

# Manufacturing Specialist

<b>Integrated Pathway</b>	<p>The Manufacturing Specialist graduation pathway is an Integrated pathway. Students must:</p> <ol style="list-style-type: none"> <li>1) pass 9 Carnegie credits of courses from this pathway;</li> <li>2) including at least one Career Readiness course (one Carnegie credit);</li> <li>3) attain one Statewide credential (or the LCTCS equivalent certificate / diploma); <i>OR</i></li> <li>4) one Core credential (or the LCTCS equivalent certificate / diploma); and</li> <li>5) two Complementary credentials.</li> </ol>
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High-Demand Careers Related to this Pathway	<p>5 Star: First Line Supervisors; Industrial Production Managers; Machinist</p> <p>4 Star: Computer-Controlled Machine Tool Operators; Machine Setter, Operator or Tender</p>
Starting Salary Ranges for this Pathway	\$25,000 - \$38,000

## Manufacturing Specialist Graduation Pathway: Sections

<b>1</b>	<b>Pathway-Specific Courses</b>	<p>This section lists the course titles and codes for courses specific to this pathway</p> <p>Each table also indicates those courses that qualify for the basic 6% CTE adder (<i>course codes beginning with "01", "04", "07", "08", "09", "10", "11" or "31" are CTE courses</i>) as well as those courses that qualify for the additional 6% Career Development Fund (or CDF) payment.</p>
<b>2</b>	<b>Universal Jump Start Courses</b>	This section lists the course titles and course codes for courses that are part of every Jump Start graduation pathway
<b>3</b>	<b>Career Readiness Courses</b>	This section lists the course titles and codes for courses that qualify as Career Readiness Courses. Students must pass at least one Carnegie credit of Career Readiness courses, but may apply more than one Career Readiness course to their 9 credit Jump Start graduation requirement.
<b>4</b>	<b>Internships</b>	This section indicates the three types of internships and the appropriate course codes.
<b>5</b>	<b>Culminating Credentials</b>	This section indicates the required culminating credential(s) for this pathway.
<b>6</b>	<b>Sample Schedule</b>	This section provides a sample schedule for students pursuing this graduation pathway. Each high school will develop its own standard schedules for Jump Start students.

## Jump Start Graduation Pathway Revision Policy

Jump Start graduation pathways are continuously updated. Please use the most updated graduation pathways.

**Future changes to Jump Start graduation pathways will always increase student opportunities. *No one will ever need to compare an old pathway with an updated pathway.***

**Please send any recommended graduation pathway changes to [JumpStart@la.gov](mailto:JumpStart@la.gov) using the subject line: *Recommended Graduation Pathway Change.***

The Department reserves the right to make administrative updates to Jump Start graduation pathways, including but not limited to updating course codes, correcting errors on course codes, correcting spelling errors and other similar changes.

The Department reserves the right to delete courses no longer meeting state standards. When this occurs, the Department may add a section to the graduation pathway indicating: "Courses Deleted from this Graduation Pathway."

The Department reserves the right to make changes on credentialing requirements based on guidance provided by the Jump Start Graduation Pathways Review Panel. (Please see the *All Things Jump Start* web portal for information about this Panel.) The Department will also maintain contact with certifying agencies and the Workforce Investment Council (WIC) to update the Statewide, Core and Complementary credentials indicated in each graduation pathway.

***Louisiana educators can seek assistance with Jump Start graduation pathways at any time by emailing their questions to [JumpStart@la.gov](mailto:JumpStart@la.gov)***

## Help Resources

Please see the updated *All Things Jump Start* web portal: <http://www.louisianabelieves.com/courses/all-things-jump-start/> The updated portal provides easier access to:

- updated Jump Start graduation pathways;
- updated industry credential fact sheets that provide comprehensive details on over 100 Jump Start industry credentials;
- guidance on how your school can implement workplace internships and virtual workplace experiences; *and much, much more.*

<b>Pathway</b>	<b>Manufacturing Specialist</b>
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<b>Pathway-Specific Courses: Manufacturing Specialist</b>				
<b>Course Title</b>	<b>Course Code</b>	<b>Carnegie Credits</b>	<b>CTE 6%</b>	<b>CDF 6%</b>
AGRISCIENCE I	010301	1	✓	
AGRISCIENCE II	010302	1	✓	
AGRISCIENCE III	010303	1	✓	✓
AGRISCIENCE IV	010304	1	✓	
COOPERATIVE AGRISCIENCE EDUCATION I (3 CREDITS)	010323	3	✓	
COOPERATIVE AGRISCIENCE EDUCATION II (3 CREDITS)	010325	3	✓	
Career Readiness Agriscience Agribusiness Natural Resources	010331	1	✓	
AGRISCIENCE-CONSTRUCTION (1/2 CREDIT)	010344	½	✓	
AGRISCIENCE-LEADERSHIP DEVELOPMENT (1/2 CREDIT)	010354	½	✓	
AG LEADERSHIP (1 CREDIT)	010364	1	✓	
AG CONST. TECH (1 CREDIT)	010444	1	✓	
AG POWER EQUIPMENT (1 CREDIT)	010446	1	✓	
NCCER CARPENTRY IN AGRISCIENCE (1 CREDIT)	010601	1	✓	✓
NCCER CARPENTRY IN AGRISCIENCE (2 CREDITS)	010602	2	✓	✓
NCCER CARPENTRY IN AGRISCIENCE (3 CREDITS)	010603	3	✓	✓
NCCER Carpentry in Agriscience II (1 credit)	010604	1	✓	✓

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NCCER Carpentry in Agriscience II (2 credit)	010605	2	✓	✓
NCCER Carpentry in Agriscience II (3 credit)	010606	3	✓	✓
NCCER Carpentry in Agriscience III (1 credit)	010607	1	✓	✓
NCCER Carpentry in Agriscience III (2 credit)	010608	2	✓	✓
NCCER Carpentry in Agriscience III (3 credit)	010609	3	✓	✓
NCCER Carpentry in Agriscience IV (1 credit)	010610	1	✓	✓
NCCER Carpentry in Agriscience IV (2 credit)	010611	2	✓	✓
NCCER Carpentry in Agriscience IV (3 credit)	010612	3	✓	✓
NCCER ELECTRICAL IN AGRISCIENCE (1 CREDIT)	010701	1	✓	✓
NCCER ELECTRICAL IN AGRISCIENCE (2 CREDITS)	010702	2	✓	✓
NCCER ELECTRICAL IN AGRISCIENCE (3 CREDITS)	010703	3	✓	✓
NCCER Electrical in Agriscience II (1CR)	010704	1	✓	✓
NCCER Electrical in Agriscience II (2CR)	010705	2	✓	✓
NCCER Electrical in Agriscience II (3CR)	010706	3	✓	✓
NCCER Electrical in Agriscience III (1CR)	010707	1	✓	✓
NCCER Electrical in Agriscience III (2CR)	010708	2	✓	✓
NCCER Electrical in Agriscience III (3CR)	010709	3	✓	✓
NCCER Electrical in Agriscience IV (1 CR)	010710	1	✓	✓

