

New Program Request Form

CA1

General Information

Institution submitting proposal	Kansas City Kansas Community College
Name, title, phone, and email of person submitting the application <i>(contact person for the approval process)</i>	Mr. Jerry Pope Vice-President of Academic Affairs (913) 288-7634 jpope@kckcc.edu
Identify the person responsible for oversight of the proposed program	Dean Cheryl Runnebaum
Title of proposed program	Welding Technology
Proposed suggested Classification of Instructional Program (CIP) Code	48.0508
CIP code description	A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing, and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.
Standard Occupation Code (SOC) associated to the proposed program	51.4121 and 51.4122
SOC description	(51.4121) Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products. (51,4122) Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Includes workers who operate laser cutters or laser-beam machines.
Number of credits for the degree <u>and</u> all certificates requested	Certificate C: 46
Proposed Date of Initiation	Fall 2022
Specialty program accrediting agency	American Welding Society SENSE
Industry certification	OHSA 10, position qualifications 1F, 2F and 1G, SENSE Level 1 partial earned in Cert A. Position qualification

	D1.1 2G, SENSE Level 1 complete earned in Cert B. Position qualification D1.1 3G earned in CERT C
--	--

Signature of College Official Jerry Price Date 6/21/22

Signature of KBOR Official _____ Date _____

Narrative

Completely address each one of the following items for new program requests. Provide any pertinent supporting documents in the form of appendices, (i.e., minutes of meetings, industry support letters, CA1-1a form).

***Institutions requesting subordinate credentials need only submit the items in blue. For example, an institution with an approved AAS degree has determined a need for a Certificate C in the same CIP code using the same courses used in the AAS degree program.*

Currently, the Kansas City Kansas Community College Welding Technology program is a 40-credit hour program with two exit points at certificate A and B levels. In March 2021, KBOR approved the realignment of the Welding Technology program.

During the Spring 2021 Welding Technology advisory board meeting, discussions took place on the proposed changes to the program including adding a Certificate C as an additional exit point. During the Fall 2021 advisory committee meeting, approval of the Certificate C was granted. Industry members agree that the advanced training received in the certificate C coursework will increase student skillsets, meet new industry standards, and help fill the skills gap. The program added a Welding Codes and Advanced Inspections course because of the importance safety and efficiency play in welding and lean manufacturing. The welder is the first line of defense as they are creating the welds for various fabrications. This course teaches students the appropriate weld per the welding code, how to minimize defects by ensuring welds adhere to code and improve productivity through understanding defects and discontinuities. Businesses also realize a cost savings as less product is being wasted on bad welds.

Program Description

This program is designed to teach specific skills in all aspects of the welding trade, including blueprint reading, metallurgy, oxy-acetylene and semi-automatic cutting, brazing, and industry standard welding processes in a standard set of positions. Students learn welding processes to work with alloy metals, aluminum, and stainless steel. Program completers will be prepared for AWS certification in most processes.

Program Objectives

Upon completion of this program, students will have mastered the following objectives:

Cert A:

1. Students will be able to explain job/site and precautions for job site hazards. They will determine the use of Personal Protective equipment (PPE), identify safety equipment, and procedures related to safe work practices and environment
2. Student will be able to demonstrate the use of good communication skills including listening, following directions, speaking, and using correct grammar in conducting a job search.
3. Student will be able to create fillet and groove welds in flat, horizontal, vertical, overhead positions; and identify common visual discontinuities and defects on welds.
4. Students will be able to successfully complete a welding project that will demonstrate the knowledge and skills from all courses in the Certificate A program.

Cert B:

1. Students will be able to continue mastering fillet and groove welds in flat, horizontal, vertical, and overhead. Identify common visual discontinuities and defects on welds and determine causes of discontinuities and defects of welds.
2. After completing the program, students will be able to exhibit a high-level of professionalism including appropriate dress, attendance, communication skills and other soft skills necessary.
3. The student will be able to demonstrate the ability to successfully complete a welding project that will demonstrate the knowledge and skills from all courses in the Certificate B program.”

Cert C:

1. The student will be able to identify high risk areas that should be avoided by operators while automated machinery is running and demonstrate appropriate safety measures.
2. The student will be able to demonstrate the ability to successfully complete a welding project that will demonstrate the knowledge and skills from all courses in the Certificate C program.”

Program Admissions requirements:

Admission to the Welding Technology is based on successful completion of the following Admission Requirements and the number of students admitted may vary based on classroom/lab size restrictions and/or teacher-to-student ratio.

1. Apply for admission to KCKCC.
2. Take the reading portion of the Accuplacer (currently, no minimum score required).
3. Make an appointment with a KCKCC TEC Advisor for an advising session and admissions office for enrollment
4. Submit a high school transcript (or GED) with graduation date.
5. All official college transcripts evaluated and on file in Records Office with GPA of 2.0 or higher.

Graduation Requirements:

- Complete program requirements with a 2.0 GPA or higher
- No outstanding obligations (tuition, bookstore, library, etc.)

Demand for the Program:

Welders, Cutters, Solderers and Brazers (51.4121)

Growth rate:	2018 jobs:	6,766
	2028 jobs:	7,062
	Change numerical:	296
	Change percentage:	4.4%

Annual Median Wage:	\$41,370.00
Educational level needed:	High school diploma or equivalent

Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51.4122)

Growth rate:	2018 jobs: 346
	2028 jobs: 323
	Change numerical: -23
	Change percentage: -6.6%
Annual Median Wage:	\$40,503.00
Educational level needed:	High school diploma or equivalent

JobsEQ Data - Based on Kansas City Metropolitan Area:

1. Welders, Cutters, Solderers, and Brazers (51.4121)
 - Median Salary: \$44,400
 - Active Job Postings: 508
 - Annual Demand: 364
2. Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51.4122)
 - Median Salary: \$42,700
 - Active Job Postings: 21
 - Annual Demand: 25

The Welding program is identified as demonstrating gaps in producing enough graduates to meet the demand of the industry. Adding a third exit point expands students' skillsets to meet the expanding demands of the welding industry. Utilizing college data, secondary concentrators are only meeting 0.4% of the manufacturing need. postsecondary: Welding technology is meeting 84% of the need. Secondary concentrators make up approximately 40% of the student population in the program.

American Dish Service fully support the proposed curriculum changes. They stated they've had great success with hiring past KCKCC students. They will continue to support the program by serving on the advisory committee and giving graduates the opportunity to apply for positions if they meet the qualifications.

Great Western Manufacturing states they will work with KCKCC to ensure the welding curriculum meets the needs of industry for entry level position. They also show support by agreeing to interview qualified graduates for positions available in their company.

Henke Manufacturing supports the addition of curriculum to the welding program stating the addition of welding codes and advanced inspections will serve to improve students welding effectiveness and better position them for success in the industry. They support the program by serving on the Advisory committee as well as granting interviews to qualified graduates.

Lampton Welding Supply Co., Inc as well as **Zephyr Products, Inc.** also support the program by serving on the advisory committee as well as granting qualified graduates interviews for open positions in their company.

Perkins Comprehensive Local Needs Assessment

The Perkins Comprehensive Local Needs Assessment identified 43 college concentrators with 290 job openings in the local area. Due to space restrictions within the current lab, the college is looking at potential scheduling solutions that would allow additional cohorts to take the program. Also, the

program is planning to expand into work-based learning, allowing advanced students to earn while they learn and seamlessly transfer into the industry with a good wage upon graduation.

Industry Partnerships

KCKCC does not have any formal partnership agreements.

Duplication of Existing Programs

There are 21 institutions listed on the KTIP report that offer a program similar to the program KCKCC is seeking approval for.

Coffeyville Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 81

Number of Program Graduates - 15

Number of graduates exited and employed - 12

Annual median wage of graduates exited and employed - \$31,870

Cowley Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 73

Number of Program Graduates - 24

Number of graduates exited and employed - 22

Annual median wage of graduates exited and employed - \$28,298

Garden City Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 121

Number of Program Graduates - 20

Number of graduates exited and employed - 15

Annual median wage of graduates exited and employed - \$36,650

Hutchinson Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 105

Number of Program Graduates - 24

Number of graduates exited and employed - 17

Annual median wage of graduates exited and employed - \$33,027

Northwest Kansas Technical College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 42

Number of Program Graduates - 34

Number of graduates exited and employed - 18

Annual median wage of graduates exited and employed - \$30,322

Seward County Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 32

Number of Program Graduates - *

Number of graduates exited and employed - *

Annual median wage of graduates exited and employed - *

Washburn Institute of Technology

Welding Technology (CIP 48.0508)

Number of Declared Majors - 212

Number of Program Graduates - 114

Number of graduates exited and employed - 56

Annual median wage of graduates exited and employed - \$28,197

Johnson County Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 116

Number of Program Graduates - 11

Number of graduates exited and employed - 11

Annual median wage of graduates exited and employed – \$42,981

Labette Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 43

Number of Program Graduates - 15

Number of graduates exited and employed - 8

Annual median wage of graduates exited and employed – \$33,146

Manhattan Area Technical College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 35

Number of Program Graduates - 28

Number of graduates exited and employed - 20

Annual median wage of graduates exited and employed – \$32,860

Neosho County Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 151

Number of Program Graduates - 91

Number of graduates exited and employed - 34

Annual median wage of graduates exited and employed – \$23,613

North Central Kansas Technical College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 37

Number of Program Graduates - 23

Number of graduates exited and employed - 19

Annual median wage of graduates exited and employed – \$40,146

Salina Area Technical College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 53

Number of Program Graduates - 20

Number of graduates exited and employed - 15

Annual median wage of graduates exited and employed – \$34,822

Wichita State University Campus of Applied Sciences and Technology

Welding Technology (CIP 48.0508)

Number of Declared Majors - 123

Number of Program Graduates - 40

Number of graduates exited and employed - 25

Annual median wage of graduates exited and employed – \$32,306

Barton Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 104

Number of Program Graduates - 77

Number of graduates exited and employed - 70

Annual median wage of graduates exited and employed – \$16,703

Butler Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 38

Number of Program Graduates - 14

Number of graduates exited and employed - 7

Annual median wage of graduates exited and employed – \$30,130

Dodge City Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 44

Number of Program Graduates - 10

Number of graduates exited and employed - 5

Annual median wage of graduates exited and employed – \$37,185

Flint Hills Technical College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 41

Number of Program Graduates - 22

Number of graduates exited and employed - 14

Annual median wage of graduates exited and employed – \$39,308

Fort Scott Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 108

Number of Program Graduates - 49

Number of graduates exited and employed - 23

Annual median wage of graduates exited and employed – \$27,457

Highland Community College

Welding Technology (CIP 48.0508)

Number of Declared Majors - 64

Number of Program Graduates - 15

Number of graduates exited and employed - 12

Annual median wage of graduates exited and employed – \$30,874

Of the 21 institutions that offer a certificate C in the Welding program, Washburn Institute of Technology is in the closest proximity approximately 60 miles west of KCKCC. This poses a challenge for the students of KCKCC because of the lack of transportation or the additional costs incurred for travel. For these reasons, collaboration was not pursued.

*indicates small cell suppression used to protect student privacy in accordance with FERPA and HEOA guidelines

Program Information

Required Course Descriptions:

WELD 0100 Welding Safety and OSHA 10

2 cr

Through a variety of classroom and/or lab learning and assessment activities, students in this course will: explain job/site safety and precautions for job/site hazards; determine the uses of personal protective equipment (PPE); identify the safety equipment and procedures related to safe work practices and environment; identify fire prevention and protection techniques; and explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS). *Prerequisites: None*

WELD 0105 Welding Blueprints

3 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: identify basic lines, views and abbreviations used in blueprints; interpret basic 3D sketches using orthographic projection and blueprints; solve applicable mathematical equations; use basic measuring tools; interpret scale ratios on a blueprint; identify basic welding joints and structural shapes; interpret a bill of materials; and identify standard AWS weld symbols. *Prerequisites: None*

WELD 0110 Cutting Processes

3 cr

Through classroom and/or shop/lab learning and assessment activities, students in this course will: distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade; demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation; demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation; demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations; demonstrate safe and proper operation of several types of mechanical cutting equipment; and inspect quality and tolerance of cuts according to industry standards.

Prerequisites: WELD 0100

WELD 0130 GMAW

3 cr

Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate

proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds. *Prerequisites: WELD 0100*

WELD 0230 Advanced GMAW

4 cr

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the Vertical position; build pads of weld beads with selected electrodes in the Over Head position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds. *Prerequisites: WELD 0100, WELD 0130*

WELD 0280 Welding Codes and Advance Inspections

4 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn destructive and nondestructive testing methods, how to interpret them to code, and how to use a code to set up welding procedures and qualification tests. *Prerequisites: WELD 0100*

BUSN 0250 Obtaining Employment

1 cr

This course explains the techniques used to successfully obtain a job. Areas covered include locating job openings; completing application forms; writing an application letter, resume, and follow-up letter; preparing for interviews; and interviewing. *Prerequisites: None*

WELD 0140 GTAW

3 cr

Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the flat position; build pads of weld beads with selected electrodes and filler material in the horizontal position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds. *Prerequisites: WELD 0100*

WELD 0120 SMAW

3 cr

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds. *Prerequisites: WELD 0100*

WELD 0240 Advanced GTAW

4 cr

Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding (GTAW) process; demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint

criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the vertical position; build pads of weld beads with selected electrodes and filler material in the overhead position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds. *Prerequisites: WELD 0100, WELD 0140*

WELD 0220 Advanced SMAW

4 cr

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the Vertical position; build pads of weld beads with selected electrodes in the Over Head position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds. *Prerequisites: WELD 0100, WELD 0120*

Elective Course Descriptions:

WELD 0255 Aluminum Welding

4 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn metal preparation, GMAW, GTAW, safety and metallurgy as they apply to aluminum welding. *Prerequisites: WELD 0100*

WELD 0260 Stainless Steel Welding

4 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn metal preparation, GMAW, GTAW, safety and metallurgy as they apply to stainless steel welding. *Prerequisites: WELD 0100*

WELD 0265 Fabrication Welding

4 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn to weld as in a shop setting. This includes project planning, layout, tacking, welding, and dealing with distortion of weldments. Students will end the class with a project that they may take home. *Prerequisites: WELD 0100*

WELD 0270 Automated Welding and Cutting

4 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn set up and operation of various automated welding and cutting procedures including programming, weld settings, troubleshooting, and maintenance of equipment. *Prerequisites: WELD 0100, Weld 0130*

WELD 0275 Pipe Welding

4 cr

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: Set up, weld and test weld coupons in various pipe positions and materials. *Prerequisites: WELD 0100*

WELD 0285 Internship

4 cr

Through an internship at a local company student will learn what it is like to work in a manufacturing plant or welding related field. Student must be working at a welding or welding related

job. Prerequisites: BUSN 0250

The proposed program does not have multiple pathways.

Program Outline

This program has three exit points, certificate levels A, B and C as outlined below.

SEMESTER 1:

Course ID		Course name	Credit
WELD	0100	Welding Safety and Osha 10	2
BUSN	0250	Obtaining Employment	1
WELD	0105	Welding Blueprints	3
WELD	0110	Cutting processes	3
WELD	0130	GMAW	3
WELD	0230	Advanced GMAW	4
WELD	0280	Welding Codes and Advanced Inspections	4

Exit Point Certificate A **20**

SEMESTER 2

Course ID		Course name	Credit
WELD	0140	GTAW	3
WELD	0120	SMAW	3
WELD	0240	Advanced GTAW	4
WELD	0220	Advanced SMAW	4
		*Electives (to be determined by instructor)	4

Exit Point Certificate B (must complete certificate A plus B) **38**

SEMESTER 3:

Course ID		Course name	Credit
		*Electives (to be determined by instructor)	8

Exit Point Certificate C (must complete certificate A, B plus C) **46**

Electives (Cert B)			
WELD	201	Oxy-Fuel Welding	1
WELD	202	Intermediate Welding Techniques	1

WELD	255	Aluminum Welding	4
WELD	260	Stainless Steel Welding	4

Electives (Cert C)			
WELD	0265	Fabrication Welding	4
WELD	0270	Automated Welding and Cutting	4
WELD	0275	Pipe Welding	4
WELD	0285	Internship	4

Accreditation

The KCKCC Welding program participates in the American Welding Society (AWS) SENSE program. The AWS SENSE program is a comprehensive set of minimum standards and guidelines for welding education programs. Although this entity is not a standard accrediting agency, the required standards and guidelines must be adhered to in order to be a participant in the program.

Faculty

- Describe faculty qualifications and/or certifications required to teach in the proposed program.

Faculty wishing to teach in this program are required to have minimum 5 years' experience in Welding and Fabrication. A Welding Certification from a Community College, Technical School, or other institution. Certificates in/or experience with SMAW, GMAW, FCAW, GTAW, OFC, PAC, CAC-A, and Oxy-Fuel welding/brazing.

Cost and Funding for Proposed Program

- Provide a detailed budget narrative that describes all costs associated with the proposed program (physical facilities, equipment, faculty, instructional materials, accreditation, etc.).
- Provide detail on **CA-1a form**.
- Provide Excel in CTE fee details on the **CA-1b form**.
- If the program is requesting Perkins funds, provide details on the **CA-1c form**.
- If the program is requesting KS Promise Act eligibility, provide details on the **CA-1d form**.
- Describe any grants or outside funding sources that will be used for the initial startup of the new program and to sustain the proposed program.

