signage** shall be observed with regard to health and safety, equipment operation, and general welding environment.
25. **When welding, cutting, or grinding,** protect all equipment and combustibles from welding processes and their bi-products.
26. **Hot work on used vessels** and containers shall not be conducted in the IVC Welding Technology facilities.
27. **Scrap, debris, and waste materials** shall be removed from the work site promptly and disposed of per instructions and common practices.
28. **Fire Watch practices** and procedures shall be implemented when welding, cutting, or grinding.
29. **Fire Extinguisher location** must be known and assure yourself of having proper instruction on the use of these devices.
30. **Observe the marking of aisle ways**, walkways, and means of egress.
31. **Maintain aisle ways, walkways,** and means of egress clear and accessible.
32. **Observe "Good Housekeeping"** practices and maintain compliance with OSHA 29 CFR 1910.22 (a) and (b,1,2)

Note: In Industry, failure to comply with posted safety rules while **"On-The-Job"** may be cause for dismissal and/or may be subject to a "Non-Compliance Citation."

At Imperial Valley College, failure to comply with posted **Welding Technology Program General Safety Rules** may lead to a recommendation for "Withdrawal from Class."

In California, CalOSHA supersedes OSHA, yet the major portion of OSHA is applicable to CalOSHA. California is within Federal Region 9 of the **Occupational Safety and Health Administration.** Detailed references to OSHA can be found at www.osha.gov.

IMPERIAL VALLEY COLLEGE

Division of Industrial Technology
Welding Technology Department

Template/Outline
For
Technical Literature Review
Semester Paper

This template/outline for writing *Technical Literature Review Semester Papers* is intended to be a guide. The student must determine what level of performance will be represented by the paper and what content will be included. The combination of the details covered, expected outcome, level of performance, and content will determine the number of pages for the paper.

I. Introduction:
The introduction should define the subject that has been reviewed and studied; this may include a discussion of the history of the subject, the importance of the subject within the field, applications of the subject, examples of the subject, explanation of the concepts associated with the subject, and the definition of the basic technical terminology associated with the subject.

NOTE: The Introduction function within your paper may be divided into two sections; **Introductory and Background Sections.**

II. Results:

This is the section of your paper in which you will state the general results of your review. Once stated, you will explain the results in the form of a general survey of the subject. This will need to be in summary form, organized, and synthesized in order to present and discuss the important points of the subject within the context of the field and the whole of industry.

III. Format:

Proper Grammar
Proper style; Professional and technical language not informal, casual, or personal
Word Processor; Word
Layout; Double spaced, 12 point font margins to be 1",
Limit the inclusion of tables, graphs, and illustrations

IV. Conclusion:

This section you will use to summarize the content of your paper. You might want to tie the past with the present and into the future for the subject.

V. References

Author, Title of work, Publisher, Date

VI. Appendix:

The use of an appendix is not encouraged. The weight of the Term Paper is not directly connected to the grade for the paper.