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NCCER Electrical in Agriscience IV (2 CR)	010711	2	✓	✓
NCCER Electrical in Agriscience IV (3 CR)	010712	3	✓	✓
NCCER PIPEFITTING IN AGRISCIENCE (1 CREDIT)	010801	1	✓	✓
NCCER PIPEFITTING IN AGRISCIENCE (2 CREDITS)	010802	2	✓	✓
NCCER PIPEFITTING IN AGRISCIENCE (3 CREDITS)	010803	3	✓	✓
NCCER Pipefitting in Agriscience II (1 credit)	010804	1	✓	✓
NCCER Pipefitting in Agriscience II (2 credit)	010805	2	✓	✓
NCCER Pipefitting in Agriscience II (3 credit)	010806	3	✓	✓
NCCER Pipefitting in Agriscience III (1 credit)	010807	1	✓	✓
NCCER Pipefitting in Agriscience III (2 credit)	010808	2	✓	✓
NCCER Pipefitting in Agriscience III (3 credit)	010809	3	✓	✓
NCCER Pipefitting in Agriscience IV (1 credit)	010810	1	✓	✓
NCCER Pipefitting in Agriscience IV (2 credit)	010811	2	✓	✓
NCCER Pipefitting in Agriscience IV (3 credit)	010812	3	✓	✓
NCCER WELDING IN AGRISCIENCE (1 CREDIT)	010901	1	✓	✓
NCCER WELDING IN AGRISCIENCE (2 CREDITS)	010902	2	✓	✓
NCCER WELDING IN AGRISCIENCE (3 CREDITS)	010903	3	✓	✓
NCCER Welding in Agriscience II (1 credit)	010904	1	✓	✓

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NCCER Welding in Agriscience II (2 credits)	010905	2	✓	✓
NCCER Welding in Agriscience II (3 credits)	010906	3	✓	✓
NCCER Welding in Agriscience III (1 credit)	010907	1	✓	✓
NCCER Welding in Agriscience III (2 credits)	010908	2	✓	✓
NCCER Welding in Agriscience III (3 credits)	010909	3	✓	✓
NCCER Welding in Agriscience IV (1 credit)	010910	1	✓	✓
NCCER Welding in Agriscience IV (2 credits)	010911	2	✓	✓
NCCER Welding in Agriscience IV (3 credits)	010912	3	✓	✓
Introduction to Manufacturing C4M in Agriscience I (1 Credit)	010913	1	✓	✓
Introduction to Manufacturing C4M in Agriscience I (2 Credits)	010914	2	✓	✓
Introduction to Manufacturing C4M in Agriscience I (3 Credits)	010915	3	✓	✓
Manufacturing Tools and Equipment C4M in Agriscience (1 Credit)	010916	1	✓	✓
Manufacturing Tools and Equipment C4M in Agriscience (2 Credits)	010917	2	✓	✓
Manufacturing Tools and Equipment C4M in Agriscience (3 Credits)	010918	3	✓	✓
Automation in Manufacturing C4M in Agriscience (1 Credit)	010919	1	✓	✓
Automation in Manufacturing C4M in Agriscience (2 Credits)	010920	2	✓	✓
Automation in Manufacturing C4M in Agriscience (3 Credits)	010921	3	✓	✓
Introduction to Fabrication, P-Tech, and Machining C4M in Agriscience (1 Credit)	010922	1	✓	✓

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Introduction to Fabrication, P-Tech, and Machining C4M in Agriscience (2 Credits)	010923	2	✓	✓
Introduction to Fabrication, P-Tech, and Machining C4M in Agriscience (3 Credits)	010924	3	✓	✓
Fundamentals of Machining C4Machining in Agriscience (1 Credit)	010925	1	✓	✓
Fundamentals of Machining C4Machining in Agriscience (2 Credits)	010926	2	✓	✓
Fundamentals of Machining C4Machining in Agriscience (3 Credits)	010927	3	✓	✓
Machining Tools and Equipment C4Machining in Agriscience (1 Credit)	010928	1	✓	✓
Machining Tools and Equipment C4Machining in Agriscience (2 Credits)	010929	2	✓	✓
Machining Tools and Equipment C4Machining in Agriscience (3 Credits)	010930	3	✓	✓
Manual Machining C4Machining in Agriscience (1 Credit)	010931	1	✓	✓
Manual Machining C4Machining in Agriscience (2 Credits)	010932	2	✓	✓
Manual Machining C4Machining in Agriscience (3 Credits)	010933	3	✓	✓
Computerized Numerical Control (CNC) Machining C4Machining in Agriscience (1 cr)	010934	1	✓	✓
Computerized Numerical Control (CNC) Machining C4Machining in Agriscience (2 cr)	010935	2	✓	✓
Computerized Numerical Control (CNC) Machining C4Machining in Agriscience (3 cr)	010936	3	✓	✓
THEATRE DESIGN AND TECHNOLOGY	030702	1		
ACCOUNTING I	040101	1	✓	✓
ACCOUNTING II	040104	1	✓	✓

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ENTREPRENEURSHIP (BUSINESS)	040110	1	✓	
WORD PROCESSING	040203	1	✓	
COOPERATIVE OFFICE EDUCATION (3 CREDITS)	040205	3	✓	
COMPUTER TECHNOLOGY LITERACY	040220	1	✓	
KEYBOARDING (1/2 CREDIT)	040225	1/2	✓	
KEYBOARDING APPLICATIONS (1/2 CREDIT)	040226	1/2	✓	
Keyboarding	040229	1	✓	
BUSINESS LAW	040303	1	✓	
BUSINESS COMMUNICATIONS	040305	1	✓	
PRINCIPLES OF BUSINESS	040306	1	✓	
Business Math	040307	1	✓	
BUSINESS COMPUTER APPLICATIONS	040400	1	✓	
INTRODUCTION TO BUSINESS COMPUTER APPLICATIONS	040401	1	✓	
CUSTOMER SERVICE (1 CREDIT)	041001	1	✓	
COOPERATIVE MARKETING EDUCATION I (3 CREDITS)	041010	3	✓	
COOPERATIVE MARKETING EDUCATION II (3 CREDITS)	041011	3	✓	
PERSONAL FINANCE	041022	1	✓	
PRINCIPLES OF MARKETING I	041025	1	✓	