The KCKCC Welding Technology program was established in the mid to late 1960's under the governance of Kansas City Kansas USD 500 school district. Over the years the program has been modified to meet industry standards and aligned through KBOR. Kansas City Kansas Area Technical School and KCKCC merged in 2008. After the merger, KCKCC purchased the property where the KCKCC Technical Education Center is currently located. At that time, the building was remodeled, and all program equipment was updated.

Currently, the program is 40-credit hours with two exit points Certificate A and Certificate B. The success of the Welding Technology program along with the state re-alignment and a strong advisory board have led to the certificate C program request. The existing program has the curriculum, equipment, and supplies necessary to deliver the additional curriculum for the Certificate C, therefore no additional expenses are required for instructional materials.

The program is in high demand by students (and employers), creating long waitlists each semester. To increase the number of student capacity in the program, the college will hire an additional faculty member. Faculty member salary and benefits are supported through tuition revenue generated from each course and program.

Course fees are used to purchase supplies, tools, small equipment, and consumables for the program during the semester. Perkins and SB143 are utilized to purchase capital equipment and resources that align with industry standards and new technology.

The program has strong industry, business, and community support that has been established for many years. Program facilitators will continue to seek financial and in-kind donations through the relationships formed with business and industry partners. Previously, the program was awarded a \$25,000 grant through the American Welding Society (AWS) for the Welding program located at Lansing Correctional Facility (LCF). KCKCC will continue to explore funding opportunities through grants and foundations, however grants are not included in the startup for this program level.

Facilities costs: No changes to the current facility will be necessary to fulfill the needs of the revised program.

Instructional Materials and Equipment costs:

There will be no upfront additional instructional materials and equipment cost. The existing program currently utilizes a variety of learning resources, equipment and supplies needed to deliver the additional curriculum for the Certificate C level. As Certificate C becomes more established, additional automated welding equipment will be necessary to meet the demands of industry.

Faculty requirements:

At this time, the Welding Technology program has two full-time instructors. It will be necessary to hire an additional full-time faculty member to meet the current and expanding needs of the various certification levels.

Program Review and Assessment

KCKCC has a robust program review and assessment process. Programs are placed on a program review schedule and reviewed on a 4-year cycle. Programs going through the process complete a self-study with the assistance of a Mentor who is a member of the Program Review Committee. Once the self-study is complete, it is presented to the Program Review Committee and a collaborative process ensues to assess the overall results of the program. Action plans are created and implemented for the next three years. The final semester of the fourth year, a comprehensive final review form is completed by the program faculty, dean, and VPAA to determine final outcomes and future initiatives. Progress is monitored via the assessment process and annual check-ups with the programs.

Program Approval at the Institution Level

- Provide copies of the minutes at which the new program was approved from the following groups:
 - Program Advisory Committee
(including a list of the business and industry members)
 - Curriculum Committee
 - Governing Board
(including a list of all Board members and indicate those in attendance at the approval meeting)

Submit the completed application and supporting documents to the following:

Director of Workforce Development
Kansas Board of Regents
1000 SW Jackson St., Suite 520
Topeka, Kansas 66612-1368

KBOR Fiscal Summary for Proposed Academic Programs

CA-1a Form (2020)

Institution: Kansas City Kansas Community College

Proposed Program: Welding Technology

IMPLEMENTATION COSTS				
Part I. Anticipated Enrollment			Implementation Year 2022	
Please state how many students/credit hours are expected during the initial year of the program?				
			Full-Time	Part-Time
A. Headcount:			10—8 credits	8—8 credits
Part II. Initial Budget			Implementation Year	
A. Faculty		Existing:	New:	Funding Source:
Full-time	#3 + 1	\$225,000	\$72,000	Tuition
Part-time/Adjunct	#3	\$48,000	\$	Tuition
		Amount	Funding Source	
B. Equipment required for program		\$0.00		
C. Tools and/or supplies required for the program		\$0.00		
D. Instructional Supplies and Materials		\$0.00		
E. Facility requirements, including facility modifications and/or classroom renovations		\$0.00		
F. Technology and/or Software		\$0.00		
G. Other <i>(Please identify; add lines as required)</i>		0.00		
Total for Implementation Year		\$345,000	Local	

PROGRAM SUSTAINABILITY COSTS (Second and Third Years)				
Part I. Program Enrollment			Second and Third Years	
Please state how many students/credit hours are expected during the first two years of the program?				
			Full-Time	Part-Time
A. Headcount:			20—8 credits	20—8 credits
Part II. Ongoing Program Costs			First Two Years	
A. Faculty		Existing:	New:	Funding Source:
Full-time	#4 + 1	\$297,000	\$	Tuition
Part-time	#3	\$48,000	\$	Tuition
		Amount	Funding Source	
B. Equipment required for program		\$100,000	Perkins, Grants, Donations, SB143	
C. Tools and/or supplies required for the program		\$10,000	Course Fees, Donations	
D. Instructional Supplies and Materials		\$5,000	Tuition and Course Fees	
E. Facility requirements, including facility modifications and/or classroom renovations		\$0.00		
F. Technology and/or Software		\$5,000	Course Fees	
G. Other <i>(Please identify; add lines as required)</i>				
Total for Program Sustainability		\$465,000	Tuition, Course Fees, Donations, Grants, Perkins, SB143	

KBOR Fiscal Summary for Proposed Academic Programs

CA-1a Form (2020)

Please indicate any additional support and/or funding for the proposed program:

The program is in high demand by students (and employers), creating long waitlists each semester. To increase the number of student capacity in the program, the college will hire an additional faculty member. Faculty member salary and benefits are supported through tuition revenue generated from each course and program.

Course fees are used to purchase supplies, tools, small equipment, and consumables for the program during the semester. Perkins and SB143 are utilized to purchase capital equipment and resources that align with industry standards and new technology.

Submit the completed application and supporting documents to the following:

Director of Workforce Development
Kansas Board of Regents
1000 SW Jackson St., Suite 520
Topeka, Kansas 66612-1368

KBOR Excel in CTE Fee Summary for Proposed Academic Programs

CA-1b Form (2020)

*Per statute (K.S.A. 72-3810), the Kansas Board of Regents shall establish general guidelines for tuition and fee schedules in career technical education courses and programs. The Excel in CTE tuition and fee schedule of every technical education program shall be subject to annual approval.
Please include all costs charged to **high school students** for the proposed new program.*

Institution Name:	Kansas City Kansas Community College
Program Title:	Welding Technology
Program CIP Code:	48.0508

<i>Please list all fees associated with this program: Only list costs the institution is charging students.</i>		
Fee	Short Description	Amount
Graduation Cert. A	Administrative expenses associated with graduation	\$ 20.00
Graduation Cert. B	Administrative expenses associated with graduation	\$ 8.00

<i>Please list all courses within the program and any fees associated to those courses : Only list costs the institution is charging students. Do not duplicate expenses.</i>		
Course ID	Short Description	Amount
WELD-0100	OSHA Certification Exam	\$ 25.00
WELD-0220	AWS Sense Certification Exam	\$ 30.00

<i>Please list items the student will need to purchase on their own for this program: Institution is not charging students these costs, rather students are expected to have these items for the program.</i>		
Item	Short Description	Estimated Amount
Welding helmet	Welding equipment/uniform	\$ 35.00
Leathers	Welding equipment/uniform	\$ 60.00
Gloves	Welding equipment/uniform	\$ 30.00
Grinding head gear	Welding equipment/uniform	\$ 16.39
#5 shaded face shield	Welding equipment/uniform	\$ 16.00
Standard Plyers	Welding tools	\$ 10.00
Mig Plyers	Welding tools	\$ 12.49
Tig kits	Welding tools	\$ 28.00
Tooling U Access Code	Online learning platform	\$ 99.00

Carl D. Perkins Funding Eligibility Request Form

Strengthening Career and Technical Education for the 21st Century Act

CA-1c Form (2022)

This application should be used for new programs (currently in the program approval process) or existing programs the institution would like reviewed for Carl D. Perkins funding eligibility.

Program Eligibility

An “eligible recipient” is an eligible institution or consortium of eligible institutions qualified to receive a Perkins allocation.

An “eligible institution” is an institution of higher education that offers CTE programs and will use Perkins funds in support of CTE coursework that leads to technical skill proficiency or a recognized postsecondary credential, including an industry-recognized credential, a certificate, or an associate degree, which does not include a baccalaureate degree.

Any program receiving Perkins funds must be designated as a technical program by KBOR. Definition of a technical program may be found in state statute K.S.A. 72-1802. Criteria adopted by the Board of Regents may be found in their February 20, 2019 meeting packet.

Program Levels:

Educational Award Level	Credit Hours
SAPP	0-15
Certificate A	16-29
Certificate B	30-44
Certificate C	45-59
Associate of Applied Science	60-69

Stand-Alone Parent Programs (SAPPs) must meet the following criteria:

- Minimum of 8 credit hours
- Minimum of 80% tiered credit hours
- Maintain an average of 6 concentrators over the most recent consecutive 2-year period

Certificates and Associate of Applied Science degrees must meet the following criteria:

- Minimum of 51% tiered credit hours
- Maintain an average of 6 concentrators over the most recent consecutive 2-year period
- Comply with Program Alignment – *if applicable*

Carl D. Perkins Funding Eligibility Request Form

Strengthening Career and Technical Education for the 21st Century Act

CA-1c Form (2022)

Name of Institution	Kansas City Kansas Community College
Name, title, phone, and email of person submitting the Perkins Eligibility application <i>(contact person for the approval process)</i>	Cheryl Runnebaum Dean of Career and Technical Education (913) 288-7811 crunnebaum@kckcc.edu
Name, title, phone, and email of the Perkins Coordinator	Cheryl Runnebaum Dean of Career and Technical Education (913) 288-7811 crunnebaum@kckcc.edu
Program Name	Welding Technology
Program CIP Code	48.0508
Educational award levels <u>and</u> credit hours for the proposed request	Certificate C: 46 credits
Percentage of tiered credit hours for the educational level of this request	97.8%
Number of concentrators for the educational level	This is a new program. The projected enrollment for year one is 10 full-time and 8 part-time students
Does the program meet program alignment?	Yes
Justification for conditional approval: <i>(this section must reference information found within the Local Needs Assessment)</i>	Secondary concentrators are only meeting 0.4% of the manufacturing need. Postsecondary: Welding technology is meeting 84% of the need.
Pursuant to Americans with Disabilities Act, will the proposed program be offered in a location and format which is fully accessible, according to applicable ADA laws? <i>(Contact Board staff for technical assistance if there are questions regarding accessibility)</i>	Yes

Signature of College Official  Date 4/22/22

Signature of KBOR Official _____ Date _____

Kansas Promise Eligibility Request Form

CA-1d Form (2021)

This application should be used for new programs (currently in the program approval process) or existing programs the institution would like reviewed for Kansas Promise eligibility.

A complete list of approved Promise Eligible programs may be located at:

https://www.kansasregents.org/students/student_financial_aid/promise-act-scholarship

Program Eligibility

2021 House Bill 2064, section 2, (7) (A) identifies promise eligible programs as (i) Information Technology and Security, (ii) Mental and Physical Healthcare, (iii) Advanced Manufacturing and Building Trades, (iv) Early Childhood Education and Development.

Section 3, (c) allows for the postsecondary educational institution to designate an additional promise eligible program that corresponds to a high wage, high demand, or critical need occupation. The Act further states the postsecondary educational institution shall maintain the promise eligible program for at least three consecutive years.

Name of Institution	Kansas City Kansas Community College
Name, title, and email of person responsible for Academic program	Cheryl Runnebaum, Dean of Career and Technical Education crunnebaum@kckcc.edu
Name, title, and email of Financial Aid contact	Mary Dorr, Director of Financial Aid mdorr@kckcc.edu

Add programs under the appropriate category the institution would like reviewed for Kansas Promise Eligibility. Add additional rows as needed.

Information Technology and Security			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

Mental and Physical Healthcare			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

Advanced Manufacturing and Building Trades			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)
48.0508	Welding Technology	Certificate	FA22

Kansas Promise Eligibility Request Form

CA-1d Form (2021)

Early Childhood Education and Development			
CIP Code	Program Name	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

The postsecondary educational institution may designate an additional promise eligible program that corresponds to a high wage, high demand, or critical need** occupation.

College Designated Program				
CIP Code	Program Name	High Wage, High Demand, or Critical Need	Type of Award (AAS, AA, AS, AGS, Certificate)	Scholarship Effective Date (FA21, SP22, SU22)

**If the above program is considered "critical need," please provide supporting documentation:

Signature of College Official *Jerry Pire* Date 4/22/22

Signature of KBOR Official _____ Date _____

Special Note to Kansas Independent Colleges:

Please carbon copy the KICA contact below when submitting this application to the Kansas Board of Regent office:

Matt Lindsey, President KICA
matt@kscolleges.org

**MINUTES OF APPROVING
CURRICULUM COMMITTEE
AND
KCKCC BOARD OF TRUSTEES**

Academic Affairs Committee Minutes

November 30, 2021

Call to order at 2:07

Quorum established

October minutes: Frankie moved to approve, Antonio seconded, minutes approved

Old business:

1. Culinary CERT A: Antonio moved to approve the new certificate. Jonathan seconded. No one opposed, so motion passes.
2. Welding- Cert A and Cert B need to be re-aligned with the state program, which KBOR has already approved. Certificate C is a new certificate. Antonio moved to approve these changes, Jake seconded. No one opposed, so motion passes.
3. Electronics: New Course New Program Course Modification- New AAS program housed in the MSBT division. Jake said that he and his dean checked into employability, and that this shows a negative job growth rate in the near future. He is also concerned that this could negatively impact the electrical technology program at TEC. Ross said that there is very little overlap between the two programs. Jake asked about the exit points, whether they could receive a certificate at 33 hours. Ed said that they could, but would not necessarily be able to find a job as a technician, though they could possibly be hired as an assembler. He pointed out that this was a program that was considered after Garmin reached out to the school requesting students with this training. Honeywell and Advent are also in support of this program. Jake said that Advent is on the advisory board for the TEC electronics program, and asked whether the classes that do overlap at TEC could be used for the program. Ross said that the DC class in the program he is proposing goes into more depth and detail than the combined AC/DC class at TEC, so even though he wanted to use the TEC courses, he could not. Dagny moved that we accept the new courses and program. Jon seconded. Motion passed with one abstaining.
4. ADCN Addiction counseling- Switching from an AAS to an AS or an AGS. Deanne suggested that an AS would be best for transferability. Shay and Jerry agree that AS would be better than AGS. Antonio checked with Michael, who said it was ok to leave out the AGS part of the proposal. Shay moved to accept the changes so that Addiction counseling is an AS degree. Antonio seconded. Motion passed.
5. ESOL- Changing two 2-credit classes to 3-credit hours and one 4-credit class to a 3-credit class. Antonio moved to accept the changes, Ian seconded. Motion passed.
6. Legal Assistant- New certificate program, Cert B. Shay said that this seems very similar to paralegal. Dagny said that what was shared at the last meeting was that the next step would be the paralegal AAS. Ed said that the work was different enough from office assistant that it wouldn't be merged with that program. Kris said that the coordinator

for paralegal was ok with this. Jon moved that we accept this program. Frankie seconded. No one opposed. Motion passed.

7. CRJS – Corrections- internship course changed to capstone, and some courses changed to meet industry standards. Certificate programs reduced credit hours so that high school students could complete them. Not Perkins eligible. Antonio moved to accept these changes. Shay seconded. No one opposed. Motion passed.
8. Business Journalism – Bring back old course, Principles of Marketing. Antonio moved to accept the course. Ian seconded. No one opposed. Motion passed.
9. By laws revision- The revisions are uploaded into Teams. Antonio pointed out that, in article 4, it should be clear that each position is for one year. He also pointed out 3b should be 4. Frankie asked about article 4, number 7, there is a typo. With these changes, Antonio moved to accept the by laws. Frankie seconded. No one opposed, motion passed.

New Business:

1. Arts- New course proposed: Life Drawing and Screen Printing. Aaron said these are standard classes in most art programs and are also useful for the students and the campus. They would become elective options in Studio Arts and Digital Design programs. Deanne said that we need to see that they would be accepted as electives in these programs. Janice said she would sit down with Aaron to figure out where they would fit into degree programs.

Meeting adjourned at 3:01.

Members present: Deanne Yates, Dagney Velazquez, Sheldon Guenther, Jake Carmack, Antonio Cutolo-Ring, Theresa Holliday, Jonathan Taylor, Frankie Davis, Ian Corbett, Shay Dodson

Visitors: Janice Spillman, Ross Stites, Jerry Pope, Ed Kremer, Kris Ball, Aaron Margolis



Mission Statement: Inspire individuals & enrich our community one student at a time.

Vision Statement: Be a national leader in academic excellence & partner of choice in the communities we serve.

