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Creating Futures**

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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 *AF*
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.

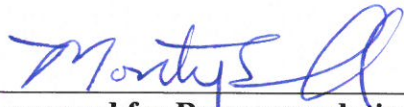
This request is based on input from multiple sources including feedback from Business and Industry partners, the Welding Occupational Advisory Committee, the

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

Date



LOUISIANA'S COMMUNITY & TECHNICAL COLLEGE SYSTEM

Requests for Programs: New, Modification, and Adoption

TYPE OF PROPOSED CHANGE		
<input type="checkbox"/> New Program	<input checked="" type="checkbox"/> Curriculum Modification	<input type="checkbox"/> Curriculum Adoption
Program Name: Northwest Louisiana Technical College - Welding		

AWARD LEVEL(S)	
For Board of Regents and LCTCS Review: <input type="checkbox"/> Associate of Applied Science (A.A.S.) <input type="checkbox"/> Associate of Science (A.S.) <input type="checkbox"/> Associate of Arts (A.A.) <input type="checkbox"/> Other Associate Degree <u>Name:</u> <input type="checkbox"/> Certificate of Applied Science (C.A.S.) <input type="checkbox"/> Certificate of General Studies (C.G.S.)	For LCTCS Review: <input checked="" type="checkbox"/> Technical Diploma (T.D.) <input checked="" type="checkbox"/> Career and Technical Certificate (C.T.C.) <input checked="" type="checkbox"/> 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

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

IMPLEMENTATION DATE (Semester and Year)

Fall 2018

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

<input type="checkbox"/> Main Campus	<input checked="" type="checkbox"/> All Campuses	<input type="checkbox"/> Sites (list below)	<input type="checkbox"/> Distance Education
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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
First Semester						

Second Semester						
Third Semester						
Fourth Semester						

Fifth Semester						
Sixth Semester						

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:

College Chief Academic Officer

Date

College Chief Executive Officer

Date

Semester	Rubric	No.	Course Title	SCH	Lec	Lab	Contact Hour	Comments
1st Semester	8WK	LEAD 1003	Career and Student Success	3	2	2	90	New Course: Workplace Competencies, Employability Skills, Learning Strategies, Study Skills New Course: Embedded IBC's Addition of Work-Based Experience Addition of Work-Based Experience
	WKSF	1003	Industrial Workplace Safety	3	2	2	90	
	WEID	1411	SMAW Filler Weld /	3	2	2	90	
	8WK	WEID 1413	SMAW Small Bead /	3	2	2	90	
	WEID	1421	SMAW V-Groove Open/BU/SOUGE	4	2	3	120	
1st Semester Totals				16	10	11	480	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
2nd Semester	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	
	2nd Semester Total				16	8	13	510
Award (2 Semesters)				32	18	24	990	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
3rd Semester	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	
	3rd Semester Totals				13	8	9	390
Award (3 Semesters)				45	26	33	1380	Revised Contact Hours

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

Rubric	Number	Course Title	SCH	Lec	Lab	Contact Hrs
WEID	2991	Special Project I	1	0	1	30
WEID	2993	Special Project II	2	0	2	60
WEID	2995	Special Project III	3	0	3	90
WBLE	1003	Internship / Cooperative Education	3	1	3	105
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*

* 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 Area (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 480500

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
TCA - WELDER HELPER				
WELD 1141 PLUS				
WELD 1211	Oxyfuel Systems/ Cutting Processes	1/2	3	115
TCA - THERMAL CUTTING				
WELD 1141 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 - THERMAL CUTTING				
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	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	1/0	2	30

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

Revised March 2017

Effective August 2017

Existing Welding Program Curriculum 2017-2018
Proposed Edits—Page 2

Delete Courses
WELD 1122
WELD 1131

Additional Exit Points					
WELD 1122	Basic Blueprints, 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 - CMAW & 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	0/0	3	45	
WELD 2997	Practicum	0/3	3	135	
WELD 2999	Cooperative Education	0/3	3	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
<i>WELD 1111 PLUS</i>				
WELD 1141	Electrical Fundamentals	1/1	2	75
			TCA - WELDER HELPER	4
				105
<i>WELD 1111 PLUS</i>				
WELD 1211	Oxyfuel Systems/ Cutting Processes	1/2	3	115
			TCA - THERMAL CUTTER	5
				145
<i>WELD 1111 PLUS</i>				
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
<i>CTS Welder Helper II PLUS</i>				
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

<i>Additional Exit Points</i>				
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 - 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
<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	Credti 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*		
Contact Hours Calculations							
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

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. 1st number will be level: Freshman or Sophomore (1 or 2)
 - b. 2nd and 3rd 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. 4th number is the Semester Hour Credits awarded for the class.

Example:

WELD 2113

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