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PRINCIPLES OF MARKETING II	041026	1	✓	
ENTREPRENEURSHIP (MARKETING)	041040	1	✓	
ENTREPRENEURSHIP II - Advanced Micro-Enterprise Credentials	041041	1	✓	✓
JOBS FOR AMERICA'S GRADUATES 1	042010	1	✓	✓
JOBS FOR AMERICA'S GRADUATES 2	042020	1	✓	✓
JOBS FOR AMERICA'S GRADUATES 3	042030	1	✓	✓
JOBS FOR AMERICA'S GRADUATES 4	042040	1	✓	✓
SPEECH I	051101	1		
SPEECH II	051102	1		
ENGINEERING DESIGN I (1 CREDIT)	080110	1	✓	
Engineering Design I (2 Credits)	080111	2	✓	
Engineering Design I (3 Credits)	080112	3	✓	
ENGINEERING DESIGN II (1 CREDIT)	080120	1	✓	
Engineering Design II (2 Credits)	080121	2	✓	
Engineering Design II (3 Credits)	080122	3	✓	
CDF-Qualifying CTE Internship I (2 CREDITS)	080200	2	✓	✓
CDF-Qualifying CTE Internship II (2 CREDITS)	080201	2	✓	✓
CDF-Qualifying CTE Internship I (1 CREDIT)	080202	1	✓	✓

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CDF-Qualifying CTE Internship II (1 CREDIT)	080203	1	✓	✓
Virtual Workplace Experience I (1/2 credit)	080204	1/2	✓	
Virtual Workplace Experience I (1 credit)	080205	1	✓	
Virtual Workplace Experience II (1/2 credit)	080206	1/2	✓	
Virtual Workplace Experience II (1 credit)	080207	1	✓	
Pre-Apprenticeship I (2 Credits)	080208	2	✓	
Pre-Apprenticeship II (2 Credits)	080209	2	✓	
Pre-Apprenticeship I (1 Credit)	080210	1	✓	
Pre-Apprenticeship II (1 Credit)	080211	1	✓	
Authentic Workplace Experience I (1 Credit)	080212	1	✓	
CDF-QUALIFYING PRE-APPRENTICESHIP I (1 CREDIT)	080230	1	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP I (2 CREDITS)	080231	2	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP II (1 CREDIT)	080233	1	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP II (2 CREDITS)	080234	2	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP III (1 CREDIT)	080236	1	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP III (2 CREDITS)	080237	2	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP IV (1 CREDIT)	080239	1	✓	✓
CDF-QUALIFYING PRE-APPRENTICESHIP IV (2 CREDITS)	080240	2	✓	✓

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GENERAL COOPERATIVE EDUCATION I (3 CREDITS)	080300	3	✓	
GENERAL COOPERATIVE EDUCATION II (3 CREDITS)	080301	3	✓	
EDUCATION FOR CAREERS (1/2 CREDIT)	080400	1/2	✓	
EDUCATION FOR CAREERS (1CREDIT)	080401	1	✓	
JOURNEY TO CAREERS PART I (1/2 CREDIT)	080402	1/2	✓	
JOURNEY TO CAREERS (1 CREDIT)	080403	1	✓	
JOURNEY TO CAREERS PART II (1/2 CREDIT)	080404	1/2	✓	
EDUCATION FOR CAREERS PART I (1/2 CREDIT)	080405	1/2	✓	
EDUCATION FOR CAREERS PART II (1/2 CREDIT)	080406	1/2	✓	
Career Success Skills	080407	1	✓	
Basic/Initial Career Readiness	080409	1	✓	
Advanced Career Readiness	080410	1	✓	
ETHICS IN BUSINESS (1/2 CREDIT)	080640	1/2	✓	
INSURANCE (1/2 CREDIT)	080650	1/2	✓	
BUSINESS IN A GLOBAL ECONOMY (1/2 CREDIT)	080660	1/2	✓	
PRINCIPLES OF FINANCE (1/2 CREDIT)	080670	1/2	✓	
(NAF) ENTREPRENEURSHIP (1/2 CREDIT)	080685	1/2	✓	
MANAGERIAL ACCOUNTING (1/2 CREDIT)	080691	1/2	✓	

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CUSTOMER SERVICE (1/2 CREDIT)	080720	1/2	✓	
ASSISTIVE TECHNOLOGY FOR THE VISUALLY IMPAIRED (1 CREDIT)	080900	1	✓	
BUSINESS ENTERPRISES FOR THE VISUALLY IMPAIRED (1 CREDIT)	080901	1	✓	
BRAILLE I (1 CREDIT)	080902	1	✓	
BRAILLE II (1 CREDIT)	080903	1	✓	
COOPERATIVE HEALTH OCCUPATIONS (3 CREDITS)	090004	3	✓	
FIRST RESPONDER / EMERGENCY MEDICAL RESPONDER (1/2 CREDIT)	090710	1/2	✓	
FIRST RESPONDER / EMERGENCY MEDICAL RESPONDER (1 CREDIT)	090711	1	✓	
FIRST RESPONDER / EMERGENCY MEDICAL RESPONDER (2 CREDITS)	090712	2	✓	
COOPERATIVE FAMILY AND CONSUMER SCIENCES (3 CREDITS)	100800	3	✓	
MATERIALS AND PROCESSES	110005	1	✓	
GENERAL TECHNOLOGY EDUCATION	110010	1	✓	
MARINE ENGINEERING (1 CREDIT)	110020	1	✓	
COOPERATIVE TECHNOLOGY EDUCATION (3 CREDITS)	110098	3	✓	
BASIC WOOD TECHNOLOGY	110100	1	✓	
NCCER CONSTRUCTION TECHNOLOGY	110110	1	✓	✓
ADVANCED WOOD TECHNOLOGY	110120	1	✓	
BASIC METAL TECHNOLOGY I	110200	1	✓	

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WELDING TECHNOLOGY	110230	1	✓	
Grinder Assistant	110231	1	✓	
Rod Identifier/Runner	110232	1	✓	
ADVANCED METAL TECHNOLOGY	110240	1	✓	
MANUFACTURING TECHNOLOGY	110250	1	✓	
INTRODUCTION TO MANUFACTURING C4M	110256	1	✓	✓
MANUFACTURING TOOLS AND EQUIPMENT C4M (1 CREDIT)	110257	1	✓	✓
AUTOMATION IN MANUFACTURING C4M (1 CREDIT)	110258	1	✓	✓
INTRODUCTION TO FABRICATION, P-TECH AND MACHINING C4M (1 CREDIT)	110259	1	✓	✓
INTRODUCTION TO MANUFACTURING C4M (2 CREDITS)	110260	2	✓	✓
INTRODUCTION TO MANUFACTURING C4M (3 CREDITS)	110261	3	✓	✓
MANUFACTURING TOOLS AND EQUIPMENT C4M (2 CREDITS)	110262	2	✓	✓
MANUFACTURING TOOLS AND EQUIPMENT C4M (3 CREDITS)	110263	3	✓	✓
AUTOMATION IN MANUFACTURING C4M (2 CREDITS)	110264	2	✓	✓
AUTOMATION IN MANUFACTURING C4M (3 CREDITS)	110265	3	✓	✓
INTRODUCTION TO FABRICATION, P-TECH AND MACHINING C4M (2 CREDITS)	110266	2	✓	✓
INTRODUCTION TO FABRICATION, P-TECH AND MACHINING C4M (3 CREDITS)	110267	3	✓	✓