**KANSAS CITY KANSAS COMMUNITY COLLEGE
Board of Trustees Meeting Minutes
December 14, 2021 – 5:00 P.M.**

Meeting Location: Hybrid – KCKCC-Main Campus, Upper Jewell Lounge and Zoom Meeting

CONSENT AGENDA – Item A
Meeting Minutes

1. **Call to Order & Pledge of Allegiance:** Chairman Ray Daniels called the meeting to order at 5:05 p.m. The Pledge of Allegiance was led by Trustee McIntyre.
2. **KCKCC Mission Statement:** Chair Daniels read the College mission statement.
3. **Roll Call:** Indicated the following trustees present – Ash, Brown, Brune, Criswell, Daniels, Hoskins Sutton and McIntyre. All members were present.
4. **Approval of Agenda:** Chair Daniels shared the following updates to the meeting agenda –
 - Climate Action KC Presentation will be postponed to a later date and
 - Policy 3.06 - Student Holds will be postponed and brought back at a later time for Board approval.

Vice-Chair Criswell made the motion to approve the agenda with the amendments. Trustee Brown seconded the motion. **The Motion Carried.**

5. **Audience to Patrons and Petitioners:** Chair Daniels invited any patrons or petitioners, both virtual and in-person to address the Board and reminded all to be respectful of the 5-minute time limit. Ms. Andrica Wilcoxon, 2807 N. 109th Street, Kansas City, Kansas, 66109, spoke to publicly thank Ms. Sheri Seeman and Nurse Sylvia Gillis for their tremendous contributions and “hearts of gold” in service to students and community of KCKCC. Ms. Wilcoxon shared about their many deeds and caring acts for the faculty, staff and students and expressed that they each will be greatly missed.

The Board echoed their appreciation for the great service of Ms. Seeman and Ms. Gillis and wished each of them well in their respective ventures.

6. **Recognitions/Presentations:** Chair Daniels invited Dr. Mosier to lead the new trustees in the Oath of Office. Trustees Evelyn Criswell, Linda Hoskins Sutton and Brad Isnard (Elect) each stood and pledged the oath as led by Dr. Mosier.

The Board thanked Dr. McIntyre for sharing her great knowledge of education and success in the classroom, passion, and care for the people at the college and community during her term as trustee. The Board and KCKCC community wished her well.

7. **Communications:** There were no communications scheduled.

8. **Board Committee Reports:**

- On behalf of the Board Finance Committee, Vice Chair Criswell shared an overview of the Monthly Financial Report presented at the Board Finance Committee on Tuesday, December 7th. She extended kudos to the Finance department for the promotion of practices that support the healthy cash position of the College such as zero-based budgeting, questioning cost drivers and promoting a culture of financial accountability.
- Trustee Ash shared feedback from the KACCT Quarterly meeting in December at Pratt Community College. He noted great training for new trustees was presented and all information received from the Director of KACCT was shared with all KCKCC Board members. The next KACCT Quarterly meeting will be in April 2022 for Phi Theta Kappa scholarships. Trustee Ash concluded that the Board plans to attend the 2022 ACCT National Legislative Summit in Washington, D.C. in February 2022.

9. **Consent Agenda:** Chair Daniels called for a motion to approve the Consent Agenda. Trustee Ash made the motion. Trustee McIntyre seconded the motion.
The Motion Carried.

10. **Student Senate Report:** There was no report due to winter break.

11. **President's Report:** Chair Daniels called for the President's report. Dr. Mosier began by thanking Trustee McIntyre for her guidance during her term as trustee and welcoming Trustee Isnard. He also thanked the Board for their continued support in the advancement of the College. Dr. Mosier continued in expressing his gratitude to the faculty and staff who are on the front lines everyday with our students.

In the monthly COVID Incidents Report, since the last Board meeting, Dr. Mosier shared for employees, there have been 10 COVID-related incidents with 5 employees testing COVID positive, 2 of those were vaccinated. For the students, there were 20 COVID-related incidents, with 11 students testing COVID positive. None of the students were living in student housing or were student athletes.

As a follow up from the SPARKS Executive Committee meeting on Thursday, November 18th, Dr. Mosier met with Kansas Senate president, Mr. Ty Masterson, who flew from Wichita for lunch, a tour of the downtown site and to talk about plans for downtown. He revisited the College plans to submit a \$30 million request for SPARKS funding with the Health and Education Subcommittee to be used for the Downtown project. The award would possibly pass in March or June 2022. Additional discussions are in progress to submit to Sen. Moran's and Sen. Marshall's offices regarding Congressional Discretionary spending for 2022, which is similar to the \$2 million request submitted by Rep. Davids on behalf of the College.

Dr. Mosier continued by sharing information regarding an additional federal funding opportunity the College is pursuing as part of a \$10 million KC Civic Council consortium proposal for the EDA Good Jobs Challenge Grant. KCKCC plans to submit for \$1.5 to \$2-million for a High Voltage/Lineperson Program to be housed at KCKCC -TEC-1.

Dr. Mosier shared other federal grant opportunities the College is working on in partnership with Merchant McIntyre such as the NSF Scholarship Grant; National Humanities Grant (for infrastructure and capacity); Initiatives in Humanities at Community Colleges; Mental Health Awareness Grant; NSF Advanced Technology Grant.

Dr. Mosier was pleased to attend the inauguration of the Wyandotte County elected officials on Monday, December 13th, and mentioned that he looks forward to working with Mayor Garner, once Trustee Garner at KCKCC, who proved to be a strong advocate of education and the community college in his service as a board member.

The Board thanked Dr. Mosier, the administration, faculty and staff for their efforts around the COVID pandemic.

Chair Daniels mentioned that Dr. Bartunek would make her Board report next in order to attend another engagement later on behalf of the College.

- 12. Vice President Strategic Initiatives & Outreach Report:** Chair Daniels called for the Vice President of Strategic Initiatives & Outreach report. Dr. Tami Bartunek began by reporting that the social media following remains strong. She offered kudos to Ms. Kris Green, the new Executive Director of Marketing and Institutional Image, who is off to a great start and working in the preparation of the KCKCC Strategic Plan Update for January 2022.

Dr. Bartunek shared footage from the following events and broadcasts -

- The "Make It Count" event broadcasted on KMBC 9 News with KCKCC in partnership with the Spencer C. Duncan Foundation. The event was recorded at the KCKCC-TEC location.
- Mr. Jerry Pope, Vice President of Academic Affairs, who was featured on KC Spotlight with Lauren Scott sharing updates on the Student Housing Project,

programs and class offerings and the Downtown Community Education, Health and Wellness Center.

Dr. Bartunek concluded her report by sharing the College seeks to do one feature with KC Spotlight each semester.

Trustee Ash made the motion to accept the report. Vice Chair Criswell seconded the motion. **The Motion Carried.**

13. **Vice President Academic Affairs Report:** Chair Daniels called for the Vice President of Academic Affairs (VPAA) report. Mr. Jerry Pope highlighted the following items from the report:

- The Art Department hosted a tour with USD 500 high school art instructors and discussed potential partnership and program collaboration.
- The Drama Club presented two plays that were directed by students.
- On November 18th, the Construction Technology program hosted a tour of a house that students have completed this semester; the students shared the processes of the work completed in each of the rooms.
- Italian chef, Jasper Mirabile from Jasper's Italian Restaurant, visited for the Culinary Arts students for a demonstration class.
- Kudos to the Automotive Collision Repair program students who were featured in a segment on KMBC 9 News for community services provided to a U.S. Marine veteran, Mr. Justin Murray, who needed autobody work after a car wreck.
- Welding and GED classes have begun at Lansing Correctional Facility. Additionally, GED classes will be offered at Wyandotte High School in the spring 2022.
- A grant was received to allow the College to offer Business English classes at a local plastic packaging company in January 2022.
- Kudos to Dr. Ishfaq Ahmed who earned a Certificate in Inclusive Instruction for Equitable Learning from Association of College and University Educators (ACUE).
- The Wellness and Fitness Center continues to collect coats, hats, gloves and scarves for charity. After meeting their initial goal to provide coats to Afghan refugees, the Center donates all items collected to local charities in need.
- MSBT faculty and staff have come together to support Blue's Kitchen Cabinet Food Pantry by collecting 130 non-perishable food items as of December 3.
- Congratulations to Dr. Ewa Unoke, Professor and Political Science Coordinator, who was an invited panelist to the 2021 Biafra Education Awareness Dissemination held on Thursday, November 18th. This event was hosted by Radio Biafra London.
- Dean Cleon Wiggins, of Social and Behavioral Sciences & Public Services, and Dr. Hira Nair, Professor and Secondary Education Coordinator participated in a K-STEP Up presentation to bi-lingual paraprofessionals.

Trustee Hoskins Sutton, on behalf of the Board, expressed gratitude in seeing all the deans and faculty are doing.

Trustee Ash made the motion to accept the report. Trustee Brown seconded the motion.
The Motion Carried.

14. Vice President Student Affairs Report: Chair Daniels called for the Vice President of Student Affairs (VPSA) report. Dr. Delfina Wilson highlighted the following items from the report:

- Congratulations to Mr. Wade Abel, Director of Military and Veteran Student Services, who has been elected as the Regent VI Delegate for the National Association of Veterans' Program Administrators (NAVPA) Board of Directors. In this role he will serve as a contact for program administrators who are advocating for military and veterans.
- Expressed many thanks to the Spencer C. Duncan Foundation from whom KCKCC received \$10K in scholarships for veteran students.
- Enrollment Management Department is working hard to promote enrollment and retention. Current strategies include working with academic departments to increase number of seats in classes, working with high schools for enrollments, keeping track of courses that students are requesting, the Financial Aid Department has been reaching out to students who have funding but who have not enrolled, added virtual placement testing, contact student athletes to ensure enrollment and have extended hours to support students.
- The Student Affairs Division has begun a Student Loan Repayment Awareness Campaign to inform students that all student loan payments are set to resume on February 1, 2022.

Chair Daniels, on behalf of the Board, thanked the Student Affairs division for supporting the students and congratulated them on the strategies for enrollment and retention.

Trustee Hoskins Sutton inquired about student housing being open during winter break and whether there was an update on the mold issue in the dorms. Dr. Wilson answered that there would be students staying the dorms during winter break. She added that there were no issues with mold for the last 3 weeks. Dr. Willson concluded her remarks by wishing Ms. Seeman and Nurse Gills well.

Vice Chair Criswell made the motion to accept the report. Trustee Brown seconded the motion. **The Motion Carried.**

15. Chief Financial Officer Report: Chair Daniels called for the Chief Financial Officer report. Mr. Michael Beach highlighted the following from the report:

- Echoed Ms. Wilcoxon's kind words for Ms. Seeman and shared she understood the students and provided generous services from the Blue Devil Deli. Ms. Seeman will be deeply missed.

- In spring 2022, food options will be available when students return to campus. The College is currently seeking a contract food services provider.
- The Student Housing project is on schedule. The roof is nearly 100% complete. Several stages of metal framing, electrical, plumbing and HVAC work are nearing completion. The sheet rock is being installed and the windows have all been installed.
- The annual audit for the KCKCC Foundation is complete. The College should have the final report soon. Other compliance filing is also in progress.
- The College's midyear budget process will begin in January 2022 for the fiscal year 2023 budget.
- The request for application for an extension in the use of HEERF Funds will be sent to us for completion. The application will be submitted by February 2022.
- The bookstore's revenues are \$1K over what they were last year, and new products have been brought in.
- Facility Services working on projects. Kudos to the team for the completion of the upgrade project in the Flint and Math/Science building projects with new lighting, paint and carpeting.
- New furniture was provided via Learning Spaces for the new lab in Flint.
- Congratulations to D'Angelo Bushnell, a newly commissioned officer in College Police. New hire paperwork is being completed by 2 additional officers as well.

Vice-Chair Criswell made the motion to accept the report. Trustee Ash seconded the motion. **The Motion Carried.**

16. **Chief Human Resources Officer Report:** Chair Daniels called for the Chief Human Resources Officer report. Ms. Christina McGee highlighted the following from the report:
- The final stages of updating HRIS system have been completed and is in compliance with Fair Labor Laws ahead of schedule, in December 2021!
 - Welcome to two new employees to the Human Resources Department, Ms. Sheila Joseph, Talent Development Manager, and Mr. Yoel Tekle, Human Resources Specialist.
 - Hosted Onboarding and Hiring Process Listening Session with employees on Friday, December 10th. There was a great turnout of 61 participants who provided really good feedback. There will be more sessions to come.
 - Currently working with the Center for Equity, Inclusion and Multicultural Engagement (CEIM) to develop plans and diversity and inclusion strategies around talent acquisition.

Trustee McIntyre made the motion to accept the report. Vice-Chair Criswell seconded the motion. **The Motion Carried.**

17. **Chief Information Officer Report:** Chair Daniels called for the Chief Information Officer report. Mr. James Bennett, Director of Computing Services on behalf of Mr. Peter Gabriel, shared the following highlights from Mr. Gabriel's report:

- All services in WebAdvisor have now been redirected to the new Staff and Student Self-Service Center.
- Over 300 laptops had been checked out during fall 2021. IT is now receiving returns and reimaging in time for spring check outs. Spring 2022 semester check outs will begin January 8th.
- Thanked Media Services for their work this semester.
- Announced upgrade of the AccuTrak, Synoptic, and Perceptive Content system.
- All computers on campus, about 2,500 machines, will be updated during winter break. Many thanks to Computing Services!

Trustee Hoskins Sutton asked about the active administrator on each College-issued device. Mr. Gabriel shared the strategy and explained the technical best practices for the College system based on the assessment completed at the beginning of 2021.

Vice-Chair Criswell commended Mr. Gabriel on taking the necessary preventative steps to protect the College's virtual infrastructure.

Vice-Chair Criswell made the motion to accept the report. Trustee Brune seconded the motion. **The Motion Carried.**

18. Unfinished Business:

- Chair Daniels invited Mr. Pope to present an HLC update. Mr. Pope shared the following details -
 - Provided feedback for Criteria 4 and 5 from consultant. The lock down date for submission is Jan. 31st, 2022.
 - An HLC Campus-wide Update meeting was held on Wednesday, December 1st.
 - The HLC Committee will host meetings in the spring semester to help inform about the College about HLC.
 - In February 2022, there will be HLC criteria specific meetings to discuss in detail each criterion.
 - In March 2022, there will be constituent meetings to ensure all involved with each criterion are aware of their respective sections of the argument and can speak to the KCKCC story.
 - The final HLC meeting for the College will be held on Wednesday, March 2nd.
 - The College will be creating a student survey regarding HLC.
 - Recently received an email sharing the members of the HLC Review Team who will be conducting our visit.

Chair Daniels asked about the criteria 1-3. Mr. Pope answered the focus has been on criteria 4 and 5 due to the concerns shared by HLC. The feedback is minimal on criteria 1 through 3. The work on criterion 4 is progressing and criterion 5 is in the works. The first 3 criteria were met without concerns.

- Chair Daniels invited Dr. Mosier to present regarding COVID-19 Safety Protocols and House Bill 2001.
 - Dr. Mosier recommended to the Board that KCKCC continue with masks being required at all locations until the first Board meeting in January 2022. The expectation is at that time more information about the Omicron variant will better inform safe practices for the College. He asked the Board to approve the recommendation.

Chair Daniels asked the Board for any discussion. Hearing none, he called for a motion to approve the COVID Protocol Update.

Trustee Brown made the motion. Vice Chair Criswell seconded the motion.

The Motion Carried.

- Chair Daniels invited Dr. Mosier to present regarding House Bill 2001 (HB2001). Dr. Mosier shared that the bill was signed into law recently and it changes the way organizations can collect medical or religious exemption. Sincere requests regarding religious exemptions must be honored by employers. The process at KCKCC will change. For healthcare providers, if the provider receives Medicare and Medicaid, they can deny religious exemptions. If they do not receive Medicare or Medicaid, they must honor HB2001 in the state of Kansas. Dr. Mosier clarified, this means if a student does not get a COVID vaccination, they currently would not be able to complete their degree. The administration is currently working on the language with the College attorney and Dean Bohm for students in special situations. New students will be required to be vaccination.

19. New Business:

- Chair Daniels invited Mr. Pope to present the Academic Calendar for 2024-2025 for approval. Mr. Pope shared that the section numbers have been updated to reference 1st and 2nd 8-week classes and the summer schedule has been adjusted.

Vice Chair Criswell made the motion to approve the academic calendar for 2024-2025.

Trustee McIntyre seconded the motion. **The Motion Carried.**

- Chair Daniels invited Mr. Pope to present the New and Revised Academic Programs for approval. Mr. Pope pointed the Board to the document in the Board Packet and asked for any questions.
 - Culinary Arts – New Certificate
 - Welding – Program Realignment
 - Electronics Engineering Technology – New Program
 - Legal Administrative Assistant – New Program
 - Corrections (AAS) – Program Modification
 - Corrections (Certification) – Program Modification
 - Police Science (Certificate A) – Program Modification

- o Homeland Security (Certificate A) – Program Modification

Hearing no questions, Chair Daniels called for a motion to approve the new and revised academic programs. Trustee Ash made the motion. Trustee Brown seconded the motion. **The Motion Carried.**

- Chair Daniels invited Trustee Hoskins Sutton to present for Approval the following College Policies. Trustee Hoskins Sutton pointed the Board to the document in the Board Packet and asked for any questions.
 - o Faculty Qualifications (2.15)
 - o Student Records Retention and Disposal (3.05)
 - o Jury Duty (5.37)
 - o Immigration Law Compliance (5.55)

Hearing no questions, Chair Daniels called for a motion to approve the college policies as listed. Vice Chair Criswell made the motion. Trustee McIntyre seconded the motion. **The Motion Carried.**

The Board congratulated former Sheriff Ash on a great career in law enforcement. They thanked Media Services for their technology support with the meeting.

