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## LOUISIANA COMMUNITY & TECHNICAL COLLEGE SYSTEM

**TO:** Dr. Monty Sullivan  
LCTCS President

**THROUGH:** Dr. René Cintrón *RC*  
Chief Academic Affairs Officer

**FROM:** Dr. Adrienne Fontenot *AD*  
Director of Adult Learning and Educational Programs

**SUBJECT:** Program Revisions at Northwest Louisiana Technical College (NWLTC)

**DATE:** 2/26/18

### **FOR BOARD ACTION:**

**Recommendation:** Staff recommends that the Board approve the program revisions listed below.

### **Program Revisions:**

1. Certificate of Technical Studies (CTS) in Welder Helper I (CIP 48.0508) – **5 STARS**
2. Certificate of Technical Studies (CTS) in Welder Helper II (CIP 48.0508) – **5 STARS**

### **Program Terminations**

3. Technical Competency Area (TCA) – Welder Helper
4. Technical Competency Area (TCA) – Thermal Cutter
5. Technical Competency Area (TCA) – Basic Blueprint Reading and Weld Testing
6. Technical Competency Area (TCA) - SMAW Arc Welder Fillet and V Groove
7. Technical Competency Area (TCA) – FCAW Basic Welds
8. Technical Competency Area (TCA) – GTAW Arc Welder
9. Technical Competency Area (TCA) – Basic Welds
10. Technical Competency Area (TCA) – SMAW Pipe Welder
11. Technical Competency Area (TCA) – GMAW & FCAW Basic Welds

**Background:** NWLTC faculty and staff are reviewing all programs. NWLTC is requesting to revise the existing CTS: Welder Helper II by renaming it Welding Helper – Level I and adding a new CTS: Welding Helper – Level II. With this change comes the removal of several TCAs. Currently the program is difficult for faculty to implement and for students to navigate due to the excessive course choices and awards that have limited regional market value with limited employment exit points within the Northwest Louisiana region.

This request is based on input from multiple sources including feedback from Business and Industry partners, the Welding Occupational Advisory Committee, the

**APPROVED**

*Slk* 3/14/18  
LCTCS BOARD OF SUPERVISORS

Northwest Louisiana Economic Partnership, the Webster Parish Economic and Education Collaborative, and the Louisiana Workforce Commission. As a result, TCAs are terminated and a review of adding related Career and Technical Certificates is underway.

**Fiscal Impact:** No additional cost will be incurred as a result of replacing the TCAs with CTCs. The affects expected as a result of these changes include increased enrollment, greater persistence and completion. The use of shorter terms within a semester will increase flexibility for student entry and exit. Serving more students who stay longer will require long term planning and forecasting for the most efficient use of faculty and facilities. As growth is experienced and program health is improved, additional adjunct and full-time faculty will likely be needed for the robust program.

**History of Prior Actions:** There is a history of revising programs to meet student and workforce needs.

**Benefits to the System:** The program revisions will address and provide solutions for employer challenges currently being cited that include both hard and soft skills among critical needs to support economic stability of the region and to facilitate growth.

  
\_\_\_\_\_  
**Approved for Recommendation to the Board**  
**Dr. Monty Sullivan**

3/14/18  
**Date**



# LOUISIANA'S COMMUNITY & TECHNICAL COLLEGE SYSTEM

## Requests for Programs: New, Modification, and Adoption

### TYPE OF PROPOSED CHANGE

☐ New Program
 ☒ Curriculum Modification
 ☐ Curriculum Adoption  
 Program Name: Northwest Louisiana Technical College - Welding

### AWARD LEVEL(S)

For Board of Regents and LCTCS Review:

- ☐ Associate of Applied Science (A.A.S.)  
☐ Associate of Science (A.S.)  
☐ Associate of Arts (A.A.)  
☐ Other Associate Degree

Name:

- ☐ Certificate of Applied Science (C.A.S.)  
☐ Certificate of General Studies (C.G.S.)

For LCTCS Review:

- ☒ Technical Diploma (T.D.)  
☒ Career and Technical Certificate (C.T.C.)  
☒ Certificate of Technical Studies (C.T.S.)