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FUNDAMENTALS OF MACHINING C4MACHINING (1 CREDIT)	110268	1	✓	✓
FUNDAMENTALS OF MACHINING C4MACHINING (2 CREDITS)	110269	2	✓	✓
FUNDAMENTALS OF MACHINING C4MACHINING (3 CREDITS)	110270	3	✓	✓
MACHINING TOOLS AND EQUIPMENT C4MACHINING (1 CREDIT)	110271	1	✓	✓
MACHINING TOOLS AND EQUIPMENT C4MACHINING (2 CREDITS)	110272	2	✓	✓
MACHINING TOOLS AND EQUIPMENT C4MACHINING (3 CREDITS)	110273	3	✓	✓
MANUAL MACHINING C4MACHINING (1 CREDIT)	110274	1	✓	✓
MANUAL MACHINING C4MACHINING (2 CREDITS)	110275	2	✓	✓
MANUAL MACHINING C4MACHINING (3 CREDITS)	110276	3	✓	✓
COMPUTERIZED NUMERICAL CONTROL (CNC) MACHINING C4MACHINING (1 CR)	110277	1	✓	✓
COMPUTERIZED NUMERICAL CONTROL (CNC) MACHINING C4MACHINING (2 CR)	110278	2	✓	✓
COMPUTERIZED NUMERICAL CONTROL (CNC) MACHINING C4MACHINING (3 CR)	110279	3	✓	✓
TECHNOLOGY EDUCATION ELECTIVE II (1/2 CREDIT)	110299	1/2	✓	
ENERGY, POWER AND TRANSPORTATION TECHNOLOGY	110310	1	✓	
POWER MECHANICS	110330	1	✓	
Fluid Mechanics	110331	1	✓	
TECHNOLOGY EDUCATION ELECTIVE II (1 CREDIT)	110399	1	✓	

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TECHNOLOGY EDUCATION ELECTIVE II (2 CREDITS)	110400	2	✓	
TECHNOLOGY EDUCATION ELECTIVE II (3 CREDITS)	110401	3	✓	
CTE Internship I (1 credit; Non-CDF)	110402	1	✓	
CTE Internship I (2 credits; Non-CDF)	110403	2	✓	
CTE Internship II (1 credit; Non-CDF)	110404	1	✓	
CTE Internship II (2 credits; Non-CDF)	110405	2	✓	
COMMUNICATION TECHNOLOGY	110540	1	✓	
BASIC TECHNICAL DRAFTING	110560	1	✓	
CMAD Drafting	110570	1	✓	✓
CMAD Drafting (2 credit)	110571	2	✓	✓
CMAD Drafting (3 credit)	110572	3	✓	✓
ARCHITECTURAL DRAFTING	110580	1	✓	
ADVANCED TECHNICAL DRAFTING	110590	1	✓	
BASIC ELECTRICITY/ELECTRONICS	110600	1	✓	
ADVANCED ELECTRICITY/ELECTRONICS	110610	1	✓	
NCCER Carpentry III (1 credit)	110700	1	✓	✓
NCCER CARPENTRY I (1 CREDIT)	110701	1	✓	✓
NCCER CARPENTRY I (2 CREDITS)	110702	2	✓	✓

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NCCER CARPENTRY I (3 CREDITS)	110703	3	✓	✓
NCCER Carpentry III (2 credits)	110704	2	✓	✓
NCCER Carpentry III (3 credits)	110705	3	✓	✓
NCCER CARPENTRY II (1 CREDIT)	110706	1	✓	✓
NCCER CARPENTRY II (2 CREDITS)	110707	2	✓	✓
NCCER CARPENTRY II (3 CREDITS)	110708	3	✓	✓
NCCER Carpentry IV (1 credit)	110709	1	✓	✓
NCCER Carpentry IV (2 credits)	110710	2	✓	✓
NCCER ELECTRICAL I (1 CREDIT)	110711	1	✓	✓
NCCER ELECTRICAL I (2 CREDITS)	110712	2	✓	✓
NCCER ELECTRICAL I (3 CREDITS)	110713	3	✓	✓
NCCER Carpentry IV (3 credits)	110714	3	✓	✓
NCCER ELECTRICAL II (1 CREDIT)	110716	1	✓	✓
NCCER ELECTRICAL II (2 CREDITS)	110717	2	✓	✓
NCCER ELECTRICAL II (3 CREDITS)	110718	3	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC I (1 CREDIT)	110721	1	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC I (2 CREDITS)	110722	2	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC I (3 CREDITS)	110723	3	✓	✓



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NCCER INSTRUMENTATION CONTROL MECHANIC II (1 CREDIT)	110726	1	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC II (2 CREDITS)	110727	2	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC II (3 CREDITS)	110728	3	✓	✓
NCCER PIPEFITTER I (1 CREDIT)	110731	1	✓	✓
NCCER PIPEFITTER I (2 CREDITS)	110732	2	✓	✓
NCCER PIPEFITTER I (3 CREDITS)	110733	3	✓	✓
NCCER PIPEFITTER II (1 CREDIT)	110736	1	✓	✓
NCCER PIPEFITTER II (2 CREDITS)	110737	2	✓	✓
NCCER PIPEFITTER II (3 CREDITS)	110738	3	✓	✓
NCCER WELDING TECHNOLOGY I (1 CREDIT)	110741	1	✓	✓
NCCER WELDING TECHNOLOGY I (2 CREDITS)	110742	2	✓	✓
NCCER WELDING TECHNOLOGY I (3 CREDITS)	110743	3	✓	✓
NCCER WELDING TECHNOLOGY II (1 CREDIT)	110746	1	✓	✓
NCCER WELDING TECHNOLOGY II (2 CREDITS)	110747	2	✓	✓
NCCER WELDING TECHNOLOGY II (3 CREDITS)	110748	3	✓	✓
INTRODUCTION TO ENGINEERING DESIGN I (1/2 CREDIT)	110799	1/2	✓	
INTRODUCTION TO ENGINEERING DESIGN (1 CREDIT)	110800	1	✓	
PRINCIPLES OF ENGINEERING (1 CREDIT)	110810	1	✓	