20. **Executive Session(s):** Chair Daniels acknowledged that there were no actions to be taken from the executive sessions for the general meeting.

21. **Adjournment:** Chair Daniels invited Trustee McIntyre to make the motion to adjourn the meeting. Trustee McIntyre made the motion. Vice Chair Criswell seconded the motion. **The Motion Carried.**

The meeting of the Board of Trustees adjourned at **7:00 p.m.**

ATTEST:


Evelyn R. Criswell (Jan 20, 2022 18:30 CST)

Chairperson


Secretary, Dr. Greg Mosier

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Career and Technical Education –Dean Cheryl Runnebaum

Culinary Arts – New Certificate

Certificate A – 20 credit hours

Currently, the Culinary Arts program at Kansas City Kansas Community College has one certificate level exit point, Certificate B. The Culinary Arts program with the support of the program advisory committee is requesting an additional certificate exit point, Certificate A. The justification for the *requested change is to provide students with the option of two exit points for the certificate level.* Certificate A will provide students with the necessary skills to be eligible for entry-level positions. The exit point at Certificate B will give them advanced training with several industry credentials that are beneficial in securing employment beyond entry level and at a higher wage.

Course layout is for the proposed certificate level is below and shows the proposed new curriculum.

Culinary Arts Requirements*

Course		Credit Hours
CULN 0205	ServeSafe	1
CULN 0100	Equipment & The Industry	1
CULN 0120	Cooking Methods*	2
CULN 0130	Food Production I*	4
CULN 0140	Food Production II*	4
CULN 0160	International Cooking*	2
CULN 0206	Beginning Baking*	3
CULN 0207	Advanced Baking*	3
*See course syllabi for Culinary Arts course prerequisites.		

Total Hours for a Culinary Arts Certificate	20
--	-----------

Welding - Program Realignment

Certificate A – 20 Credit Hours

Certificate B – 38 Credit Hours

Certificate C – 46 Credit Hours

Revisions to this program are being made to stay in compliance with the Kansas Board of Regents program re-alignment taking affect Fall of 2022. Currently, the Kansas City Kansas Community College Welding Technology program is a 40-credit hour program with two exit points. The new alignment requires the addition of a Certificate C to the program.

Proposed Welding schedule to align with KBOR Aug 2022

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Certificate A

WELD 0100	Welding Safety and Osha 10	2
BUSN 0250	Obtaining Employment	1
WELD 0105	Welding Blueprints	3
WELD 0110	Cutting processes	3
WELD 0130	GMAW	3
WELD 0220	Advanced GMAW	4
WELD 0280	Welding Codes and Advanced Inspections	4

Total 20

Certificate B

(Completion of CERT A – 20 credits plus the following)

WELD 0140	GTAW	3
WELD 0120	SMAW	3
WELD 0240	Advanced GTAW	4
WELD 0220	Advanced SMAW	4
Cert B elective		4

Total 38

Certificate C

(Completion of CERT B – 38 credits plus the following)

Cert C elective		4
Cert C elective		4

Electives (to be determined by instructor)

CERT B Electives:

WELD 0201	Oxy-Fuel Welding	1
WELD 0202	Intermediate Welding Techniques	1
WELD 0255	Aluminum Welding	4
WELD 0260	Stainless Steel Welding	4

CERT C Electives:

WELD 0265	Fabrication Welding	4
WELD 0270	Automated Welding and Cutting	4
WELD 0275	Pipe Welding	4
WELD 0285	Internship	4

Total of 46 credit hours

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Math, Science and Business Technology – Dr. Edward Kremer

Electronics Engineering Technology- New Program

Certificate A – 18 Credit Hours

Certificate B – 33 Credit Hours

AAS – 60-62 Credit Hours

The Electronics Engineering Technology Certificate(s) and Associates Program commencing in the Fall 2022 is a comprehensive education program preparing individuals for a career as an Electronics technician. There is a strong need for trained electronics technicians throughout the greater Kansas City Metro area. Recent growth of local aerospace, and related, engineering companies and of need in biomedical companies and providers have a need for trained, skilled technicians to do assembly, testing, and repair of advanced electronics technology. Students will learn electronics theory, and how to apply that theory to real circuits, both analog and digital, and will learn hands-on skills for circuit construction, testing, and analysis with standard electronics test equipment.

Upon completion of the program, students will be able to pass The International Society of Certified Electronics Technicians (ISCET) associate level exam for students. ISCET is a recognized accreditation society in the field of electronics engineering technology. ISCET offers an associate level exam for students on work professionals with less than four years of experience covering basic electronics, mathematics, DC circuits, AC circuits, transistors, and circuit troubleshooting. The program of study in the AAS in Electronics Engineering Technology is designed, in part, to prepare students to successfully pass this examination so they can start their life-long path in as a certified technician in the field. The program certificates A & B are geared to prepare students to be immediately productive employees while completing the AAS.

The Kansas Department of Labor 2018-2028 Long-term Labor Projection show a 3.4% growth in the demand for Electrical and Electronics Engineering Technicians in the state. Additionally, growth in Electrical and Electronics Equipment and Installation and Repair Technicians is 7.2% over that same time in Kansas. These are statewide numbers, and as such it seems clear that given the business climate of the Kansas-side of the Kansas City Metro area, that those will both be higher in the region that KCKCC serves.

The Missouri Department of Labor 2018-2028 shows an expected growth of 2.64% in Electrical and Electronics Engineers, and a 4% growth in Electrical and Electronics and Installation and Repair Technicians. It is important to exam Missouri data in addition to Kansas Data when looking at career opportunities served by KCKCC. Additionally, there is no comparable program on the Missouri-side of the metro area currently to serve those companies.

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Those seeking careers in Electronics Engineering Technology will be those students who complete the AAS, while those seeking in careers in Electronics Equipment and Installation and Repair Technicians will be more likely to complete at the certification level.

Median 2018 Wages for Electrical and Electronics Engineering Technicians (SOC 17-3023) is \$69,851 in Kansas according to the KC Occupational 2018-2018 long term projections. Median 2018 Wages for Electrical Equipment Installers and Repairers (SOC 49-2094) are \$46,638 and Wages for the catch-all Installation, Maintenance, and Repair Workers (SOC 49-9099) are \$57,814.

In addition to the data on overall job growth, these are fields largely occupied at present by Baby Boomers who are approaching retirement, so there is a larger gap in trained electronics technicians than raw statistics would suggest. This is confirmed by local companies who have approached KCKCC on their own looking to fulfill needs in their skill sets.

There is currently a push in local school districts to have more technical education for students in high school, as well as college credit courses. Currently, KCKCC is working directly with Piper High School (USD 504) and Garmin Ltd. to develop the baseline program to be accessible to high school students who can complete one of the technical certificates by the time they complete high school. That will allow students to directly enter the market as electronics technicians, while they complete their degrees at KCKCC. This program is expected to expand to include other school districts in the KCKC service area.

Course layout for the proposed certificates and AAS level is shown below and with the proposed new curriculum.

Proposed Electronics Programs

Associate in Applied Science	
Program Specific Requirements	
Courses	Credit
Electronic Circuit Fundamentals (ENGR0108)	3
DC Circuits ELEC-120	4
AC Circuits ELEC 210	4
Semiconductor Devices ELEC 21	4
Electronic Communication Systems ELEC 225	4
Digital Electronics I ELEC 115	4
Digital Electronics II ELEC 215	4
Computer Concepts (CIST0101)	3
Programming Fundamentals (CIST0120)	4
Microcontrollers ELEC 220	4
Technical Elective	3-4
General Education Requirements	
Freshman Seminar (BLUE0101)	1
Composition 1 (ENGL0101)	3
Composition 2 (ENGL0102)	3

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Public Speaking (SPCH151) or Interpersonal Communication (SPCH0201)	3
College Algebra (MATH0105) or higher	3
Introductory Physics (NASC0130) or Human Anatomy (BIOL0141)	3-4
Humanities or Social Science Elective	3
Technical Electives	
Electronics Internship ELEC 250	3
Networking I (CIST0117)	3
Programing Algorithms (CIST0180)	4
Medical Terminology (ALHT0127)	3
Total	60-62

Electronics AAS Suggested Course Progression/Schedule

Freshman Fall	
Electronic Circuit Fundamentals (ENGR0108)	3
Digital Electronics I ELEC 0115	4
Computer Concepts (CIST0101)	3
Freshman Seminar (BLUE0101)	1
College Algebra (MATH0105) or higher	3
	14

Freshman Spring	
DC Circuits ELEC 0120	4
Digital Electronics II ELEC 0215	4
Programming Fundamentals (CIST0120)	4
Composition 1 (ENGL0101)	3
	15

Sophomore Fall	
AC Circuits ELEC 0210	4
Semiconductor Devices ELEC 0212	4
Microcontrollers ELEC 0220	4
Composition 2 (ENGL0102)	3
	15

Sophomore Spring	
Electronic Communication Systems ELEC 0225	4
Technical Elective	3
Introductory Physics (NASC0130) or Human Anatomy (BIOL0141)	3-4
Public Speaking (SPCH151) or Interpersonal Communication (SPCH0201)	3
Humanities or Social Science Elective	3
	16

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Certificate B/C in Electronics	
Courses	Credit
Electronic Circuit Fundamentals (ENGR0108)	3
DC Circuits ELEC 0120	4
AC Circuits ELEC 0210	4
Semiconductor Devices ELEC 0212	4
Digital Electronics I ELEC 0115	4
Digital Electronics II ELEC 0215	4
Computer Concepts (CIST0101)	3
Programming Fundamentals (CIST0120)	4
Math-0105 OR HIGHER	3
Total Credits	33

Certificate A in Electronics	
Courses	Credit
Electronic Circuit Fundamentals (ENGR0108)	3
DC Circuits ELEC-0120	4
Digital Electronics I ELEC 0115	4
Digital Electronics II ELEC 0215	4
MATH 0105 OR HIGHER	3
Total Credits	18

Legal Administrative Assistant – New Program

Certificate B – 33 credit hours

There are currently only two institutions offering a Legal Administrative Assistant or Legal Office Professional program in the state of Kansas or the Kansas City metropolitan area. Neither program is offered online. There is a need to prepare students for the challenging field of Legal Administrative Assistant (LAA) in Wyandotte and Leavenworth Counties and beyond. Kansas City Kansas Community College (KCKCC) is uniquely positioned to fill that need.

KCKCC's Administrative Office Professional (AOP) program has had online offerings since the 1980s. It was the first program to begin online delivery at the college. The program coordinator regularly recruits graduates from industry events, including the International Association of Administrative Professional's 1000-person annual convention. The program has graduated students from all over the United States who were never required to set foot on campus. KCKCC has the existing infrastructure, systems, and faculty to add a Legal Administrative Assistant Certificate to its offerings with minimal investment and potential solid returns.

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

At the April 26, 2021, AOP Advisory Board meeting, the topic of adding a certificate for Legal and Medical pathways was discussed and was supported by the Board (*minutes attached*). The Board felt that adding these additional offerings would benefit the students, the college, and the community.

The entire AOP program underwent an internal Program Review in the 2021-2022 academic school year. Among the challenges identified were small declining enrollment in the AOP programs due to Covid and competition from workforce employment opportunities for students. Program opportunities identified were adding Legal and Medical Pathways to the AOP program. Those actions were endorsed by the Program Review Board, the Program Coordinator, and the Dean of the MSBT Division (*Program Review Excerpt attached*). The Program Coordinator started developing the outline for an Action Plan to be submitted to the Program Review Committee in Fall 2021.

The Program Coordinator and Business Department faculty began researching the possibility of adding an LAA certificate program to the AOP curriculum in the fall of 2021. This research included discussions with fellow faculty members, local attorneys, the Dean of Math, Science, and Business Technology, and other interested parties. Receiving only positive feedback, it was decided to pursue this course of action.

A virtual focus group with area lawyers, legal assistants, and legal administrative assistants was held on September 22, 2021, to solicit knowledge and ideas for the need and delivery of an LAA certificate program. A special meeting of the AOP Advisory Board was called on October 1, 2021, to discuss the proposal for offering an LAA certificate program in the Fall of 2022. The motion to submit the program to KCKCC Deans' Council and Academic Affairs Committee and the Kansas Board of Regents passed, *and* the effort moved forward to the Dean's Council, and upon its approval it will be evaluated by the KCKCC Academic Affairs Committee, and then submitted to the Kansas Board of Regents.

Students wishing to further their education may transfer their Office Assistant certificate to the AOP Legal Administrative Assistant (LAA) certificate. This certificate prepares students for work in the legal field with such classes as Business Law and Legal Terminology and Document Preparation. The AOP LAA certificate may be seamlessly transferred into the AOP AAS degree, which can be completed by adding an additional twenty-nine credit hours. Any deviation from the program must be approved by the Dean of Math, Science, and Business Technology.

Course Number	Course Name	Credit Hours
BUSN 0140	Essential Career Skills	1
BUSN 0191	Microcomputer Apps I-II: Advanced Word*	2
BUSN 0204	Business Law	3
BUSN 0211	Business Communications*	3
BUSN 0250	Obtaining Employment	1
BUSN 0285	Occupational Internship*	3
BUSN 1151	Keyboarding	1

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

BUSN 1152	Document Formatting*	1
BUSN 1153	Speedbuilding I*	1
BUSN 2201	Records Management	1
BUSN 2202	Business English	1
BUSN 2203	Proofreading	1
BUSN 2204	Legal Terminology and Document Preparation	3
BUSN 2253	Customer Service	2
CIST 0111	Microcomputer Business Software*	3
CIST 0166	Microcomputer Apps I: Spreadsheets*	3
ENGL 0101	Composition I*	3
Total hours for Legal Administrative Assistant Certificate		33

* See course syllabi for administrative Professional course prerequisites.

Social and Behavioral Science and Public Service – Dean Cleon Wiggins

Corrections – AAS – Program Modification

60 Credit Hours

A Capstone course would be more relevant for this degree program by requiring the students to complete a project that documents their culminating academic knowledge of corrections. In addition, research-based practices are an integral part of the disciplinary process from incarceration to programs that reduce recidivism; therefore, a Capstone course would be a practical course offering for this degree. Also, students cannot work directly with inmates because it violates their civil rights, therefore, an internship would not give the student the experience of working as a correctional officer or deputy.

Reducing the number of credits from 64 to 60 makes this degree option attractive compared to other programs requiring three to four additional credit hours for completion.

COURSE	DESCRIPTION	HOURS	COMPLETE	NOTES
BLUE 0101	Freshman Seminar	1		
ENGL 0101	Composition I	3		
ENGL 0102	Composition II	3		
SPCH 0151 or SPCH 0201	Public Speaking or Interpersonal Communication	3		
MATH 0104	Intermediate Algebra ** or higher	3		
HIST 0105	United States Since 1877	3		
SOSC 0107 or SOSC 0134	Sociology or Criminology	3		
Science Elect	Natural/Physical Science Elective	3		
PSYC	Psychology	3		
Total Hours General Education		24		
CRJS 0101	Intro Criminal Justice	3		
CRJS 0102	Introduction to Corrections	3		

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

CRJS 0108	Oral Communications in the Correctional Environment	3		
CRJS 0109	Correctional Report Writing	3		
CRJS 0110	Ethical Decision Making in Corrections	3		Changed to CRJS 0117(KBOR made CRJS 0110 inactive)
CRJS 0111	Spanish in the Workplace (Corrections)	2		Remove
CRJS 0115	Probation and Parole	3		
CRJS 0116	Juvenile Delinquency and Justice	3		
CRJS 0119	Agency Administration (Corrections)	3		
CRJS 0120	Special Populations in Corrections	3		
CRJS 0209	Community Corrections	3		
CRJS 0210	Legal Issues in Corrections	3		Change to CRJS 0203 – Criminal Law (KBOR made inactive)
CRJS 0221	Criminal Justice Practicum	3		Change to a Capstone or Research Course
Life Learning Credits -HUDV				
Police Science Requirements		33		

Total Hours for AAS in Corrections Degree: 60

Corrections Certificate A – Modification

18 Credit Hours

By replacing CRJS 0108, CRJS 0110, and CRJS 0111 with CRJS 0115, CRJS 0119, and CRJS 0209 - Should increase enrollment and completion rates because all the courses for the new certificate program are on the list of Senate Bill courses. The revised certificate will be attainable to dual-enrolled students, who in turn can take the 18- credit hour certificate to KCKCC and complete their AAS degree in corrections. Dual enrolled students, their parents, and school counselors have expressed their interest in the opportunity to obtain a certificate in corrections. During the advisory meeting, February 2021, I received positive feedback on this proposal. Also, the courses proposed are in line with current employment opportunities in corrections, probation and parole, and community corrections.