CIP:480508	Credit Hours:45	Contact Hours:1380	Award Level: Technical Diploma
Name:			
CIP: 480508	Credit Hours: 32	Contact Hours: 990	Award Level: CTS
Name:			
CIP: 480508	Credit Hours: 16	Contact Hours: 480	Award Level: CTS
Name:			
CIP:	Credit Hours:	Contact Hours:	Award Level:

IBC	Issuing Body	Course Title	Course Prefix	Course Number	Credits Awarded
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1. Workplace Safety + OSHA 10	1. NCCER Core + OSHA	1. Workplace Safety	1. WKSF	1003	3
2. AWS Level I	2. American Welding Society	2. SMAU V Groove Open/BU/GOUGE	2. WELD	1421	4
3. AWS Level II	3. American Welding Society	3. SMAU Pipe 6G	3. WELD	1512	4

**PROPOSED CHANGE**

a) For New Programs, state the purpose and objective; b) For Curriculum Modifications, state previous credit and clock hours; c) For Program Termination, state program and all award levels; d) For Curriculum Adoption, state the college from which curriculum is being adopted and the date it was approved by LCTCS.

- 1) Elimination of TCA's
  - a) TCA – Welder Helper – 4 SCH - 105 clock hours
  - b) TCA – Thermal Cutter – 5 SCH – 145 clock hours
  - c) TCA – Basic Blueprint Reading and Weld Testing – 5 SCH – 105 clock hours
  - d) TCA - SMAW Arc Welder Fillet and V Groove – 6 SCH – 270 clock hours
  - e) TCA – FCAW Basic Welds – 3 SCH – 150 clock hours
  - f) TCA – GTAW Arc Welder – 6 SCH – 240 clock hours
  - g) TCA - Basic Welds – 6 SCH – 300 clock hours
  - h) TCA – SMAW Pipe Welder – 12 SCH – 495 clock hours
  - i) TCA GMAW & FCAW Basic Welds
- 2) Revise Existing CTS: Welder Helper II
  - a) Rename to CTS: Welding Helper – Level I
  - b) Currently: 14 SCH – 565 clock hours
  - c) Proposed: 16 SCH – 480 clock hours
- 3) Add NEW CTS: Welding Helper – Level II – SCH 32 – 990 clock hours

<b>IMPLEMENTATION DATE (Semester and Year)</b>	Fall 2018
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**HISTORY OF PRIOR ACTIONS**

Provide an overview of changes to this program.



This program is difficult for faculty to implement and for students to navigate with excessive course choices and awards that have limited regional market value and represent limited employment exit points within the Northwest Louisiana region. In the past, numerous TCA's were added to demonstrate completion. The courses have been changed over time without utilizing a consistent lecture / Lab combination matrix for course offerings and scheduling consistency.

#### JUSTIFICATION FOR THE PROPOSED CHANGE

Include support such as four-year university agreements, industry demand, advisory board information, etc.

This proposal is based on input from multiple sources including feedback from Business and Industry partners, the Welding Occupational Advisory Committee, the Northwest Louisiana Economic Partnership, the Webster Parish Economic and Education Collaborative, and the Louisiana Workforce Commission. The practices of sequencing courses over shorter 8 and 4 week terms within a semester, providing hybrid coursework, evening, weekend and block schedules have all been shown to be effective strategies to increase student success (time to completion, persistence and completion) as demonstrated by the research of Achieving the Dream and Complete College America. Fully developing pathways with on-ramps from Jumpstart (dual enrollment and articulation), Workforce (non-credit short term training and PLA), Work Ready U (adult basic education), and special populations (Veterans) provide added support for students and facilitate greater student success. Regional and Statewide labor market information demonstrates a continued need for the Welding Technology program emphasizing industrial and manufacturing applications.

LOUISIANA WORKFORCE COMMISSION STAR LEVEL (<http://www.laworks.net/Stars/>)

☒ 5 Stars

☐ 4 Stars

☐ 3 Stars

☐ 2 Stars

☐ 1 Star

#### SITE(S) OF NEW PROGRAM OR CURRICULUM MODIFICATION

☐ Main Campus

☒ All Campuses

☐ Sites (list below)

☐ Distance  
Education

Site 1: Minden Campus  
 Site 2: Shreveport Campus  
 Site 3: Mansfield Campus  
 Site 4: Caddo Correctional

**QUALIFIED FACULTY** (Check all that apply)

<input checked="" type="checkbox"/> Use Existing Faculty #: <u>3 Fulltime – 3 part-time</u>	<input type="checkbox"/> Hire Adjunct Faculty #: _____	<input type="checkbox"/> Hire Full-Time Faculty #: _____
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**MINIMUM CREDENTIALS REQUIRED FOR FACULTY**