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PRINCIPLES OF ENGINEERING (2 CREDITS)	110811	2	✓	
DIGITAL ELECTRONICS (1 CREDIT)	110820	1	✓	
AEROSPACE ENGINEERING (1 CREDIT)	110830	1	✓	
CIVIL ENGINEERING & ARCHITECTURE (1 CREDIT)	110840	1	✓	
COMPUTER INTEGRATED MANUFACTURING (1 CREDIT)	110850	1	✓	
ENGINEERING DESIGN AND DEVELOPMENT (1 CREDIT)	110860	1	✓	
PHYSICS OF TECHNOLOGY I (VOCATIONAL)	110900	1	✓	
PHYSICS OF TECHNOLOGY II (VOCATIONAL)	110910	1	✓	
PROCESS TECHNICIAN I (1 credit)	110911	1	✓	✓
PROCESS TECHNICIAN II (1 credit)	110912	1	✓	✓
Process Technician I (2 credits)	110913	2	✓	✓
Process Technician I (3 credits)	110914	3	✓	✓
Process Instrumentation I	110915	1	✓	
Process Instrumentation II	110916	1	✓	
Process Technician II (2 credits)	110917	2	✓	✓
Process Technician II (3 credits)	110918	3	✓	✓
Process Technician III (1 credit)	110919	1	✓	✓
Process Technician III (2 credits)	110920	2	✓	✓

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Process Technician III (3 credits)	110921	3	✓	✓
Process Technology I: Equipment	110922	1	✓	
Process Technology II: Unit Systems	110923	1	✓	
Process Technology III: Operations	110924	1	✓	
OIL AND GAS PRODUCTION OPERATIONS (1 CREDIT)	110955	1	✓	✓
T2 SAFETY SYSTEMS FOR OIL AND GAS PRODUCTION (1 CREDIT)	110956	1	✓	✓
OIL PATCH PREPARATION SYSTEM	110957	1	✓	✓
TECHNICAL WRITING	120350	1		
AMERICAN SIGN LANGUAGE I	123456	1		
AMERICAN SIGN LANGUAGE II	123457	1		
TECHNICAL READING and WRITING	125010	1		
BUSINESS COMMUNICATIONS	125030	1		
ENVIRONMENTAL SCIENCE	150310	1		
CHEMISTRY	150401	1		
FIRST ROBOTICS I (1 CREDIT)	150740	1		
FIRST ROBOTICS II (1 CREDIT)	150750	1		
FIRST ROBOTICS III (1 CREDIT)	150760	1		
FIRST ROBOTICS IV (1 CREDIT)	150770	1		
GEOMETRY	160323	1		
FINANCIAL LITERACY (formerly Financial Math)	160345	1		
TECHNICAL MATH	165010	1		

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JR. ROTC III	170003	1		
JR. ROTC IV	170004	1		
LAW STUDIES	220506	1		
AIR CONDITIONING/REFRIGERATION I (1 CREDIT)	310100	1	✓	✓
AIR CONDITIONING/REFRIGERATION I (2 CREDITS)	310102	2	✓	✓
AIR CONDITIONING/REFRIGERATION I (3 CREDITS)	310103	3	✓	✓
AIR CONDITIONING/REFRIGERATION II (1 CREDIT)	310105	1	✓	✓
AIR CONDITIONING/REFRIGERATION II (2 CREDITS)	310112	2	✓	✓
AIR CONDITIONING/REFRIGERATION II (3 CREDITS)	310113	3	✓	✓
AIR CONDITIONING/REFRIGERATION III (1 CREDIT)	310114	1	✓	✓
AIR CONDITIONING/REFRIGERATION III (3 CREDITS)	310115	2	✓	✓
AIR CONDITIONING/REFRIGERATION III (3 CREDITS)	310116	3	✓	✓
AIR CONDITIONING/REFRIGERATION IV (1 CREDIT)	310117	1	✓	✓
AIR CONDITIONING/REFRIGERATION IV (2 CREDITS)	310118	2	✓	✓
AIR CONDITIONING/REFRIGERATION IV (3 CREDITS)	310119	3	✓	✓
AUTO BODY REPAIR I (1 CREDIT)	310200	1	✓	✓
AUTO BODY REPAIR I (2 CREDITS)	310202	2	✓	✓
AUTO BODY REPAIR I (3 CREDITS)	310203	3	✓	✓
AUTO BODY REPAIR II (1 CREDIT)	310205	1	✓	✓

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AUTO BODY REPAIR II (2 CREDITS)	310212	2	✓	✓
AUTO BODY REPAIR II (3 CREDITS)	310213	3	✓	✓
Auto Body Repair III (1 credit)	310214	1	✓	✓
Auto Body Repair III (2 credits)	310215	2	✓	✓
Auto Body Repair III (3 credits)	310216	3	✓	✓
Auto Body Repair IV (1 credit)	310217	1	✓	✓
Auto Body Repair IV (2 credits)	310218	2	✓	✓
Auto Body Repair IV (3 credits)	310219	3	✓	✓
AUTOMOTIVE TECHNICIAN I (1 CREDIT)	310300	1	✓	✓
GENERAL AUTOMOTIVE MAINTENANCE (2 CREDITS)	310302	2	✓	
GENERAL AUTOMOTIVE MAINTENANCE (3 CREDITS)	310303	3	✓	
AUTOMOTIVE TECHNICIAN II (1 CREDIT)	310305	1	✓	✓
AUTOMOTIVE TECHNICIAN III (1 CREDIT)	310306	1	✓	✓
AUTOMOTIVE TECHNICIAN IV (1 CREDIT)	310307	1	✓	✓
AUTOMOTIVE TECHNICIAN V (1 CREDIT)	310308	1	✓	✓
AUTOMOTIVE TECHNICIAN VI (1 CREDIT)	310309	1	✓	✓
AUTOMOTIVE TECHNICIAN I (2 CREDITS)	310312	2	✓	✓
AUTOMOTIVE TECHNICIAN I (3 CREDITS)	310313	3	✓	✓

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GENERAL AUTOMOTIVE MAINTENANCE (1 CREDIT)	310315	1	✓	
AUTOMOTIVE TECHNICIAN II (2 CREDITS)	310322	2	✓	✓
AUTOMOTIVE TECHNICIAN II (3 CREDITS)	310323	3	✓	✓
AUTOMOTIVE TECHNICIAN III (2 CREDITS)	310332	2	✓	✓
AUTOMOTIVE TECHNICIAN III (3 CREDITS)	310333	3	✓	✓
AUTOMOTIVE TECHNICIAN IV (2 CREDITS)	310342	2	✓	✓
AUTOMOTIVE TECHNICIAN IV (3 CREDITS)	310343	3	✓	✓
AUTOMOTIVE TECHNICIAN V (2 CREDITS)	310352	2	✓	✓
AUTOMOTIVE TECHNICIAN V (3 CREDITS)	310353	3	✓	✓
AUTOMOTIVE TECHNICIAN VI (2 CREDITS)	310362	2	✓	✓
AUTOMOTIVE TECHNICIAN VI (3 CREDITS)	310363	3	✓	✓
Introduction to Motor Vehicle Technology	310373	1	✓	
Steering and Suspension Systems	310381	1	✓	
Steering and Suspension Systems Laboratory	310382	1	✓	
Advanced Electrical Electronics	310383	1	✓	
Advanced Electrical and Electronics Laboratory	310384	1	✓	
Engine Performance I: Components and Systems	310390	1	✓	
Engine Performance I: Components and Systems Laboratory	310391	1	✓	