Corrections Requirements*

Course		Credit Hours
CRJS 0102	Introduction to Corrections	3
CRJS 0109	Corrections Report Writing	3
CRJS 0115	Probation and Parole	3
CRJS 0119	Agency Administration (Corrections)	3
CRJS 0120	Special Populations in Corrections	3
CRJS 0209	Community Corrections	3
*See course syllabi for Corrections course prerequisites.		

Total Hours for a Corrections Certificate	18
--	-----------

**December 2021 Board Report
KCKCC Academic Affairs
New and Revised Program Submissions**

Police Science – Certificate A - Modification
18 Credit Hours

This certificate aligns with the degree options for this program. Reducing the number of hours for the certificate from 48 to 18 makes this certificate more marketable and attractive to those students who may not have taken any college courses and dual-enrolled students who can obtain this certificate during their Junior and Senior years of high school. Additionally, aligning the classes with the Senate Bill-approved courses should increase completion rates, especially with dual-enrolled students – thus segueing into completing their degree with KCKCC.

Police Science Certificate Requirements*

Course		Credit Hours
CRJS 0101	Introduction to Criminal Justice*	3
CRJS 0118	Law Enforcement Operations and Procedures*	3
CRJS 0201	Criminal Investigation*	3
CRJS 0204	Criminal Procedures*	3
CRJS 0206	Criminal Justice Interview and Report Writing*	3
CRJS 0207	Understanding Terrorism & Homeland Security*	3
*See course syllabus for prerequisite.		
**Math sequence is contingent upon previous high school mathematics background and transfer institution. Students should confer with an advisor to determine correct placement.		

Total Hours for a Certificate in Police Science	18
--	-----------

Homeland Security – Certificate A – Modification
18 Credit Hours

The Homeland Security Certificate Program has been moved from Fire Sciences to Behavioral Sciences under the Criminal Justice program. By modifying the courses and certificate program increases marketability and aligns the certificate with the Criminal Justice program and the bachelor's degree from Wichita State University and other universities who offer courses online – National University, Penn State (undergraduate – minor), and the University of Maryland. Current police officers have expressed their interest in obtaining a homeland security certificate – this is the feedback from my advisory committee meeting in February 2021.

Homeland Security Certificate Requirements

Course		Credit Hours
CRJS 0101	Introduction to Law Enforcement*	3
CRJS 0201	Criminal Investigations	3
CRJS 0206	Interview and Report Writing	3
CRJS 0207	Understanding Terrorism and Homeland Security	3
CRJS 0121	Introduction to Homeland Security	3
CRJS 0122	Emergency Management & Disaster*	3
*See course syllabus or prerequisite.		

Total hours for Homeland Security Certificate	18
--	-----------

**ADVISORY BOARD MEMBERS &
MEETING MINUTES**

Welding Technology Advisory Board Members

Debbie Sidfkas			
Burns, Dan	ksiefkas@henkemfg.com	913-682-9000	Henke Manufacturing, 3070 Wilson Ave, Leavenworth Bonner Springs school dist
Don Schepis	burnsda@usd204.net		Ronson Manufacturing
Jay Slikard	dfirkins@ronsonmfg.com		Shawnee Steel
Jones Jeffrey	don.schepis@shawnee-steel.com		Custom Welding
Kevin Bolen	customwelding@live.com		Energy welding coordinator, KCKCC adjunct
Kip Smythia	jeffery.jones@kcpl.com		Water One, KCKCC adjunct
Jennifer Vochatzer	KBOLEN@KCKCC.EDU	816-832-4274	1628 Burlington St. , North Kansas City, MO 64116
Kory Johnson	kips@lampton.com		Labconco
Kristina Yamaguchi	michelle@theindustriouscompany.com		Labconco
Ron Sportsman	kjohnson@labconco.com		Lincoln Electric
Spencer Fritz	kristina_yamaguchi@lincolnelectric.com		KCKCC Welding instructor
Tracy Forbush	rsportsman@KCKCC.EDU	913-288-8888	American Dish
William Woodard	fritz91297@gmail.com		Catholic Charities
	tforbush@catholiccharitiesks.org		Woodard Welding
	woodweld1@gmail.com		



**Kansas City Kansas Community College
Welding Technology / 48.0508
Advisory Committee Meeting Minutes
April 06, 2021/1:00 P.M. via Zoom**

Attending:

Eric Theel	KCKCC	Kip Smythia	Lampton Welding supplies
Ron Sportsman	KCKCC	Dan Burns	Bonner Springs School Dis
William Woodard	Woodard Welding	Saray Larson	Catholic Charities
Kory Johnson	Labconco		
Kristina Yamaguchi	Lincoln Electric		
Jeff Jones	Evergy		

Eric Theel Called the meeting to order at 1:05 p.m.

Welcome and Introductions were made.

The minutes for the May 13 ,2020 Advisory Committee meeting were reviewed and accepted as read by the committee.

Old Business was discussed:

A. Create or Review Program Vision Statement (*Where program wants to go*)

- Program expansion:
- Cert C.
- A robotics program
- Pipe welding as part
- Manufacturing class
- Advanced manufacturing
- LCF Welding program

The vision statement was reviewed and no changes were deemed necessary. With changes coming from KBOR it was discussed that a smaller version of Cert C could be offered in the summer. The committee would like to see the shop space expand so that the cert C would be similar in length as cert A and B.

I. New Business

A. Identify New Technologies for Course Content

- a. Instructor retraining and new technology training
- b. Soft skills/professionalism for long-term employment
- c. Industry credentials AWS SENSE, Miller open book
- d. New KBOR alignment

Instructors plan to resume training at Lincoln Electric for continued robotic weld training as soon as the college allows professional travel again.

The committee had a consensus that soft skills continue to be a very important part of the program.

The Welding program is a AWS SENSE program. The committee would like more information on other micro credentials. Some places that offer these are Lincoln Electric, Miller Hobart.

The Members present approved of the changes to the program to KBOR requirements as presented to them. They would like to revisit this subject at our next advisory meeting when a more detail plan is available.

B. Trends in the Workforce

Employment trends are very strong. Every employer on the committee is currently having trouble finding welders.

C. Recommendations for Facilities and Program Equipment (e.g., Perkins)

With the welding shops lack of floor space the committee discussed and agreed that a updated CNC steel shear should be purchased to replace the manual sheer that has been in the shop at least 10 years.

- It was noted that the motion for expansion of the welding program to accommodate a certification C has been voted on and has passed in several previous meetings. The board expressed frustration that the topic continues to be discussed at every advisory meeting and no progress has been made.

Meeting Adjourned 1:50 p.m.

LETTERS OF SUPPORT



Lansing Unified School District 469

200 East Mary Street
Lansing, Kansas 66043
913-727-1100
www.usd469.net

Superintendent Dan Wessel

To Whom It May Concern:

USD 469, Lansing School District, is writing this letter to serve as support for the addition of the new Welding Certificate C at Kansas City Kansas Community College. This certification will provide students with additional training and credentialing opportunities as they prepare for a career in Welding. Upon completion of the additional exit point, students can obtain a career in the industry with a higher learning potential.

Please let me know if you have any additional questions or concerns that I can address. Thank you for your consideration and support of the Welding Certificate C at Kansas City Kansas Community College.

Sincerely,

Dan Wessel,
Superintendent of USD469
200 East Mary
Lansing, KS 66043
913 727 1100
Dan.wessel@usd469.net



AMERICAN DISH SERVICE
MANUFACTURERS OF WARE WASHING EQUIPMENT FOR OVER 40 YEARS

April 7, 2022

To Whom It May Concern:

I wanted to take this opportunity to let you know that American Dish Service (ADS) fully supports the curriculum changes that KCKCC is getting ready to implement. We hire welders and we have had great success with the graduates from the KCKCC welding department. Adding two more credit hours to the cutting process will be highly beneficial as well as the four credit hours of welding codes and advanced inspections.

ADS will work with Kansas City Kansas Community College to ensure welding technical curriculum meets our needs for an entry-level welder. We will be thrilled to participate in interviewing individuals who successfully complete the program and fit our job description. We find that strong relationships with partners such as KCKCC is critical to help us fill our positions. I believe your welding courses are crucial in filling in the "skills gap".

Respectfully,

Shanna Tibbetts

Human Resources Manager



**Sifting & Screening Machines
Sieves • Milling Supplies**

Phone 913-682-2291
Fax 913-682-1431

April 6, 2022

TO: Kansas Board of Regents

Great Western Manufacturing Company, Inc. supports the curriculum changes made in the state alignment for the welding program. The changes are as follows:

1. Two more credit hours on cutting processes.
2. All major process will be taught in sequential order
 - a. Beginning and intermediate MIG
 - b. Beginning and intermediate TIG
 - c. Beginning and intermediate Stick
3. Four credit hours of Welding Codes and Advanced Inspections.

Great Western Mfg will work with Kansas City Kansas Community College to ensure welding technical curriculum meets our needs for an entry-level and participate in interviewing individuals who successfully complete the program and fit our job description. Strong relationships with industry partners and our community college partners like KCKCC are critical to fulfilling the 'skills gap.'

We appreciate our relationship with KCKCC. Over the years we have hired many beginner welders from their program and have found their skillset to be above the industry standard.

Sincerely,

A handwritten signature in black ink that reads "Michael Jones". The signature is written in a cursive, flowing style.

Michael Jones, Supervisor
Machine Shop & Metal Fabrication
Great Western Manufacturing Company, Inc.



April 8, 2022

To whom it may concern:

Henke Manufacturing an Alamo Group Inc. operating company supports the curriculum changes made in the state alignment for Kansas City Kansas Community College's welding program. This includes broadening the training on cutting processes by adding two more credit hours and teaching all major processes in sequential order, building upon the different types of welding. In addition, we fully support the addition training on Welding Codes and Advanced Inspections which will serve to improve students welding effectiveness and better position students for success in industry.

Henke Manufacturing will work with Kansas City Kansas Community College to ensure welding technical curriculum meets our needs for an entry-level welder and participate in interviewing individuals who successfully complete the program and fit our job description. Strong relationships with industry partners and our community college partners like KCKCC are critical to fulling the 'skills gap' facing our industry.

If there are any questions, I can be reached directly at 830-481-4497.

Amber Steele

Sr. Corporate HR Manager – Talent



CORPORATE OFFICES LOCATED AT 601 N. WASHINGTON • P.O. BOX 765 • WICHITA, KANSAS 67201
PHONE (316) 263.3293 • WATS (800) 688.7688 • FAX (316) 263-6042

April 5, 2022

KBOR c/o Kansas City Kansas Community College
7250 State Avenue
Kansas City, KS 66112

To whom it may concern,
Lampton Welding Supply supports the curriculum changes made in the state alignment for the welding program. The changes are as followed:

1. Two more credit hours on cutting processes.
2. All major processes will be taught in sequential order
 - a. Beginning and intermediate MIG
 - b. Beginning and intermediate TIG
 - c. Beginning and intermediate Stick
3. Four credit hours of Welding Codes and Advanced Inspections

Lampton Welding Supply will work with Kansas City Kansas Community College to ensure welding technical curriculum meets our needs for an entry-level welder and participate in interviewing individuals who successfully complete the program and fit our job description. Strong relationships with industry partners and our community college partners like KCKCC are critical to filling the 'skills gap.'

Regards,

Kip Smythia
Area Sales Manager
Lampton Welding Supply
1628 Burlington Street
North Kansas City, MO 64116
816-832-4274
Fax: 816-629-4427
Cell: 402-239-3836
kips@lampton.com

SYLLABI

SYLLABUS

DATE OF LAST REVIEW:	Spring 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Welding Safety and OSHA 10
COURSE NUMBER:	WELD 0100
CREDIT HOURS:	2
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	None

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or lab learning and assessment activities, students in this course will: explain job/site safety and precautions for job/site hazards; determine the uses of personal protective equipment (PPE); identify the safety equipment and procedures related to safe work practices and environment; identify fire prevention and protection techniques; and explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Introduction to OSHA - Two Hours

- A. OSH Act, General Duty Clause, Employer and Employee Rights and Responsibilities, Whistleblower Rights, Recordkeeping basics
 - B. Inspections, Citations, and Penalties
 - C. General Safety and Health Provisions, Competent Person, Subpart C
 - D. Value of Safety and Health
 - E. OSHA Website, OSHA 800 number and available resources
- II. OSH Act Subparts
- A. Walking and Working Surfaces - including fall protection, Subpart D - One Hour
 - B. Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection, Subparts E & L - Two Hours
 - C. Electrical, Subpart S - Two Hours
 - D. Personal Protective Equipment (PPE), Subpart I - One Hour
 - E. Materials Handling, Subpart N - Two Hours
 - F. Hazard Communication, Subpart Z - One Hour
 - G. Hazardous Material (Flammable and Combustible Liquids, Spray Finishing, Compressed Gases, Dipping and Coating Operations), Subpart H
 - H. Permit-Required Confined Spaces, Subpart J
 - I. Lockout/Tagout, Subpart J
 - J. Machine Guarding, Subpart O
 - K. Welding, Cutting, and Brazing, Subpart Q
 - L. Introduction to Industrial Hygiene, Subpart Z
 - M. Bloodborne Pathogens, Subpart Z
 - N. Ergonomics
 - O. Fall Protection
 - P. Safety and Health Programs
 - Q. Powered Industrial Vehicles

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to explain job/site safety and precautions for job/site hazards
- B. The student will be able to Determine the uses of personal protective equipment (PPE)
- C. The student will be able to Identify the safety equipment and procedures related to safe work practices and environment
- D. The student will be able to Identify fire prevention and protection techniques
- E. The student will be able to Explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS)

COURSE COMPETENCIES:

Explain job/site safety and precautions for job/site hazards.

1. Conduct job site analysis.
2. Identifies a tasks of job to be performed
3. List possible hazards related to the task
4. List precautions that need to be taken to safely perform tasks

Determine the uses of personal protective equipment (PPE)

5. Describe the type of equipment
6. Describe the purpose of the equipment

7. Describe benefit of equipment

Identify the safety equipment and procedures related to safe work practices and environment

8. Describe industry standards applicable to walkways and working surfaces
9. Describe industry standards fire hazards, protection and plans
10. Describe industry standards electrical hazards, protections and plans
11. Describe industry standards applicable to machine guarding
12. Identify safe lockout and tagout practices
13. Describe industry standards applicable to lifting
14. Explain what assured grounding is
15. Explain when GFCI is needed on a site

Identify fire prevention and protection techniques

16. interpret the fire classification system
17. identify the three components of a fire triangle
18. describe the purpose of various fire extinguishers
19. detail fire hazard potentials and system for preventing them

Explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS)

20. reference appropriate MSDS
21. identify the various sections of an MSDS and its purpose
22. identify the section and numbering of a container labeling system

ASSESSMENT OF LEARNER OUTCOMES:

Student Progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Welding Blueprints
COURSE NUMBER:	WELD0105
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	None

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: identify basic lines, views and abbreviations used in blueprints; interpret basic 3D sketches using orthographic projection and blueprints; solve applicable mathematical equations; use basic measuring tools; interpret scale ratios on a blueprint; identify basic welding joints and structural shapes; interpret a bill of materials; and identify standard AWS weld symbols.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Introduction to prints
 - A. What is a print?
 - B. Measurement
 - C. Fractions and decimals
- II. Basics
 - A. Lines on a print
 - B. Types of prints
 - C. Print formats
 - D. Dimensioning prints
 - E. Basic and Geometric tolerances on prints
 - F. First and Third angle views
 - G. Circles, triangles and angles on prints
 - H. Finding area and volume for parts
- III. Materials and joining them
 - A. Threaded fasteners
 - B. Non-threaded fasteners
 - C. Structural materials
 - D. Weld joints and weld types
- IV. Welding symbols for prints
 - A. Overview of welding symbols
 - B. Groove welds
 - C. Fillet welds
 - D. Plug and slot welds
 - E. Resistance welds
 - F. Flange welds
 - G. Weld examination symbols

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Identify basic lines, views and abbreviations used in blueprints
- B. The student will be able to Interpret basic 3D sketches using orthographic projection and blueprints
- C. The student will be able to Solve applicable mathematical equations
- D. The student will be able to Use basic measuring tools
- E. The student will be able to Interpret scale ratios on a blueprint
- F. The student will be able to Identify basic welding joints and structural shapes
- G. The student will be able to Interpret a bill of materials
- H. The student will be able to Identify standard AWS weld symbols
- I. The Student will be able to interpret basic and geometric tolerance notes

COURSE COMPETENCIES:

The student will be able to identify basic lines, views, and abbreviations used in blueprints

1. Identify types of lines associated with industrial blueprints
2. Identify the views associated with an orthographic projection

3. Identify the placement of the views of an orthographic projection on a 2D surface
4. Utilize abbreviations where appropriate

The student will be able to interpret basic 3D sketches using orthographic projection and blueprints

5. Describe each view of an orthographic projection
6. Explain the part based on the view
7. Accurately lay out the part based on the sketches tolerances

The student will be able to solve applicable mathematical equations

8. Demonstrate use of fractions and decimals
9. Compute areas
10. Compute volumes
11. Use basic geometric equations

The student will be able to use basic measuring tools

12. Use a variety of measuring tools and layout devices appropriate to the task
13. Can read a tape measure to a minimum of 1/16th of an inch or 1mm