Education: 2-year Post-Secondary Award (Associates Degree) or Alternative Certification	Experience: 3 Yrs fieldwork, non-instruction	Certification: National Certification: AWS or NCCER
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**FISCAL IMPACT: ADMINISTRATION and IMPLEMENTATION COSTS**

Department: Industrial Studies

**Describe how this change will affect the administrative structure and/or allocation of departmental funds in terms of faculty, facilities, support, and any other resources.**

The affects expected as a result of these changes include increased enrollment, greater persistence and completion. The use of shorter terms within a semester will increase flexibility for student entry and exit. Serving more students who stay longer will require long term planning and forecasting for the most efficient use of faculty and facilities. As growth is experienced and program health is improved, additional adjunct and full-time faculty will likely be needed for the robust program.

**ANTICIPATED ENROLLMENT:**

Students	Year One	Year Two	Year Three	Year Four	Year Five
<u>DAY</u>	<u>220</u>	<u>230</u>	<u>250</u>	<u>270</u>	<u>280</u>
<u>EVENING</u>	<u>30</u>	<u>55</u>	<u>70</u>	<u>95</u>	<u>120</u>
<u>DISTANCE EDUCATION</u>					

**ANTICIPATED ENROLLMENT:**

Describe Process for Attaining & Estimating Enrollment:

The enrollment is based on estimates founded in the previous history of the program as indicated on the most recent Program Health Index. Growth is expected to occur in daytime and evening student enrollment. Daytime is expected to grow at a slower rate since the launch of the evening offerings may slightly diminish the daytime number. We expect to increase the overall enrollment initially with the working population the college has not been serving – those who need evening or weekend courses. The evening classes will be offered in sequenced block schedules but will not have students completing as quickly due to the contact hour requirements and subsequent part-time enrollment. Hybrid and web-enhanced curricular strategies will be utilized to improve students' ability to enroll in more hours, but NWLTC curriculum strength is the simulated work-based learning that takes place in the lab and during actual work-based experiences on the job. Evening enrollment will compound at a different rate due to students staying longer and as a result of part time enrollment. The current attrition is approximately 25% Fall to Fall. NWLTC persistence and completion are among the highest in the state and this results in the need to constantly recruit as students complete and are employed mostly on-time in less than 2 years. All of these factors were included in the estimates for enrollment shown above.

**PROGRAM ACCREDITATION:**

Is Program Accreditation, Licensure or Certification Required?

☐ Yes

☒ No

If YES, please provide projected accreditation/licensure/certification date:

Type/Name of Program Accreditation, Licensure or Certification Required:

**PROGRAM CURRICULUM**

Use the template below or insert separate attachment. All modifications should include the OLD and NEW curriculum with changes appropriately noted so that it is visually clear what has been added, deleted and/or changed. Note if any special requirements, such as internships, are part of the curriculum. List all embedded IBCs. **If you are adopting curriculum, you do not need to complete this section. See Attachments**

Subject Code	Course Number	Course Title	Lecture Hours	Lab Hours	Contact Hours	Credit Hours
<b>First Semester</b>						

<b>Second Semester</b>						
<b>Third Semester</b>						
<b>Fourth Semester</b>						



<b>Fifth Semester</b>						
<b>Sixth Semester</b>						

# **BENEFITS TO THE SYSTEM**

**Discuss how this change will benefit your students, your community, and the LCTCS.**

These changes will provide highly skilled workers to fill high demand positions critical to the state of Louisiana and specifically in the Northwest region of the state. The program changes will address and provide solutions for employer challenges currently being cited that include both hard and soft skills among critical needs to support economic stability of the region and to facilitate growth. The communities served by NWLTC have a high occurrence of poverty and a high percentage receive financial aid. This program redesign will provide more efficient use of resources for the college and create an environment conducive to greater career and student success. This model is designed to help students complete in less time and attain employment quicker. The NWLTC on-ramps from the different student populations ensures NWLTC is able to meet the student where they are and in many cases provide them with a head-start on career and student success. Students will experience blocked courses with predictable schedules, needed courses available when they need them and a demonstrated value-add through their ability to secure employment.