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Engine Diagnosis and Repair	310392	1	✓	
Engine Diagnosis and Repair Laboratory	310393	1	✓	
Engine Performance II: Advanced Driveability	310394	1	✓	
Engine Performance II Laboratory	310395	1	✓	
BASIC ELECTRICITY I (1 CREDIT)	310400	1	✓	
BASIC ELECTRICITY I (2 CREDITS)	310402	2	✓	
BASIC ELECTRICITY I (3 CREDITS)	310403	3	✓	
BASIC ELECTRICITY II (1 CREDIT)	310410	1	✓	
BASIC ELECTRICITY II (2 CREDITS)	310412	2	✓	
BASIC ELECTRICITY II (3 CREDITS)	310413	3	✓	
CABINET MAKING I (1 CREDIT)	310500	1	✓	
CABINET MAKING I (2 CREDITS)	310502	2	✓	
CABINET MAKING I (3 CREDITS)	310503	3	✓	
CABINET MAKING II (1 CREDIT)	310505	1	✓	
CABINET MAKING II (2 CREDITS)	310512	2	✓	
CABINET MAKING II (3 CREDITS)	310513	3	✓	
CARPENTRY I (1 CREDIT)	310600	1	✓	
CARPENTRY I (2 CREDITS)	310602	2	✓	

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CARPENTRY I (3 CREDITS)	310603	3	✓	
CARPENTRY II (1 CREDIT)	310605	1	✓	
CARPENTRY II (2 CREDITS)	310612	2	✓	
CARPENTRY II (3 CREDITS)	310613	3	✓	
Building Materials and Estimating	310620	1	✓	
Carpentry Calculations	310621	1	✓	
Design, Blueprint Reading and Codes	310622	1	✓	
Site Layout	310623	1	✓	
Foundations and Floor Framing	310624	1	✓	
Wall and Ceiling Framing	310625	1	✓	
Roofing Construction	310626	1	✓	
Exterior Finishes	310627	1	✓	
Interior Finishes	310628	1	✓	
Project Management	310630	1	✓	
Fundamentals of Industrial Scaffolding (1 Credit)	310631	1	✓	
Fundamentals of Industrial Scaffolding (2 Credits)	310632	2	✓	
COMPUTER ELECTRONICS I (1 CREDIT)	310800	1	✓	
COMPUTER ELECTRONICS I (2 CREDITS)	310802	2	✓	



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COMPUTER ELECTRONICS I (3 CREDITS)	310803	3	✓	
COMPUTER ELECTRONICS II (1 CREDIT)	310805	1	✓	
COMPUTER ELECTRONICS II (2 CREDITS)	310812	2	✓	
COMPUTER ELECTRONICS II (3 CREDITS)	310813	3	✓	
Computer Service Technology I	310818	1	✓	
Computer Service Technology II	310819	1	✓	
COMPUTER SERVICE TECHNOLOGY I (2 CREDITS)	310820	2	✓	
COMPUTER SERVICE TECHNOLOGY I (3 CREDITS)	310821	3	✓	
COMPUTER SERVICE TECHNOLOGY II (2 CREDITS)	310822	2	✓	
COMPUTER SERVICE TECHNOLOGY II (3 CREDITS)	310823	3	✓	
NETWORKING BASICS (2 CREDITS)	310850	2	✓	
NETWORKING BASICS (3 CREDITS)	310851	3	✓	
ROUTERS AND ROUTING BASICS (2 CREDITS)	310852	2	✓	
ROUTERS AND ROUTING BASICS (3 CREDITS)	310853	3	✓	
DIESEL MECHANICS I (1 CREDIT)	311200	1	✓	
DIESEL MECHANICS I (2 CREDITS)	311202	2	✓	
DIESEL MECHANICS I (3 CREDITS)	311203	3	✓	
DIESEL MECHANICS II (1 CREDIT)	311205	1	✓	

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DIESEL MECHANICS II (2 CREDITS)	311212	2	✓	
DIESEL MECHANICS II (3 CREDITS)	311213	3	✓	
DRAFTING & DESIGN TECHNOLOGY I (1 CREDIT)	311300	1	✓	
DRAFTING & DESIGN TECHNOLOGY I (2 CREDITS)	311302	2	✓	
DRAFTING & DESIGN TECHNOLOGY I (3 CREDITS)	311303	3	✓	
DRAFTING & DESIGN TECHNOLOGY II (1 CREDIT)	311305	1	✓	
DRAFTING & DESIGN TECHNOLOGY II (2 CREDITS)	311312	2	✓	
DRAFTING & DESIGN TECHNOLOGY II (3 CREDITS)	311313	3	✓	
ELECTRICIAN I (1 CREDIT)	311400	1	✓	
ELECTRICIAN I (2 CREDITS)	311402	2	✓	
ELECTRICIAN I (3 CREDITS)	311403	3	✓	
ELECTRICIAN II (1 CREDIT)	311405	1	✓	
ELECTRICIAN II (2 CREDITS)	311412	2	✓	
ELECTRICIAN II (3 CREDITS)	311413	3	✓	
ELECTRONICS I (1 CREDIT)	311500	1	✓	
ELECTRONICS I (2 CREDITS)	311502	2	✓	
ELECTRONICS I (3 CREDITS)	311503	3	✓	
ELECTRONICS II (1 CREDIT)	311505	1	✓	

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ELECTRONICS II (2 CREDITS)	311512	2	✓	
ELECTRONICS II (3 CREDITS)	311513	3	✓	
NCCER Core	311720	1	✓	✓
INDUSTRIAL ELECTRONICS I (1 CREDIT)	311800	1	✓	
INDUSTRIAL ELECTRONICS I (2 CREDITS)	311802	2	✓	
INDUSTRIAL ELECTRONICS I (3 CREDITS)	311803	3	✓	
INDUSTRIAL ELECTRONICS II (1 CREDIT)	311805	1	✓	
INDUSTRIAL ELECTRONICS II (2 CREDITS)	311812	2	✓	
INDUSTRIAL ELECTRONICS II (3 CREDITS)	311813	3	✓	
INDUSTRIAL MACHINES SHOP I (1 CREDIT)	311900	1	✓	✓
INDUSTRIAL MACHINES SHOP I (2 CREDITS)	311902	2	✓	✓
INDUSTRIAL MACHINES SHOP I (3 CREDITS)	311903	3	✓	✓
INDUSTRIAL MACHINES SHOP II (1 CREDIT)	311905	1	✓	✓
INDUSTRIAL MACHINES SHOP II (2 CREDITS)	311912	2	✓	✓
INDUSTRIAL MACHINES SHOP II (3 CREDITS)	311913	3	✓	✓
GO SAFE	311914	1	✓	
Industrial Machines Shop III (1 credit)	311915	1	✓	✓
Industrial Machines Shop III (2 credits)	311916	2	✓	✓