The student will be able to interpret scale ratios on a blueprint

14. Apply appropriate mathematical principles to assigned tasks

The student will be able to identify basic welding joints and structural shapes

15. Identify welding joints
16. Identify structural shapes

The student will be able to interpret a bill of materials

17. Identify the material description
18. Identify the quantities of materials
19. Identify parts and item numbers

The student will be able to identify standard AWS weld symbols

20. Identify a joint design
21. Identify a weld process
22. Identify other symbols' components

The student will be able to interpret basic and geometric tolerance notes

23. Identify tolerances on a print
24. Identify and define geometric tolerance symbols

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Cutting Processes
COURSE NUMBER:	WELD0110
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, [/www.kckccbookstore.com](http://www.kckccbookstore.com), for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or shop/lab learning and assessment activities, students in this course will: distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade; demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation; demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation; demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations; demonstrate safe and proper operation of several types of mechanical cutting equipment; and inspect quality and tolerance of cuts according to industry standards.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Cutting basics
 - A. Methods of cutting
 - B. Measurement for cutting
 - C. Cutting safety
 - 1. Mechanical cutting hazards
 - 2. Thermal cutting hazards
- II. Mechanical cutting
 - A. Sawing
 - B. Shearing
 - C. Punching
 - D. Machining
- III. Thermal Cutting
 - A. PAC
 - B. OFC
 - 1. Oxy Acetylene
 - 2. Other fuels
 - C. CAC-A

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade
- B. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation
- C. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation
- D. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations
- E. The student will be able to Demonstrate safe and proper operation of several types of mechanical cutting equipment
- F. The student will be able to Inspect quality and tolerance of cuts according to industry standards

COURSE COMPETENCIES:

Distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade

- 1. Identify types of cutting process
- 2. Define the cutting process advantage
- 3. Define the cutting process disadvantage
- 4. Identify different components of the process equipment
- 5. Describe required safety procedures of the process
- 6. Describe the set-up procedures of the process

Demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation

7. Use the proper personal protective equipment (PPE)
8. Identify safety hazards of the equipment
9. Properly set up the equipment
10. Properly light and adjust the torch
11. Make a variety of quality cuts
12. Properly shut down the equipment

Demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation

13. Use the proper personal protective equipment (PPE)
14. Identify the safety hazards of the equipment
15. Properly set up the equipment
16. Properly shut down the equipment
17. Make a variety of quality cuts on various types and sizes of metal

Demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations

18. Use the proper personal protective equipment (PPE)
19. Identify the safety hazards of the equipment
20. Properly set up the equipment
21. Make a variety of quality gouges and cuts on various metals
22. Properly shut down the equipment

Demonstrate safe and proper operation of several types of mechanical cutting equipment

23. Identify safety hazards of the equipment
24. Use the proper personal protective equipment (PPE)
25. Properly set up the mechanical cutting equipment
26. Make a variety of quality cuts on various metals
27. Properly shut down the equipment

Inspect quality and tolerance of cuts according to industry standards

28. Inspect that the quality of edges are to industry standard
29. Use the proper inspection tools for the cutting process

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	GMAW
COURSE NUMBER:	WELD0130
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com/ for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia; cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. GMAW Processes and equipment
 - A. GMAW equipment
 1. Welding station components
 2. Power sources
 3. Wire feeders
 4. Welding guns
 - B. GMAW process theory
 1. Machine settings
 2. Electrode specifications
 3. Metal transfer
 4. Shielding gasses
- II. GMAW welding in the flat position
 - A. Fillet welds (1F)
 - B. Groove welds (1G)
- III. GMAW welding in the horizontal position
 - A. Fillet welds (2F)
 - B. Groove welds (2G)
- IV. Weld inspection
 - A. GMAW visual inspection
 1. Visual inspection criteria
 2. Common discontinuities in flat and horizontal positions
 - B. GMAW destructive weld testing
 1. Weld test joint set up
 2. Preparing test specimens
 3. Destructive test criteria

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to explain gas metal arc welding process (GMAW).
- B. The student will be able to demonstrate the safe and correct set up of the GMAW workstation.
- C. The student will be able to correlate GMAW electrode classifications with base metals and joint criteria
- D. The student will be able to demonstrate proper electrode selection and use based on metal types and thicknesses
- E. The student will be able to build pads of weld beads with selected electrodes in the flat position
- F. The student will be able to build pads of weld beads with selected electrodes in the horizontal position
- G. The student will be able to produce basic GMAW welds on selected weld joints
- H. The student will be able to conduct visual inspection of GMAW welds

COURSE COMPETENCIES:

Explain gas metal arc welding process (GMAW).

1. Describe different modes of transfer

2. Differentiate between types and uses of current
3. Identify the advantages and disadvantages of GMAW
4. Identify types of welding power sources
5. Identify different components of a GMAW station
6. Describe basic electrical safety

Demonstrate the safe and correct set up of the GMAW workstation.

7. Demonstrate proper inspection of equipment
8. Demonstrate proper use of PPE
9. Demonstrate proper placement of workpiece connection
10. Check for proper setup of equipment
11. Inspect area for potential hazards/safety issues
12. Troubleshoot the GMAW equipment and perform minor maintenance

Correlate GMAW electrode classifications with base metals and joint criteria

13. Explain the AWS electrode nomenclature
14. Determine proper electrode for given joint based on material and position of weld
15. Determine proper type of electrodes to be used in a variety of industry applications
16. Identify proper electrode storage and handling
17. Identify consumables

Demonstrate proper electrode selection and use based on metal types and thicknesses

18. Identify consumables for various electrode sizes
19. Select the proper electrode type and size relative to metal size, type and thickness
20. Select the proper electrode type and size based on material specifications

Build pads of weld beads with selected electrodes in the flat position

21. Implement safety procedures and PPE
22. Implement proper equipment setup
23. Use the proper metal transfer
24. Create a pad of beads using GMAW
25. Weld exhibits proper uniformity and profile

Build pads of weld beads with selected electrodes in the horizontal position

26. Implement safety procedures and PPE
27. Implement proper equipment setup
28. Use the proper metal transfer
29. Create a pad of beads using GMAW
30. Weld exhibits proper uniformity and profile

Produce basic GMAW welds on selected weld joints.

31. Implement safety procedures and PPE
32. Implement proper equipment setup
33. Perform fillet weld in flat position
34. Perform a fillet weld in horizontal position
35. Perform a groove weld in a flat position
36. Perform a groove weld in a horizontal position
37. Use tools appropriate for the task

Conduct visual inspection of GMAW welds

38. Identify common visual discontinuities and defects on welds
39. Determine causes of discontinuities and defects of welds
40. Inspect welds for pass/fail ratings according to industry standards

41. Use appropriate tools for inspection

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	Fall 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Advanced GMAW
COURSE NUMBER:	WELD0230
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD 0100, WELD0130

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kkcccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the vertical position; build pads of weld beads with selected electrodes in the overhead position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. GMAW welding in the vertical position
 - A. Fillet welds (3F)
 - B. Groove welds (3G)
- II. GMAW welding in the overhead position
 - A. Fillet welds (4F)
 - B. Groove welds (4G)
- III. Weld inspection
 - A. GMAW visual inspection
 1. Visual inspection criteria
 2. Common discontinuities in vertical and overhead positions
 - B. GMAW non destructive testing
 1. Ultrasound testing
 2. Radiograph testing
 3. Penetrant testing
 4. Magnetic particle testing

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Demonstrate the safe and correct set up of the GMAW workstation.
- B. The student will be able to Correlate GMAW electrode classifications with base metals and joint criteria
- C. The student will be able to Demonstrate proper electrode selection and use based on metal types and thicknesses
- D. The student will be able to Build pads of weld beads with selected electrodes in the Vertical position
- E. The student will be able to Build pads of weld beads with selected electrodes in the Overhead position
- F. The student will be able to Produce basic GMAW welds on selected weld joints
- G. The student will be able to Conduct visual inspection of GMAW welds

COURSE COMPETENCIES:

Demonstrate the safe and correct set up of the GMAW workstation.

1. Demonstrate proper inspection of equipment
2. Demonstrate proper use of PPE
3. Demonstrate proper placement of work piece connection
4. Check for proper setup of equipment
5. Inspect area for potential hazards/safety issues
6. Troubleshoot the GMAW equipment and perform minor maintenance

Correlate GMAW electrode classifications with base metals and joint criteria

7. Explain the AWS electrode nomenclature
8. Determine proper electrode for given joint based on material and position of weld
9. Determine proper type of electrodes to be used in a variety of industry applications
10. Identify proper electrode storage and handling
11. Identify consumables

Demonstrate proper electrode selection and use based on metal types and thicknesses

12. Identify consumables for various electrode sizes
13. Select the proper electrode type and size relative to metal size, type and thickness
14. Select the proper electrode type and size based on material specifications

Build pads of weld beads with selected electrodes in the Vertical position

15. Implement safety procedures and PPE
16. Implement proper equipment setup
17. Use the proper metal transfer
18. Create a pad of beads using GMAW
19. Weld exhibits proper uniformity and profile

Build pads of weld beads with selected electrodes in the Overhead position

20. Implement safety procedures and PPE
21. Implement proper equipment setup
22. Use the proper metal transfer
23. Create a pad of beads using GMAW
24. Weld exhibits proper uniformity and profile

Produce basic GMAW welds on selected weld joints.

25. Implement safety procedures and PPE
26. Implement proper equipment setup
27. Perform fillet weld in Vertical position
28. Perform a fillet weld in Over head position
29. Perform a groove weld in a Vertical position
30. Perform a groove weld in a Overhead position
31. Use tools appropriate for the task

Conduct visual inspection of GMAW welds

32. Identify common visual discontinuities and defects on welds
33. Determine causes of discontinuities and defects of welds
34. Inspect welds for pass/fail ratings according to industry standards
35. Use appropriate tools for inspection

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	Fall 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Advanced GTAW
COURSE NUMBER:	WELD0240
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD 0100, WELD0140

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the vertical position; build pads of weld beads with selected electrodes and filler material in the overhead position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. GTAW welding in the vertical position
 - A. Fillet welds (3F)
 - B. Groove welds (3G)
- II. GTAW welding in the overhead position
 - A. Fillet welds (4F)
 - B. Groove welds (4G)
- III. Weld inspection
 - A. GTAW visual inspection
 1. Visual inspection criteria
 2. Common discontinuities in vertical and overhead positions
 - B. GTAW non destructive testing
 1. Ultrasound testing
 2. Radiograph testing
 3. Penetrant testing
 4. Magnetic particle testing

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Demonstrate the safe and correct set up of the GTAW workstation
- B. The student will be able to Relate GTAW electrode and filler metal classifications with base metals and joint criteria
- C. The student will be able to Build proper electrode and filler metal selection and use based on metal types and thicknesses
- D. The student will be able to Build pads of weld beads with selected electrodes and filler material in the Vertical position
- E. The student will be able to Build pads of weld beads with selected electrodes and filler material in the Overhead position
- F. The student will be able to Perform basic GTAW welds on selected weld joints
- G. The student will be able to Perform visual inspection of GTAW welds

COURSE COMPETENCIES:

Demonstrate the safe and correct set up of the GTAW workstation

1. Demonstrate proper inspection of equipment
2. Demonstrate proper use of PPE
3. Demonstrate proper placement of work piece connection
4. Check for proper setup of equipment
5. Inspect area for potential hazards/safety issues
6. Troubleshoot GTAW equipment and perform minor maintenance

Relate GTAW electrode and filler metal classifications with base metals and joint criteria

7. Identify electrode classifications
8. Explain the AWS electrode and filler metal nomenclature
9. Determine proper electrode and filler metal for given joint based on material and position of weld

10. Determine proper type of electrodes to be used in a variety of industry applications
Build proper electrode and filler metal selection and use based on metal types and thicknesses
11. Use safety hazard precautions and PPE
12. Properly prepare the tungsten electrode profile relative to base material
13. Perform weld using GTAW process appropriate to electrode size and filler metal size
14. Select the proper electrode and filler metal type and size relative to metal size, type and thickness
15. Select the proper electrode and filler metal type and size based on material specifications
16. Use tools appropriate for the task
Build pads of weld beads with selected electrodes and filler material in the Vertical position
17. Use safety hazard precautions and PPE
18. Demonstrate proper equipment setup and troubleshooting
19. Create a pad of beads using GTAW process
20. Weld exhibits proper uniformity and profile
Build pads of weld beads with selected electrodes and filler material in the Overhead position
21. Use safety hazard precautions and PPE
22. Demonstrate proper equipment setup and troubleshooting
23. Create a pad of beads using GTAW process
24. Weld exhibits proper uniformity and profile
Perform basic GTAW welds on selected weld joints
25. Conduct proper base metal preparation
26. Use safety hazard precautions and PPE
27. Demonstrate proper equipment setup and troubleshooting
28. Perform fillet weld in Vertical position
29. Perform a fillet weld in Overhead position
30. Perform a groove weld in a Vertical position
31. Perform a groove weld in a Overhead position
32. Use tools appropriate for the task
Perform visual inspection of GTAW welds
33. Identify common visual discontinuities and defects on welds
34. Determine causes of discontinuities and defects of welds
35. Inspect welds for pass/fail ratings according to industry standards
36. Use tools appropriate for the inspection

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW: 09/2019

CIP CODE: 48.0508

SEMESTER: Departmental Syllabus

COURSE TITLE: Welding Codes and Advanced Inspection

COURSE NUMBER: WELD0280

CREDIT HOURS: 4

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITES: WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn destructive and non destructive testing methods, how to interpret them to code, and how to use a code to set up welding procedures and qualification tests.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Inspection methods
 - A. Destructive examination
 1. Weld bend tests

2. Tensile tests
 3. Impact tests
 4. Fillet weld break tests
 5. Macro etch specimens
- B. Non Destructive examination
1. Visual inspection
 2. Magnetic particle testing
 3. Die penetrant testing
 4. Ultrasound inspection
 5. Radiographic inspection
- II. Welding codes
- A. AWS
 - B. ASME
 - C. API
 - D. SAE
- III. Code testing
- A. Reading and writing a WPS
 - B. Inspecting set up of weldment
 - C. Inspecting welding during process
 - D. Visual inspection of finished weldment
 - E. Preparation of test specimens
 - F. Testing of specimens

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Explain how different testing methods ensure quality welds
- B. The student will be able to Define codes, organizations and what industries they cover
- C. The student will be able to Inspect welds to various codes
- D. The student will be able to Properly prepare test weldments for welding
- E. The student will be able to Properly prepare specimens for destructive testing
- F. The student will be able to Test destructive test specimens and interpret results for pass/fail status to given codes
- G. The student will be able to Properly prepare test weldments for NDE
- H. The student will be able to Use various NDE to determine welds are acceptable to various codes

COURSE COMPETENCIES:

Explain how different testing methods ensure quality welds

1. Identify various testing methods used in industry
2. Define whether or not various testing methods are destructive or nondestructive
3. Describe what various testing methods check for and how it ensures quality welds

Define codes, organizations and what industries they cover

4. Identify several commonly used welding codes
5. Identify major code creating organizations and correctly match the codes they publish
6. Identify industries that commonly use welding codes and match them to their code

Inspect welds to various codes

7. Define visual acceptance criteria to a given code
8. Visually inspect groove welds to provided code and properly identify pass/fail status
9. Visually inspect fillet welds to provided code and properly identify pass/fail status

Properly prepare test weldments for welding

10. Determine joint preparation and geometry for a weld test to a given code
11. Prepare plates to have proper edge preparation for a given weld test
12. Properly tack plates for test weldment
13. Inspect tacked test plates for proper fit up within given code

Properly prepare specimens for destructive testing

14. Determine proper layout for test specimens for given weld test
15. Demonstrate ability to get proper test specimens for bend tests
16. Demonstrate ability to get proper macro etch and break test specimens for fillet welds
17. Demonstrate proper surface preparation for face and root bend tests
18. Demonstrate proper surface preparation for macro etch test specimens

Test destructive test specimens and interpret results for pass/fail status to given codes

19. Demonstrate ability to perform root and face bend tests and inspections to given code
20. Demonstrate ability to perform side bend tests and inspections to given code
21. Demonstrate ability to perform fillet weld break tests and inspections to given code
22. Demonstrate ability to perform macro etch weld tests and inspections to given code

Properly prepare test weldments for NDE

23. Determine what if any preparation must be done to prepare for MT
24. Determine what if any preparation must be done to prepare for DPT
25. Determine what if any preparation must be done to prepare for UT
26. Determine what if any preparation must be done to prepare for RT

Use various NDE to determine welds are acceptable to various codes

27. Demonstrate ability to perform and inspect welds with MT
28. Demonstrate ability to perform and inspect welds with DPT
29. Demonstrate ability to perform and inspect welds with UT
30. Demonstrate ability to perform and inspect welds with RT