**SIGNATURES:**

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College Chief Academic Officer

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Date

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College Chief Executive Officer

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Date

Semester	Rubric	No.	Course Title	SCH	Lec	Lab	Contact Hour	Comments
<b>1st Semester</b>								
8WK	LEAD	1003	Career and Student Success	3	2	2	90	New Course: Workplace Competencies, Employability Skills, Learning Strategies, Study Skills
WKSF	1003		Industrial Workplace Safety	3	2	2	90	New Course: Embedded IBC's
WEID	1411		SMAW Filler Weld /	3	2	2	90	Addition of Work-Based Experience
8WK	WEID	1413	SMAW Small Bead /	3	2	2	90	Addition of Work-Based Experience
WEID	1421		SMAW V-Groove Open/BU/SOUGE	4	2	3	120	
<b>1st Semester Totals:</b>								
<b>IBC</b>				<b>16</b>	<b>10</b>	<b>11</b>	<b>480</b>	1) Rename Existing CTS: Welder Helper II to Welder Helper - Level I, 2) Revised to include IBC's: NCCER Core + OSHA 10 + new AWS Welding Certification Level I, 3) Addition of Work-Based Experiences, 4) renumbering of courses with numbering convention 5) Revised SCH, Contact hour and Lec/Lab combinations 6) Addition of LEAD 1003: Career and Student Success Course 7) Addition of WKSF 1003: Industrial Workplace Safety, 8) Elimination of TCA's
<b>2nd Semester</b>								
8WK	WEID	1510	SMAW Pipe 2G	4	2	3	120	
WEID	1511		SMAW Pipe 5G	4	2	3	120	
8WK	WEID	1512	SMAW Pipe 6G	4	2	3	120	
WEID	2211		GTAW Basic Multi-Joint	4	2	4	150	
<b>2nd Semester Total</b>								
				<b>16</b>	<b>8</b>	<b>13</b>	<b>510</b>	
<b>3rd Semester</b>								
<b>Award (2 Semesters)</b>								
<b>IBC</b>				<b>32</b>	<b>18</b>	<b>24</b>	<b>990</b>	1) New Proposed CTS - Welder Helper - Level II, 2) Include IBC: new AWS Welding Level II, 3) Revised existing course SCH, lec/lab contact combinations, 4) Workbased—Learning Courses
<b>3rd Semester</b>								
8WK	WEID	2231	GTAW Aluminum Multi-Joint	4	2	3	120	
WEID	2312		GMAW Basic Fillet Weld /Groove Welds	3	2	2	90	
8WK	WEID	2100	FCAW Basic Fillet Weld /Groove Welds	3	2	2	90	
WEID	2113		Capstone: Advanced Welding Problem Solving /	3	2	2	90	New Course
<b>3rd Semester Totals</b>								
				<b>13</b>	<b>8</b>	<b>9</b>	<b>390</b>	
<b>Award (3 Semesters)</b>								
<b>Technical Diploma - Welding</b>				<b>45</b>	<b>26</b>	<b>33</b>	<b>1380</b>	<b>Revised Contact Hours</b>

With approval of Chief Academic Officer/designee, the following courses may be substituted for any of the above course requirements individually or in combination:

Experiential Learning Credit Course Options					
Rubric	Number	Course Title	SCH	Lec	Lab
WEID	2991	Special Project I	1	0	1
WEID	2993	Special Project II	2	0	2
WEID	2995	Special Project III	3	0	3
WBLE	1003	Internship / Cooperative Education	3	1	3
WBLE	1011	Work-Based Learning Experience (External)	1	0	0
WBLE	1012	Work-Based Learning Experience (External)	2	0	0
WBLE	1013	Work-Based Learning Experience (External)	3	0	0
WBLE	1014	Work-Based Learning Experience (External)	4	0	0

\* All Work-Based Learning Experiences that involve external partners, locations and work assignments with an emphasis on skill building and meeting the student learning outcomes of the course must meet the standard of a minimum 45 contact or clock hours = 1 Semester Credit Hour

# Existing Welding Program Curriculum 2017-2018

## Proposed Edits—Page 1

### Northwest Louisiana Technical College

#### Welding

Rename: Welding Technology

#### Program Description & Curriculum

The purpose of the Welding Program is to prepare individuals for employment in the field of welding. Instruction is provided in various welding processes and techniques including oxy-fuel cutting, carbon arc cutting, shielded metal arc welding, gas tungsten arc welding, flux-cored arc welding, gas metal arc welding, pipe welding, plasma arc cutting, blueprint reading, weld symbols, and joints.