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Industrial Machines Shop III (3 credits)	311917	3	✓	✓
Industrial Machines Shop IV (1 credit)	311918	1	✓	✓
Industrial Machines Shop IV (2 credits)	311919	2	✓	✓
Industrial Machines Shop IV (3 credits)	311920	3	✓	✓
Industrial and Plant Safety	311921	1	✓	
Introduction to Hazardous Materials	311922	1	✓	
Workplace Safety (1 Credit)	311923	1	✓	
Workplace Safety (2 Credit)	311924	2	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN I (1 CREDIT)	312300	1	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN I (2 CREDITS)	312302	2	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN I (3 CREDITS)	312303	3	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN II (1 CREDIT)	312305	1	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN II (2 CREDITS)	312312	2	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN II (3 CREDITS)	312313	3	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN III (1 CREDIT)	312320	1	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN III (2 CREDITS)	312321	2	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN III (3 CREDITS)	312322	3	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN IV (1 CREDIT)	312330	1	✓	

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OUTDOOR POWER EQUIPMENT TECHNICIAN IV (2 CREDITS)	312331	2	✓	
OUTDOOR POWER EQUIPMENT TECHNICIAN IV (3 CREDITS)	312332	3	✓	
NCCER PLUMBING I (1 credit)	312500	1	✓	✓
NCCER PLUMBING I (2 credits)	312502	2	✓	✓
NCCER PLUMBING I (3 credits)	312503	3	✓	✓
NCCER PLUMBING II (1 credit)	312505	1	✓	✓
NCCER PLUMBING II (2 credits)	312512	2	✓	✓
NCCER PLUMBING II (3 credits)	312513	3	✓	✓
SHEET METAL I (1 CREDIT)	312700	1	✓	
SHEET METAL I (2 CREDITS)	312702	2	✓	
SHEET METAL I (3 CREDITS)	312703	3	✓	
SHEET METAL II (1 CREDIT)	312705	1	✓	
SHEET METAL II (2 CREDITS)	312712	2	✓	
SHEET METAL II (3 CREDITS)	312713	3	✓	
AWS WELDING I (1 credit)	313100	1	✓	✓
AWS WELDING I (2 credits)	313102	2	✓	✓
AWS WELDING I (3 credits)	313103	3	✓	✓
AWS WELDING II (1 credit)	313105	1	✓	✓

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AWS WELDING II (2 credits)	313106	2	✓	✓
AWS WELDING II (3 credits)	313107	3	✓	✓
AWS Welding III (1 credit)	313108	1	✓	✓
AWS Welding III (2 credits)	313109	2	✓	✓
AWS Welding III (3 credits)	313110	3	✓	✓
AWS Welding IV (1 credit)	313111	1	✓	✓
AWS Welding IV (2 credits)	313112	2	✓	✓
AWS Welding IV (3 credits)	313113	3	✓	✓
AWS WELDING I PART I (2 CREDITS)	313114	2	✓	✓
AWS WELDING I PART II (2 CREDITS)	313115	2	✓	✓
AWS WELDING II PART I (2 CREDITS)	313116	2	✓	✓
AWS WELDING II PART II (2 CREDITS)	313117	2	✓	✓
Basic SMAW	313120	1	✓	
SMAW Groove Welds	313121	1	✓	
SMAW Pipe 2G	313122	1	✓	
SMAW Pipe 5G	313123	1	✓	
SMAW Pipe 6G	313124	1	✓	
G.M. TECHNICIAN I (1 CREDIT)	313200	1	✓	

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G.M. TECHNICIAN I (2 CREDITS)	313202	2	✓	
G.M. TECHNICIAN I (3 CREDITS)	313203	3	✓	
G.M. TECHNICIAN II (1 CREDIT)	313205	1	✓	
G.M. TECHNICIAN II (2 CREDITS)	313212	2	✓	
G.M. TECHNICIAN II (3 CREDITS)	313213	3	✓	
NCCER CARPENTRY I (1 CREDIT)	313300	1	✓	✓
NCCER CARPENTRY I (2 CREDITS)	313302	2	✓	✓
NCCER CARPENTRY I (3 CREDITS)	313303	3	✓	✓
NCCER CARPENTRY II (1 CREDIT)	313305	1	✓	✓
NCCER CARPENTRY II (2 CREDITS)	313312	2	✓	✓
NCCER CARPENTRY II (3 CREDITS)	313313	3	✓	✓
NCCER Carpentry III (3 credits)	313317	3	✓	✓
NCCER ELECTRICAL I (1 CREDIT)	313400	1	✓	✓
NCCER ELECTRICAL I (2 CREDITS)	313402	2	✓	✓
NCCER ELECTRICAL I (3 CREDITS)	313403	3	✓	✓
NCCER ELECTRICAL II (1 CREDIT)	313405	1	✓	✓
NCCER ELECTRICAL II (2 CREDITS)	313412	2	✓	✓
NCCER ELECTRICAL II (3 CREDITS)	313413	3	✓	✓

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NCCER Electrical III (1 Credit)	313417	1	✓	✓
NCCER Electrical III (2 Credits)	313418	2	✓	✓
NCCER Electrical III (3 Credits)	313419	3	✓	✓
NCCER Electrical IV (1 Credit)	313420	1	✓	✓
NCCER Electrical IV (2 Credits)	313421	2	✓	✓
NCCER Electrical IV (3 Credits)	313422	3	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC I (1 CREDIT)	313500	1	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC I (2 CREDITS)	313502	2	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC I (3 CREDITS)	313503	3	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC II (1 CREDIT)	313505	1	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC II (2 CREDITS)	313512	2	✓	✓
NCCER INSTRUMENTATION CONTROL MECHANIC II (3 CREDITS)	313513	3	✓	✓
NCCER Instrumentation Control Mechanic III	313517	1	✓	✓
NCCER Instrumentation IV	313520	1	✓	✓
NCCER PIPEFITTER I (1 CREDIT)	313600	1	✓	✓
NCCER PIPEFITTER I (2 CREDITS)	313602	2	✓	✓
NCCER PIPEFITTER I (3 CREDITS)	313603	3	✓	✓
NCCER PIPEFITTER II (1 CREDIT)	313605	1	✓	✓



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OLD COURSE CODE	313606	1	✓	✓
NCCER PIPEFITTER II (2 CREDITS)	313612	2	✓	✓
NCCER PIPEFITTER II (3 CREDITS)	313613	3	✓	✓
NCCER PIPEFITTER III (2 CREDITS)	313616	2	✓	✓
NCCER Pipefitting III	313617	1	✓	✓
NCCER PIPEFITTER IV (2 CREDITS)	313619	2	✓	✓
NCCER Pipefitting IV	313620	1	✓	✓
NCCER Welding Technology III (1 credit)	313621	1	✓	✓
NCCER Welding Technology III (2 credits)	313622	2	✓	✓
NCCER Welding Technology III (3 credits)	313623	3	✓	✓
NCCER Welding Technology IV (1 credit)	313624	1	✓	✓
NCCER Welding Technology IV (2 credits)	313625	2	✓	✓
NCCER Welding Technology IV (3 credits)	313626	3	✓	✓
NCCER WELDING TECHNOLOGY I (1 CREDIT)	313700	1	✓	✓
NCCER WELDING TECHNOLOGY I (2 CREDITS)	313702	2	✓	✓
NCCER WELDING TECHNOLOGY I (3 CREDITS)	313703	3	✓	✓
NCCER WELDING TECHNOLOGY II (1 CREDIT)	313705	1	✓	✓
NCCER WELDING TECHNOLOGY II (2 CREDITS)	313712	2	✓	✓