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	Spring 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	GTAW
COURSE NUMBER:	WELD 0140
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the flat position; build pads of weld beads with selected electrodes and filler material in the horizontal position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. GTAW Processes and equipment
 - A. GTAW equipment
 1. Welding station components
 2. Power sources
 3. Welding torches
 - B. GTAW process theory
 1. Machine settings
 2. Electrode specifications
 3. Electrode preparation
 4. Filler metal specifications
 5. Shielding gasses
- II. GTAW welding in the flat position
 - A. Fillet welds (1F)
 - B. Groove welds (1G)
- III. GTAW welding in the horizontal position
 - A. Fillet welds (2F)
 - B. Groove welds (2G)
- IV. Weld inspection
 - A. GTAW visual inspection
 1. Visual inspection criteria
 2. Common discontinuities in flat and horizontal positions
 - B. GTAW destructive weld testing
 1. Weld test joint set up
 2. Preparing test specimens
 3. Destructive test criteria

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Explain the gas tungsten arc welding process (GTAW)
- B. The student will be able to Demonstrate the safe and correct set up of the GTAW workstation
- C. The student will be able to Relate GTAW electrode and filler metal classifications with base metals and joint criteria
- D. The student will be able to Build proper electrode and filler metal selection and use based on metal types and thicknesses
- E. The student will be able to Build pads of weld beads with selected electrodes and filler material in the flat position
- F. The student will be able to Build pads of weld beads with selected electrodes and filler material in the horizontal position
- G. The student will be able to Perform basic GTAW welds on selected weld joints
- H. The student will be able to Perform visual inspection of GTAW welds

COURSE COMPETENCIES:

Explain the gas tungsten arc welding process (GTAW)

1. Differentiate between types and uses of current
2. Identify the advantages and disadvantages of GTAW
3. Identify types of welding power sources
4. Identify different components of a GTAW workstation
5. Describe basic electrical safety

Demonstrate the safe and correct set up of the GTAW workstation

6. Demonstrate proper inspection of equipment
7. Demonstrate proper use of PPE
8. Demonstrate proper placement of workpiece connection
9. Check for proper setup of equipment
10. Inspect area for potential hazards/safety issues
11. Troubleshoot GTAW equipment and perform minor maintenance

Relate GTAW electrode and filler metal classifications with base metals and joint criteria

12. Identify electrode classifications
13. Explain the AWS electrode and filler metal nomenclature
14. Determine proper electrode and filler metal for given joint based on material and position of weld
15. Determine proper type of electrodes to be used in a variety of industry applications

Build proper electrode and filler metal selection and use based on metal types and thicknesses

16. Use safety hazard precautions and PPE
17. Properly prepare the tungsten electrode profile relative to base material
18. Perform weld using GTAW process appropriate to electrode size and filler metal size
19. Select the proper electrode and filler metal type and size relative to metal size, type and thickness
20. Select the proper electrode and filler metal type and size based on material specifications
21. Use tools appropriate for the task

Build pads of weld beads with selected electrodes and filler material in the flat position

22. Use safety hazard precautions and PPE
23. Demonstrate proper equipment setup and troubleshooting
24. Create a pad of beads using GTAW process
25. Weld exhibits proper uniformity and profile

Build pads of weld beads with selected electrodes and filler material in the horizontal position

26. Use safety hazard precautions and PPE
27. Demonstrate proper equipment setup and troubleshooting
28. Create a pad of beads using GTAW process
29. Weld exhibits proper uniformity and profile

Perform basic GTAW welds on selected weld joints

30. Conduct proper base metal preparation
31. Use safety hazard precautions and PPE
32. Demonstrate proper equipment setup and troubleshooting
33. Perform fillet weld in flat position
34. Perform a fillet weld in horizontal position
35. Perform a groove weld in a flat position
36. Perform a groove weld in a horizontal position
37. Use tools appropriate for the task

Perform visual inspection of GTAW welds

38. Identify common visual discontinuities and defects on welds
39. Determine causes of discontinuities and defects of welds
40. Inspect welds for pass/fail ratings according to industry standards
41. Use tools appropriate for the inspection

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies, and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	Spring 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	SMAW
COURSE NUMBER:	WELD 0120
CREDIT HOURS:	3
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. SMAW Processes and equipment
 - A. SMAW equipment
 1. Welding station components
 2. Power sources
 3. Welding leads
 - B. SMAW process theory
 1. Machine settings
 2. Electrode specifications
- II. SMAW welding in the flat position
 - A. Fillet welds (1F)
 - B. Groove welds (1G)
- III. SMAW welding in the horizontal position
 - A. Fillet welds (2F)
 - B. Groove welds (2G)
- IV. Weld inspection
 - A. SMAW visual inspection
 1. Visual inspection criteria
 2. Common discontinuities in flat and horizontal positions
 - B. SMAW destructive weld testing
 1. Weld test joint set up
 2. Preparing test specimens
 3. Destructive test criteria

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to explain the Shielded Metal Arc Welding process (SMAW).
- B. The student will be able to demonstrate the safe and correct set up of the SMAW workstation.
- C. The student will be able to relate SMAW electrode classifications with base metals and joint criteria
- D. The student will be able to demonstrate proper electrode selection and use based on metal types and thicknesses
- E. The student will be able to build pads of weld beads with selected electrodes in the flat position
- F. The student will be able to build pads of weld beads with selected electrodes in the horizontal position
- G. The student will be able to perform basic SMAW welds on selected weld joints.
- H. The student will be able to perform visual inspection of welds

COURSE COMPETENCIES:

Explain the Shielded Metal Arc Welding process (SMAW).

1. Differentiate between types and uses of current
2. Identify the advantages and disadvantages of SMAW
3. Identify types of welding power sources

4. Identify different components of a SMAW station
 5. Describe basic electrical safety
- Demonstrate the safe and correct set up of the SMAW workstation.*
6. Demonstrate proper inspection of equipment
 7. Demonstrate proper use of PPE
 8. Demonstrate proper placement of workpiece connection
 9. Check for proper setup of equipment
 10. Inspect area for potential hazards/safety issues
- Relate SMAW electrode classifications with base metals and joint criteria*
11. Explain the AWS electrode nomenclature
 12. Determine proper electrode for given joint based on material and position of weld
 13. Determine proper type of electrodes to be used in a variety of industry applications
 14. Identify proper electrode storage and handling
- Demonstrate proper electrode selection and use based on metal types and thicknesses*
15. Select the proper electrode type and size relative to metal size, type and thickness
 16. Select the proper electrode type and size based on material specifications
- Build pads of weld beads with selected electrodes in the flat position*
17. Use the proper safety procedures and PPE
 18. Use the proper setup procedures
 19. Create a pad of beads using SMAW electrode
 20. Weld exhibits proper uniformity and profile
- Build pads of weld beads with selected electrodes in the horizontal position*
21. Use the proper safety procedures and PPE
 22. Use the proper setup procedures
 23. Create a pad of beads using SMAW electrode
 24. Weld exhibits proper uniformity and profile
- Perform basic SMAW welds on selected weld joints.*
25. Use the proper setup procedures
 26. Use the proper safety procedures and PPE
 27. Perform a fillet weld in horizontal position
 28. Perform fillet weld in flat position
 29. Perform a groove weld in a flat position
 30. Perform a groove weld in a horizontal position
 31. Use tools appropriate for the task
- Perform visual inspection of welds*
32. Identify common visual discontinuities and defects on welds
 33. Determine causes of discontinuities and defects of welds
 34. Inspect welds for pass/fail ratings according to industry standards
 35. Use appropriate inspection tools

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Advanced SMAW
COURSE NUMBER:	WELD0220
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0120, WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the Vertical position; build pads of weld beads with selected electrodes in the Over Head position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. SMAW welding in the vertical position
 - A. Fillet welds (3F)
 - B. Groove welds (3G)
- II. SMAW welding in the overhead position
 - A. Fillet welds (4F)
 - B. Groove welds (4G)
- III. Weld inspection
 - A. SMAW visual inspection
 1. Visual inspection criteria
 2. Common discontinuities in vertical and overhead positions
 - B. SMAW non destructive testing
 1. Ultrasound testing
 2. Radiograph testing
 3. Penetrant testing
 4. Magnetic particle testing

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Demonstrate the safe and correct set up of the SMAW workstation.
- B. The student will be able to Relate SMAW electrode classifications with base metal and joint criteria
- C. The student will be able to Demonstrate proper electrode selection and use based on metal types and thicknesses
- D. The student will be able to Build pads of weld beads with selected electrodes in the Vertical position
- E. The student will be able to Build pads of weld beads with selected electrodes in the Over Head position
- F. The student will be able to Perform SMAW welds on selected weld joints.
- G. The student will be able to Perform visual inspection of welds

COURSE COMPETENCIES:

Demonstrate the safe and correct set up of the SMAW workstation.

1. Demonstrate proper inspection of equipment
2. Demonstrate proper use of PPE
3. Demonstrate proper placement of work piece connection
4. Check for proper setup of equipment
5. Inspect area for potential hazards/safety issues

Relate SMAW electrode classifications with base metals and joint criteria

6. Determine proper electrode for given joint based on material and position of weld
7. Determine proper type of electrodes to be used in a variety of industry applications

Demonstrate proper electrode selection and use based on metal types and thicknesses

8. Select the proper electrode type and size relative to metal size, type and thickness
9. Select the proper electrode type and size based on material specifications

Build pads of weld beads with selected electrodes in the Vertical position

10. Use the proper safety procedures and PPE
11. Use the proper setup procedures
12. Create a pad of beads using SMAW electrode
13. Weld exhibits proper uniformity and profile

Build pads of weld beads with selected electrodes in the Over Head position

14. Use the proper safety procedures and PPE
15. Use the proper setup procedures
16. Create a pad of beads using SMAW electrode
17. Weld exhibits proper uniformity and profile

Perform basic SMAW welds on selected weld joints.

18. Use the proper setup procedures
19. Use the proper safety procedures and PPE
20. Perform a fillet weld in Over Head position
21. Perform fillet weld in Vertical position
22. Perform a groove weld in a Vertical position
23. Perform a groove weld in a Over Head position
24. Use tools appropriate for the task

Perform visual inspection of welds

25. Identify common visual discontinuities and defects on welds
26. Determine causes of discontinuities and defects of welds
27. Inspect welds for pass/fail ratings according to industry standards
28. Use appropriate inspection tools

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Oxy-fuel Welding
COURSE NUMBER:	WELD0201
CREDIT HOURS:	1
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn to set up, operate, and shut down OFW equipment, and learn to perform basic welds with the OFW and TB processes.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. OAW basics
 - A. Safety
 - B. Equipment

- C. Set up
- II. OAW beads
 - A. Without filler metal
 - B. With filler metal
 - C. Fillet weld
- III. TB
 - A. Square groove
 - B. Fillet

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFW) workstation
- B. The student will be able to Perform selected OFW and TB assignments

COURSE COMPETENCIES:

Demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFW) workstation

- 1. Use the proper personal protective equipment (PPE)
- 2. Identify safety hazards of the equipment
- 3. Properly set up the equipment
- 4. Properly light and adjust the torch
- 5. Make a variety of quality cuts
- 6. Properly shut down the equipment

Perform selected OFW and TB assignments

- 7. Use the proper PPE
- 8. Perform selected OFW assignments to a standard
- 9. Perform selected TB assignments to a standard

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Intermediate Welding Techniques
COURSE NUMBER:	WELD0202
CREDIT HOURS:	1
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: develop skills in areas that have been difficult to them. If students have no trouble areas they will use this class to explore the basics of advanced classes they may have an interest in to help decide on welding electives.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Define goals for class -or- Define areas of interest for electives
- II. Decide on several assignments (4-8 labs) that will help develop needed skill -or- decide

where skills lie

III. Complete lab assignments

IV. Identify improvements in skill obtained from course -or- decide on electives for program

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to identify welding skills that they are interested in pursuing/improving
- B. The student will be able to improve/pursue welding skill of interest

COURSE COMPETENCIES:

The student will be able to identify welding skills that they are interested in pursuing/improving

- 1. The student will be able to identify one or more welding processes that they want to work on.
- 2. The student will be able to identify one or more positions they want to work on.
- 3. The student will be able to design four to eight welding assignments that will enable them to advance the above skills

The student will be able to improve/pursue welding skill of interest

- 4. The student will be able to identify discontinuities to improve/pros and cons of chosen assignments.
- 5. The student will be able to list improvements made on chosen projects/ electives to enroll in

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW: 09/2019

CIP CODE: 48.0508

SEMESTER: Departmental Syllabus

COURSE TITLE: Aluminum Welding

COURSE NUMBER: WELD0255

CREDIT HOURS: 4

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITES: WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, <http://www.kckccbookstore.com>, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn metal preparation, GMAW, GTAW, safety and metallurgy as they apply to aluminum welding.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I Aluminum Metallurgy
 - A. Properties of aluminum
 - B. Aluminum alloys and their uses

- II. Aluminum inspection
 - A. Weld profiles
 - B. Heat Affected Zone (HAZ)
 - C. Other flaws
- III. GMAW of aluminum
 - A. Flat position fillet welds
 - B. Flat position groove welds
 - C. Horizontal position fillet welds
 - D. Horizontal position groove welds
- IV. GTAW of aluminum
 - A. Flat position fillet welds
 - B. Flat position groove welds
 - C. Horizontal position fillet welds
 - D. Horizontal position groove welds

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to identify various aluminum alloys and their characteristics.
- B. The student will be able to perform GMAW welds on aluminum in the flat and horizontal positions.
- C. The student will be able to perform GTAW welds on aluminum in the flat and horizontal positions.
- D. The student will be able to perform inspections on aluminum welds to check for conformance with specific criteria.

COURSE COMPETENCIES:

The student will be able to identify various aluminum alloys and their characteristics.

- 1. The student will be able to differentiate various aluminum alloys based on alloy naming system.
- 2. The student will be able to select proper filler metal for welding aluminum alloys with GMAW.
- 3. The student will be able to select proper filler metal for welding aluminum alloys with GTAW.

The student will be able to perform GMAW welds on aluminum in the flat and horizontal positions.

- 4. The student will be able to properly set up GMAW station for welding aluminum.
- 5. The student will be able to select proper shielding gasses for welding aluminum alloys with GMAW.
- 6. The student will be able to properly layout and tack aluminum coupons for GMAW.
- 7. The student will be able to properly prepare surface of aluminum for GMAW.
- 8. The student will be able to perform several fillet welds in the flat position to given performance standard.
- 9. The student will be able to perform a groove weld on aluminum in the flat position to given performance standard.

10. The student will be able to perform several fillet welds on aluminum in the horizontal position to given performance standard.
11. The student will be able to perform a groove weld on aluminum in the horizontal position to given performance standard.

The student will be able to perform GTAW welds on aluminum in the flat and horizontal positions.

12. The student will be able to properly set up GTAW station for welding aluminum.
13. The student will be able to select proper electrode for welding aluminum alloys with GTAW.
14. The student will be able to prepare electrode for welding aluminum alloys with GTAW.
15. The student will be able to select proper shielding gasses for welding aluminum alloys with GTAW.
16. The student will be able to properly layout and tack aluminum coupons for GTAW.
17. The student will be able to properly prepare surface of aluminum for GTAW.
18. The student will be able to perform several fillet welds in the flat position to given performance standard.
19. The student will be able to perform a groove weld on aluminum in the flat position to given performance standard.
20. The student will be able to perform several fillet welds on aluminum in the horizontal position to given performance standard.
21. The student will be able to perform a groove weld on aluminum in the horizontal position to given performance standard.

The student will be able to perform inspections on aluminum welds to check for conformance with specific criteria.

22. The student will be able to inspect weld beads for profile to determine acceptability to given specification.
23. The student will be able to inspect GTAW beads to determine if AC balance is in proper place.
24. The student will be able to inspect weld beads with DPT to determine acceptability to given specification.
25. The student will be able to inspect GMAW fillet weld with break test or macro etch specimen to determine penetration.
26. The student will be able to inspect GTAW fillet weld with break test or macro etch specimen to determine penetration.
27. The student will be able to inspect weld with bend test to determine acceptability to given specification.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the

student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Stainless Steel Welding
COURSE NUMBER:	WELD0260
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, <http://www.kckccbookstore.com>, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will learn metal preparation, GMAW, GTAW, safety and metallurgy as they apply to Stainless Steel welding.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Stainless Steel Metallurgy
 - A. Properties of stainless steel
 - B. Stainless steel alloys and their uses

- II. Stainless steel inspection
 - A. Weld profiles
 - B. Heat Affected Zone (HAZ)
 - C. Other flaws
- III. GMAW of stainless steel
 - A. Flat position fillet welds
 - B. Flat position groove welds
 - C. Horizontal position fillet welds
 - D. Horizontal position groove welds
- IV. GTAW of stainless steel
 - A. Flat position fillet welds
 - B. Flat position groove welds
 - C. Horizontal position fillet welds
 - D. Horizontal position groove welds

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to identify various stainless steel alloys and their characteristics.
- B. The student will be able to perform GMAW welds on stainless steel in the flat and horizontal positions.
- C. The student will be able to perform GTAW welds on stainless steel in the flat and horizontal positions.
- D. The student will be able to perform inspections on stainless steel welds to check for conformance with specific criteria.

COURSE COMPETENCIES:

The student will be able to identify various stainless steel alloys and their characteristics.