#### Degrees/Certificates

Technical Diploma (TD)

Certificate of Technical Studies (CTS)

Technical Competency Award (TCA)

Revise 1 CTS / Add 1 CTS

Available degrees and certificates may vary at each campus. Check with your local campus for more information.  
CIP 480508

Delete TCA's

Delete Courses

WELD 1111

WELD 1211

WELD 1141

WELD 1211

WELD 1131

WELD 1122

JOBS 2450

Delete TCA's

Welding CURRICULUM				
Course #	Course Title	Lecture /Lab Hours	Credit Hours	Clock Hours
WELD 1111	Occupational Orientation and Safety	2/0	2	30
WELD 1111 PLUS				
WELD 1141	Electrical Fundamentals	1/1	2	75
WELD 1141 PLUS				
WELD 1211	Oxyfuel Systems/ Cutting Processes	1/2	3	115
WELD 1211 PLUS				
WELD 1141	Electrical Fundamentals	1/1	2	75
WELD 1211	Oxyfuel Systems/ Cutting Processes	1/2	3	115
WELD 1131	Welding Inspection & Testing	1/1	2	65
WELD 1415	SMAW Basic Beads	1/1	2	150
WELD 1411	SMAW Fillet Weld	0/3	3	150
CTS Welder Helper II PLUS				
WELD 1422	Basic Blueprint, Metallurgy, and Weld Symbols	2/1	3	60
WELD 1421	SMAW V-Groove Open/BU/GOUGE	1/3	4	120
WELD 2100	PCAW Basic Fillet Weld/Groove Welds	1/2	3	150
WELD 2211	GTAW Basic Multi-Joint	1/2	3	120
WELD 2312	GMAW Basic Fillet/Groove Weld	1/3	4	150
WELD 1510	SMAW Pipe 2G	1/3	4	165
WELD 1511	SMAW Pipe 5G	0/4	4	165
WELD 1512	SMAW Pipe 6G	0/4	4	165
JOBS 2450	Job-Seeking Skills	2/0	2	30
TD - WELDING TECHNOLOGY		47	47	1650

Revised March 2017

Effective August 2017

#### Revision Part 1

- 1) Rename Existing CTS: Welder Helper II to Welder Helper - Level I, 2) Revised to include IBC's: NCCER Core + OSHA 10 + new AWS Welding Certification Level I, 3) Addition of Work-Based Experiences, 4) renumbering of courses with numbering convention 5) Revise SCH, Contact hour and Lec/Lab combinations 6) Addition of LEAD 1003: Career and Student Success Course 7) Addition of WKSF 1003: Industrial Workplace Safety, 8) Elimination of TCA's

#### Revisions Part 2

- 1) New Proposed CTS - Welder Helper - Level II, 2) Include IBC: new AWS Welding Level II, 3) Revised existing course SCH, lec/lab contact combinations, 4) Workbased—Learning Courses, 5) Revised lec/lab, contact hour of TD—Welding, 6) Rename TD—Welding Technology

For the Proposed Curriculum, See Attached:

NWLTC Welding Technology Program  
Proposed Program Curriculum Revision

Effective 2018-2019

# Existing Welding Program Curriculum 2017-2018

## Proposed Edits—Page 2

### Delete Courses

WELD 1122

WELD 1131

Additional Exit Points					
WELD 1122	Basic Blueprint, Metallurgy, and Weld Symbols	2/1	3	60	
WELD 1131	Welding Inspection & Testing	1/1	2	45	
TCA - BASIC BLUEPRINT READING AND WELD TESTING			3	105	
WELD 1413	SMAW Basic Beads/ Fillet Weld	1/1	2	150	
WELD 1421	SMAW V-Groove BU/Groove V-groove Open	1/3	4	120	
TCA - SMAW ARC WELDER FILLET & V-GROOVE			6	270	
WELD 2100	FCAW Basic Fillet Weld/Groove Welds	1/2	3	150	
TCA - FCAW - BASIC WELDS			3	150	
WELD 2211	GTAW Basic Multi-Joint	1/2	3	120	
WELD 2231	GTAW Aluminum Multi-Joint	1/2	3	120	
TCA - GTAW ARC WELDER			6	240	
WELD 2312	GMAW Basic Fillet/Groove Weld	1/3	4	150	
WELD 1413	SMAW Basic Beads/ Fillet Weld	1/1	2	150	
TCA - Basic Welds			6	300	
WELD 1510	SMAW Pipe 2G	1/3	4	165	
WELD 1511	SMAW Pipe 5G	0/4	4	165	
WELD 1512	SMAW Pipe 6G	0/4	4	165	
TCA - SMAW PIPE WELDER			12	495	
WELD 2312	GMAW Basic Fillet/Groove Weld	1/3	4	150	
WELD 2100	FCAW Basic Fillet Weld/Groove Welds	1/2	3	150	
TCA - GMAW & FCAW BASIC WELDS			7	300	
With approval from the Chief Academic Officer/designee, the following courses may be substituted for any of the above course requirements.					
WELD 2991	Special Projects I	0/1	1	30	
WELD 2993	Special Projects II	0/2	2	60	
WELD 2995	Special Projects III	0/3	3	90	
WELD 2996	Special Projects IV	0/6	3	45	
WELD 2997	Practicum	0/3	3	135	
WELD 2999	Cooperative Education	0/9	9	195	