1. The student will be able to differentiate various stainless steel alloys based on alloy naming system.
2. The student will be able to select proper filler metal for welding stainless steel alloys with GMAW.
3. The student will be able to select proper filler metal for welding stainless steel alloys with GTAW.

The student will be able to perform GMAW welds on stainless steel in the flat and horizontal positions.

4. The student will be able to properly set up GMAW station for welding stainless steel.
5. The student will be able to select proper shielding gasses for welding stainless steel alloys with GMAW.
6. The student will be able to properly layout and tack stainless steel coupons for GMAW.
7. The student will be able to properly prepare surface of stainless steel for GMAW.
8. The student will be able to perform several fillet welds in the flat position to given performance standard.
9. The student will be able to perform a groove weld on stainless steel in the flat position to given performance standard.
10. The student will be able to perform several fillet welds on stainless steel in the horizontal

- position to given performance standard.
11. The student will be able to perform a groove weld on stainless steel in the horizontal position to given performance standard.
The student will be able to perform GTAW welds on stainless steel in the flat and horizontal positions.
 12. The student will be able to properly set up GTAW station for welding stainless steel.
 13. The student will be able to select proper electrode for welding stainless steel alloys with GTAW.
 14. The student will be able to prepare electrode for welding stainless steel alloys with GTAW.
 15. The student will be able to select proper shielding gasses for welding stainless steel alloys with GTAW.
 16. The student will be able to properly layout and tack stainless steel coupons for GTAW.
 17. The student will be able to properly prepare surface of stainless steel for GTAW.
 18. The student will be able to perform several fillet welds in the flat position to given performance standard.
 19. The student will be able to perform a groove weld on stainless steel in the flat position to given performance standard.
 20. The student will be able to perform several fillet welds on stainless steel in the horizontal position to given performance standard.
 21. The student will be able to perform a groove weld on stainless steel in the horizontal position to given performance standard.
The student will be able to perform inspections on stainless steel welds to check for conformance with specific criteria.
 22. The student will be able to inspect weld beads for profile to determine acceptability to given specification.
 23. The student will be able to inspect GTAW beads to determine if AC balance is in proper place.
 24. The student will be able to inspect weld beads with DPT to determine acceptability to given specification.
 25. The student will be able to inspect GMAW fillet weld with break test or macro etch specimen to determine penetration.
 26. The student will be able to inspect GTAW fillet weld with break test or macro etch specimen to determine penetration.
 27. The student will be able to inspect weld with bend test to determine acceptability to given specification.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center in or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	Fall 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Fabrication Welding
COURSE NUMBER:	WELD 0265
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	Departmental Syllabus
PREREQUISITES:	WELD 100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, <http://www.kckccbookstore.com>, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn to weld as in a shop setting. This includes project planning, layout, tacking, welding, and dealing with distortion of weldments. Students will end the class with a project that they may take home.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Project planning
 - A. Drawing/ sketching projects
 - B. Project estimation
 1. Materials
 2. Man hours
 - C. Weld procedure planning
 1. Size and type of weld
 2. Distortion and correction
- II. Preparing materials
 - A. Parts list
 - B. Layout of materials

- C. Cutting materials
- D. Cleaning and preparing for welding
- III. Welding
 - A. Tacking
 - B. Checking for project accuracy
 - C. Welding of projects
- IV. Project finishing
 - A. Post weld cleaning
 - B. Surface finish
 - 1. Paint
 - 2. Powder coating
 - 3. Texturing

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to produce a drawing and/or sketch that a project can be created from.
- B. The student will be able to determine welding procedure for a job.
- C. The student will be able to estimate costs for projects.
- D. The student will be able to prepare materials for project.
- E. The student will be able to successfully complete welding project.
- F. The student will be able to successfully complete project finishing.

COURSE COMPETENCIES:

The student will be able to produce a drawing and/or sketch that a project can be created from.

- 1. The student will be able to demonstrate ability to produce simple sketches for projects.
- 2. The student will be able to determine if sketch should be made into a proper print.
- 3. The student will be able to demonstrate ability to produce a drawing for a simple project.

The student will be able to determine welding procedure for a job.

- 4. The student will be able to determine best welding process for project.
- 5. The student will be able to create a weld procedure for project including machine settings and deposit rates.
- 6. The student will be able to determine total length and volume of weld needed for project.

The student will be able to estimate costs for projects.

- 7. The student will be able to figure lengths and types of materials needed.
- 8. The student will be able to obtain price quotes for materials needed.
- 9. The student will be able to determine amount and cost of weld consumables needed for project.
- 10. The student will be able to determine approximate man hours needed to complete a project.
- 11. The student will be able to create a quote that factors in all aspects of project including profit.

The student will be able to prepare materials for project.

- 12. The student will be able to create bill of materials for project.
- 13. The student will be able to lay out raw materials to make parts for project.
- 14. The student will be able to cut raw materials to size with maximum tolerance of 1/16".
- 15. The student will be able to prepare parts for assembly and welding.

The student will be able to successfully complete welding project.

- 16. The student will be able to layout parts and check to drawing.
- 17. The student will be able to fit up and tack parts together for sub assemblies.
- 18. The student will be able to ensure that sub assemblies are still correct to drawing.
- 19. The student will be able to weld sub assemblies.

20. The student will be able to ensure that sub assemblies are still correct to drawing.
21. The student will be able to remove any spatter or defects from sub assemblies.
22. The student will be able to fit up and tack sub assemblies for final assembly.
23. The student will be able to ensure that final assembly is still correct to drawing.
24. The student will be able to weld final assembly.
25. The student will be able to complete final fabrication inspection to ensure project is correct to drawing.

The student will be able to successfully complete project finishing.

26. The student will be able to clean up any spatter, defects or burrs on project.
27. The student will be able to prepare project for final finish (paint, powder coat, abrasive texturing, etc.
28. The student will be able to apply finish to project.
29. The student will be able to inspect project for proper finish/appeal.
30. The student will be able to touch up any flaws found during inspection.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact Valerie Webb in Rm. 3354 or call 288-7670 V/TDD.

SYLLABUS

DATE OF LAST REVIEW:	Fall 2021
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Automated Welding and Cutting
COURSE NUMBER:	WELD 0270
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	Departmental Syllabus
PREREQUISITES:	WELD 0100, WELD 0130

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, <http://www.kckccbookstore.com>, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn set up and operation of various automated welding and cutting procedures including programming, weld settings, troubleshooting, and maintenance of equipment.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Intro to automated welding and cutting
 - A. Safety
 - B. Basic G and M code
 - C. Overview of automated welding and cutting
- II. CNC cutting machine
 - A. Start up and basic maintenance
 - B. Making a part for a CNC cutting program
 - C. Nesting for CNC cutting machines
 - D. Transferring files to CNC cutting machine
 - E. Operating CNC cutting machine
 - F. Basic trouble shooting for CNC cutting machines

- III. Robotic welding
- A. Start up and basic maintenance
 - B. Making a robotic welding program
 - C. Weld settings for robotic welders
 - D. Operating a robotic welder
 - E. Basic trouble shooting for robotic welders

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to explain safety concerns specific to automated welding and cutting.
- B. The student will be able to use basic G and M codes for automated systems.
- C. The student will be able to start up and provide basic maintenance of CNC cutting machine.
- D. The student will be able to program a CNC cutting machine to make various parts.
- E. The student will be able to perform basic troubleshooting for CNC cutting machine.
- F. The student will be able to start up and maintain robotic welding station.
- G. The student will be able to program a robotic welding station to make several welds.
- H. The student will be able to provide basic troubleshooting for robotic welder.

COURSE COMPETENCIES:

The student will be able to explain safety concerns specific to automated welding and cutting.

- 1. The student will be able to define areas that should be avoided by operators while automated machinery is running.
- 2. The student will be able to define area that observers should avoid while automated machinery is running.
- 3. The student will be able to explain why automated safety systems are never to be overridden.

The student will be able to use basic G and M codes for automated systems.

- 4. The student will be able to define common G and M code commands.
- 5. The student will be able to fix errors with basic G and M code commands.
- 6. The student will be able to create a simple program from scratch using only G and M code.

The student will be able to start up and provide basic maintenance of CNC cutting machine.

- 7. The student will be able to demonstrate proper start up procedure for a CNC cutting machine.
- 8. The student will be able to locate places on CNC machine that require maintenance on a daily basis.
- 9. The student will be able to locate places on CNC machine that require maintenance on a weekly basis.
- 10. The student will be able to locate places on CNC machine that require maintenance on a monthly basis.
- 11. The student will be able to demonstrate proper consumable replacement for CNC machine.

The student will be able to program a CNC cutting machine to make various parts.

- 12. The student will be able to use shape library to create several common parts from sheet steel.
- 13. The student will be able to use a CAD or other program to create parts.
- 14. The student will be able to use nesting software to nest various parts onto a sheet.
- 15. The student will be able to download a part nest into a CNC machine and run program.

The student will be able to perform basic troubleshooting for CNC cutting machine.

- 16. The student will be able to list several common causes of CNC machine errors.
- 17. The student will be able to successfully use a trouble shooting guide to fix common problems with CNC machine.
- 18. The student will be able to define problems that should be fixed by a trained maintenance technician.

The student will be able to start up and maintain robotic welding station.

- 19. The student will be able to demonstrate proper start up procedure for a robotic welder.
- 20. The student will be able to locate places on robotic welder that require maintenance on a daily basis.

21. The student will be able to locate places on robotic welder that require maintenance on a weekly basis.
22. The student will be able to locate places on robotic welder that require maintenance on a monthly basis.
23. The student will be able to demonstrate proper consumable replacement for robotic welder.

The student will be able to program a robotic welding station to make several welds.

24. The student will be able to define different commands used by teach pendant to program robotic welder.
25. The student will be able to define different types of robot movement and what they are used for.
26. The student will be able to demonstrate how to teach a point to robotic welder.
27. The student will be able to demonstrate how to teach and run a weld with a robotic welder.

The student will be able to provide basic troubleshooting for robotic welder.

28. The student will be able to list several common causes of robotic welder errors.
29. The student will be able to successfully use trouble shooting guide to fix common problems with robotic welder.
30. The student will be able to define problems that should be fixed by a trained maintenance technician.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact Valerie Webb in Rm. 3354 or call 288-7670 V/TDD.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Pipe Welding
COURSE NUMBER:	WELD0275
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	WELD0100

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, <http://www.kckccbookstore.com>, for the required texts for your particular class.

COURSE DESCRIPTION:

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: Set up, weld and test weld coupons in various pipe positions and materials.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Pipe welding intro
 - A. Pipe positions
 - B. Electrode angles
 - C. Test pipe preparation

- D. Tacking and placement of pipe
- II. Root pass
 - A. SMAW (ER6010)
 - B. GTAW
- III. Fill and capping passes
 - A. SMAW (ER7018)
 - B. GTAW
- IV. Testing
 - A. Visual inspection
 - 1. Face
 - 2. Root
 - B. Weld coupon prep and testing

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to properly prepare test weldment for welding.
- B. The student will be able to properly weld root of test pipes in various positions.
- C. The student will be able to properly weld fill and cap of test pipes in various positions.
- D. The student will be able to inspect pipe welds as determined by given specification.
- E. The student will be able to prepare and test coupons from pipe test weldment.

COURSE COMPETENCIES:

The student will be able to properly prepare test weldment for welding.

- 1. The student will be able to identify joint geometry as given in a code or WPS.
- 2. The student will be able to prepare ends of pipe to conform with joint geometry given.
- 3. The student will be able to tack pieces of pipe together with proper alignment and gap to conform with WPS.
- 4. The student will be able to identify pipe welding positions.
- 5. The student will be able to tack test weldment in proper position for test according to WPS.

The student will be able to properly weld root of test pipes in various positions.

- 6. The student will be able to perform root weld of test pipe in the 2G position with GTAW process.
- 7. The student will be able to perform root weld of test pipe in the 2G position with SMAW process.
- 8. The student will be able to perform root weld of test pipe in the 5G position with GTAW process.
- 9. The student will be able to perform root weld of test pipe in the 5G position with SMAW process.
- 10. The student will be able to perform root weld of test pipe in the 6G position with GTAW process.
- 11. The student will be able to perform root weld of test pipe in the 6G position with SMAW process.

The student will be able to properly weld fill and cap of test pipes in various positions.

- 12. The student will be able to perform fill and cap welds of test pipe in the 2G position with GTAW process.

13. The student will be able to perform fill and cap welds of test pipe in the 2G position with SMAW process.
14. The student will be able to perform fill and cap welds of test pipe in the 5G position with GTAW process.
15. The student will be able to perform fill and cap welds of test pipe in the 5G position with SMAW process.
16. The student will be able to perform fill and cap welds of test pipe in the 6G position with GTAW process.
17. The student will be able to perform fill and cap welds of test pipe in the 6G position with SMAW process.
The student will be able to inspect pipe welds as determined by given specification.
18. The student will be able to inspect face of weld for proper weld profile in accordance with given specification.
19. The student will be able to inspect root of weld for proper penetration in accordance with given specification.
20. The student will be able to inspect root of weld for proper weld profile in accordance with given specification.
21. The student will be able to perform DPT weld inspection to assure that weld is in accordance with given specification.
22. The student will be able to perform MT weld inspection to assure that weld is in accordance with given specification.
The student will be able to prepare and test coupons from pipe test weldment.
23. The student will be able to find proper location of test specimens on a test weldment.
24. The student will be able to cut properly sized test specimens from a test weldment.
25. The student will be able to prepare test specimens in accordance with given specification.
26. The student will be able to bend and inspect test specimens to determine qualification in accordance with given specification.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title

IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.

SYLLABUS

DATE OF LAST REVIEW:	09/2019
CIP CODE:	48.0508
SEMESTER:	Departmental Syllabus
COURSE TITLE:	Internship
COURSE NUMBER:	WELD0285
CREDIT HOURS:	4
INSTRUCTOR:	Departmental Syllabus
OFFICE LOCATION:	Departmental Syllabus
OFFICE HOURS:	Departmental Syllabus
TELEPHONE:	Departmental Syllabus
EMAIL:	KCKCC issued email accounts are the official means for electronically communicating with our students.
PREREQUISITES:	BUSN0250

REQUIRED TEXT AND MATERIALS:

Please check with the KCKCC bookstore, <http://www.kckccbookstore.com>, for the required texts for your particular class.

COURSE DESCRIPTION:

Through an internship at a local company students will learn what it is like to work in a manufacturing plant or welding related field. Student must be working at a welding or welding related job.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

- I. Review of obtaining employment
 - A. Writing a resume

- B. Proper dress
- C. Cover and follow up letters
- II. Getting a job
 - A. Filing out application
 - B. Interview
 - C. Discuss interview
- III. Job
 - A. Pre work discussion
 - B. Mid course survey
 - C. Final survey

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

- A. The student will be able to demonstrate ability to utilize skills learned in the obtaining employment course.
- B. The student will be able to demonstrate ability to obtain employment.
- C. The student will be able to demonstrate ability to understand what is expected by employer.
- D. The student will be able to demonstrate proper job skills needed for job acquired.

COURSE COMPETENCIES:

The student will be able to demonstrate ability to utilize skills learned in the obtaining employment course.

- 1. The student will be able to create a resume with proper structure and syntax.
- 2. The student will be able to identify the level of dress required for an interview.
- 3. The student will be able to define types of clothing that are proper/improper for level of dress required.
- 4. The student will be able to create a cover letter for resume with proper structure and syntax.
- 5. The student will be able to create a follow up letter with proper structure and syntax.

The student will be able to demonstrate ability to obtain employment.

- 6. The student will be able to fill out an application with relevant data, proper spelling, and legible handwriting.
- 7. The student will be able to interview with prospective employer to obtain employment.
- 8. The student will be able to identify areas of interview that are good or need improvement.

The student will be able to demonstrate ability to understand what is expected by employer.

- 9. The student will be able to identify job duties.
- 10. The student will be able to identify employers' expectations for quality and effort.

The student will be able to demonstrate proper job skills needed for job acquired.

- 11. The student will be able to provide a mid course survey conducted by employer.
- 12. The student will be able to identify areas that need to be improved.

13. The student will be able to develop a plan of action to improve these areas.
14. The student will be able to develop goals for areas needing improvement.
15. The student will be able to identify areas that student is successful in.
16. The student will be able to identify good habits that help student be successful in those areas.
17. The student will be able to provide an end of course survey conducted by employer.
18. The student will be able to identify if goals were met.
19. The student will be able to identify improvement/decline of scores from mid course survey.
20. The student will be able to identify reasons for improvement/decline.
21. The student will be able to discuss work experiences with instructor/students at end of course.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation. Students will be assessed based on assignments, employer surveys, and a 5-minute oral presentation on experiences in the field.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student's progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty and staff that is free of bigotry and discrimination. KCKCC is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college's policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center or call (913) 288-7670.

All enrolled students at Kansas City Kansas Community College are subject to follow all rules, conditions, policies and procedures as described in both the Student Code of Conduct as well as the Student Handbook. All Students are expected to review both of these documents and to understand their responsibilities with regard to academic conduct and policies. The Student Code of Conduct and the Student Handbook can be found on the KCKCC website.