### Delete Courses

WELD 2996

WELD 2997

WELD 2999

WBLE	1011	Work-Based Learning Experience (External)	1	0	0	45*
WBLE	1012	Work-Based Learning Experience (External)	2	0	0	90*
WBLE	1013	Work-Based Learning Experience (External)	3	0	0	135*
WBLE	1014	Work-Based Learning Experience (External)	4	0	0	180*

### Add: Work-Based Learning Experience Credit Course Options

#### Delete TCA's

TCA - Welder Helper - 4 SCH - 105 clock hours

TCA - Thermal Cutter - 5 SCH - 145 clock hours

TCA - Basic Blueprint Reading and Weld Testing - 5 SCH - 105 clock hours

TCA - SMAW Arc Welder Fillet and V Groove - 6 SCH - 270 clock hours

TCA - FCAW Basic Welds - 3 SCH - 150 clock hours

TCA - GTAW Arc Welder - 6 SCH - 240 clock hours

TCA - Basic Welds - 6 SCH - 300 clock hours

TCA - SMAW Pipe Welder - 12 SCH - 495 clock hours

TCA GMAW & FCAW Basic Welds

Revised March 2017

Effective August 2017



# Northwest Louisiana Technical College

## Welding

### Program Description & Curriculum

The purpose of the Welding Program is to prepare individuals for employment in the field of welding. Instruction is provided in various welding processes and techniques including oxy-fuel cutting, carbon arc cutting, shielded metal arc welding, gas tungsten arc welding, flux-cored arc welding, gas metal arc welding, pipe-welding, plasma arc cutting, blueprint reading, weld symbols, and joints.

#### Degrees/Certificates

Technical Diploma (TD)

Certificate of Technical Studies (CTS)

Technical Competency Area (TCA)

Available degrees and certificates may vary at each campus. Check with your local campus for more information.

CIP 480508

Welding CURRICULUM				
Course #	Course Title	Lecture /Lab Hours	Credit Hours	Clock Hours
WELD 1111	Occupational Orientation and Safety	2/0	2	30
WELD 1111 PLUS				
WELD 1141	Electrical Fundamentals	1/1	2	75
	TCA - WELDER HELPER		4	105
WELD 1111 PLUS				
WELD 1211	Oxyfuel Systems/ Cutting Processes	1/2	3	115
	TCA - THERMAL CUTTER		5	145
WELD 1111 PLUS				
WELD 1141	Electrical Fundamentals	1/1	2	75
WELD 1211	Oxyfuel Systems/ Cutting processes	1/2	3	115
WELD 1131	Welding Inspection & Testing	1/1	2	45
WELD 1413	SMAW Basic Beads	1/1	2	150
WELD 1411	SMAW Fillet Weld	0/3	3	150
	CTS - WELDER HELPER II		14	565
CTS Welder Helper II PLUS				
WELD 1122	Basic Blueprint, Metallurgy, and Weld Symbols	2/1	3	60
WELD 1421	SMAW V-Groove Open/BU/GOUGE	1/3	4	120
WELD 2100	FCAW Basic Fillet Weld/Groove Welds	1/2	3	150
WELD 2211	GTAW Basic Multi-Joint	1/2	3	120
WELD 2312	GMAW Basic Fillet/Groove Weld	1/3	4	150
WELD 1510	SMAW Pipe 2G	1/3	4	165
WELD 1511	SMAW Pipe 5G	0/4	4	165
WELD 1512	SMAW Pipe 6G	0/4	4	165
JOBS 2450	Job Seeking Skills	2/0	2	30
	TD - WELDING		45	1690

Additional Exit Points				
WELD 1122	Basic Blueprint, Metallurgy, and Weld Symbols	2/1	3	60
WELD 1131	Welding Inspection & Testing	1/1	2	45
TCA - BASIC BLUEPRINT READING AND WELD TESTING			5	105
WELD 1413	SMAW Basic Beads/ Fillet Weld	1/1	2	150
WELD 1421	SMAW V-Groove BU/Groove V-groove Open	1/3	4	120
TCA - SMAW-ARC WELDER FILLET & V-GROOVE			6	270
WELD 2100	FCAW Basic Fillet Weld/Groove Welds	1/2	3	150
TCA - FCAW- BASIC WELDS			3	150
WELD 2211	GTAW Basic Multi-Joint	1/2	3	120
WELD 2231	GTAW Aluminum Multi-Joint	1/2	3	120
TCA - GTA W ARC WELDER			6	240
WELD 2312	GMAW Basic Fillet/Groove Weld	1/3	4	150
WELD 1413	SMAW Basic Beads/ Fillet Weld	1/1	2	150
TCA - Basic Welds			6	300
WELD 1510	SMAW Pipe 2G	1/3	4	165
WELD 1511	SMAW Pipe 5G	0/4	4	165
WELD 1512	SMAW Pipe 6G	0/4	4	165
TCA - SMAW PIPE WELDER			12	495
WELD 2312	GMAW Basic Fillet/Groove Weld	1/3	4	150
WELD 2100	FCAW Basic Fillet Weld/Groove Welds	1/2	3	150
TCA - GMAW & FCAW BASIC WELDS			7	300
<i>With approval from the Chief Academic Officer/designee, the following courses may be substituted for any of the above course requirements.</i>				
WELD 2991	Special Projects I	0/1	1	30
WELD 2993	Special Projects II	0/2	2	60
WELD 2995	Special Projects III	0/3	3	90
WELD 2996	Special Projects IV	3/0	3	45
WELD 2997	Practicum	0/3	3	135
WELD 2999	Cooperative Education	0/3	3	135

# NWLTC Chart

## 2018-2019 Program Revisions - Semester Credit Hour - Contact Hour Conversions

Semester	Credit Hour	Contact Hour Allowable	Allowed Combinations			Work-Based Learning Experience (WBLE)	
			Lecture HR 15 Contact	Lab HR 30 Contact	Total Contact (clock) HR	Required WBLE Hrs	Contact
1	15-45	1	0	15	45		
		0	1	30			
		2	0	30			
		1	1	45*			
2	30-75	2	0	30	90		
		2	1	60			
		1	2	75*			
3	45-105	3	0	45	135		
		2	2	90			
		1	3	105			
4	60-165	4	0	60	180		
		2	3	120			
		3	3	135			
		4	3	150*			
		2	4	150*			
		1	5	165*			
<b>Contact Hours Calculations</b>							
1 Lecture Hour = 15 contact/clock hours (except where noted)							
1 Lab Hour = 30 contact/clock hours with preparatory work/homework (except where noted)							
1 SCH = 45 contact hours of Work-Based Experiential Learning							
* Any course without preparatory work / homework must include a minimum of 37.5 contact hours per Semester Credit Hour in the Lec/Lab combination.							
Revised 2.21.2018 Effective 8.1.2018							

Revised 2.21.2018

Effective 8.1.2018

NWLTC Program Revisions  
Effective 2018-2019  
Common Numbering Convention

- 1) Only Courses that are new or revised will be renamed or renumbered.
- 2) All new and revised courses will be numbered using the following convention:
  - a. 1<sup>st</sup> number will be level: Freshman or Sophomore (1 or 2)
  - b. 2<sup>nd</sup> and 3<sup>rd</sup> number will be the suggested sequence (01-99) within discipline courses
    - i. 00 reserved for courses taught throughout all disciplines
    - ii. 90-99 reserved for Work-Based Learning Experience Courses, Special Projects, Internships, Clinicals, Cooperative Education, Apprenticeships
  - c. 4<sup>th</sup> number is the Semester Hour Credits awarded for the class.

Example:

WELD 2113

- a. Welding Course for 2<sup>nd</sup> year (sophomore) students
- b. 11<sup>th</sup> in the sequence of WELD courses
- c. 3 SCH