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NCCER WELDING TECHNOLOGY II (3 CREDITS)	313713	3	✓	✓
NCCER MILLWRIGHT LEVEL I (1 CREDIT)	313714	1	✓	✓
NCCER MILLWRIGHT LEVEL II (1 CREDIT)	313715	1	✓	✓
NCCER Millwright III (1 CREDIT)	313716	1	✓	✓
NCCER Millwright IV (1 CREDIT)	313717	1	✓	✓
NCCER MOBILE CRANE LEVEL I	313720	1	✓	✓
NCCER MOBILE CRANE LEVEL II	313721	1	✓	✓
NCCER HEAVY EQUIPMENT OPERATOR LEVEL I	313722	1	✓	✓
NCCER HEAVY EQUIPMENT OPERATOR LEVEL II	313723	1	✓	✓
SAFETY AND CONSTRUCTION SKILLS: YEAR 1	313724	1	✓	✓
SAFETY AND CONSTRUCTION SKILLS: YEAR 2	313725	1	✓	✓
NCCER Construction Crafts	313726	1	✓	✓
Quality Controls	313727	1	✓	✓
NCCER INDUSTRIAL MAINTENANCE LEVEL II (1 CREDIT)	313729	1	✓	✓
NCCER INDUSTRIAL MAINTENANCE ELECTRICAL & INSTRUMENTATION I	313730	2	✓	✓
NCCER Rigging I (1 Credit)	313731	1	✓	✓
NCCER Rigging I (2 Credit)	313732	2	✓	✓
NCCER Rigging I (3 Credit)	313733	3	✓	✓

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NCCER Rigging II (1 Credit)	313734	1	✓	✓
NCCER Rigging II (2 Credit)	313735	2	✓	✓
NCCER Rigging II (3 Credit)	313736	3	✓	✓
NCCER Rigging III (1 Credit)	313737	1	✓	✓
NCCER Rigging III (2 Credit)	313738	2	✓	✓
NCCER Rigging III (3 Credit)	313739	3	✓	✓
NCCER MILLWRIGHT LEVEL I (2 CREDITS)	313740	2	✓	✓
NCCER MILLWRIGHT LEVEL I (3 CREDITS)	313741	3	✓	✓
NCCER MILLWRIGHT LEVEL II (2 CREDITS)	313742	2	✓	✓
NCCER MILLWRIGHT LEVEL II (3 CREDITS)	313743	3	✓	✓
NCCER MILLWRIGHT LEVEL III (2 CREDITS)	313744	2	✓	✓
NCCER MILLWRIGHT LEVEL III (3 CREDITS)	313745	3	✓	✓
NCCER MILLWRIGHT LEVEL IV (2 CREDITS)	313746	2	✓	✓
NCCER MILLWRIGHT LEVEL IV (3 CREDITS)	313747	3	✓	✓
NCCER INSULATING I	313830	2	✓	✓
Introduction to Logistics	313831	1	✓	
Transportation Management	313832	1	✓	
Supply Chain Management	313833	1	✓	

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Management Information Systems	313834	1	✓	
Warehouse and Inventory Management	313835	1	✓	
Maintenance Assistant	313836	1	✓	
Logistics I	313837	1	✓	
Logistics II	313838	1	✓	
Logistics III	313839	1	✓	
Logistics IV	313840	1	✓	
NCCER Plumbing I (1 Credit)	321500	1	✓	✓
NCCER Plumbing I (2 Credits)	321502	2	✓	✓
NCCER Plumbing I (3Credits)	321503	3	✓	✓
NCCER Plumbing II (1 Credit)	321505	1	✓	✓
NCCER Plumbing II (2 Credit)	321512	2	✓	✓
NCCER Plumbing II (3 Credit)	321513	3	✓	✓
LCTCS course(s) that generate Dual Enrollment credit aligned with approved pathway courses				

\*- Courses that count towards an academic requirement cannot also count towards the requirement of 9 Carnegie credits for a graduation pathway.

Note: course codes beginning with "01", "04", "07", "08", "09", "10", "11" or "31" are CTE courses that qualify for the basic 6% CTE adder payment.

<b>Universal Jump Start Courses – these courses are part of every Jump Start graduation pathway</b>				
Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
Accounting	040101	1	☐	☐
Accounting II	040104	1	☐	☐

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Entrepreneurship (Business)	040110	1	☐	
Word Processing	040203	1	☐	
Computer Technology Literacy	040220	1	☐	
Keyboarding	040225	½	☐	
Keyboarding Applications	040226	½	☐	
Keyboarding	040229	1	☐	
Business Law	040303	½	☐	
Business Communications	040305	1	☐	
Principles of Business	040306	1	☐	
Business Math*	040307	1	☐	
Business Computer Applications (BCA)	040400	1	☐	
Introduction to Business Computer Applications (IBCA)	040401	1	☐	
Customer Service	041001	1	☐	
Personal Finance	041022	½	☐	
Principles of Marketing I	041025	1	☐	
Principles of Marketing II	041026	1	☐	
Entrepreneurship - Marketing	041040	1	☐	
Entrepreneurship II - Advanced Micro-Enterprise Credentials	041041	1	☐	☐
JAG III	042030	1	☐	☐
JAG IV	042040	1	☐	☐
Speech I	051101	1		
Speech II	051102	1		
Career Success Skills	080407	1	☐	

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Principles of Finance	080670	½	☐	
Entrepreneurship (NAF)	080685	½	☐	
Managerial Accounting	080691	½	☐	
Customer Service	080720	½	☐	
Assistive Technology for the Visually Impaired	080900	1		
Business Enterprises for the Visually Impaired	080901	1		
Braille I	080902	1		
Braille II	080903	1		
First Responder	090710	½	☐	
First Responder	090711	1	☐	
First Responder	090712	2	☐	
Technical Writing* [ <i>TOPS Tech-qualifying English course</i> ]	120350	1		
AMERICAN SIGN LANGUAGE I	123456	1		
AMERICAN SIGN LANGUAGE II	123457	1		
Technical Reading and Writing* (NOT a TOPS Tech-qualifying course)	125010	1		
Business Communications	125030	1		
Financial Literacy (formerly Financial Mathematics)*	160345	1		
Technical Math*	165010	1		
JR ROTC III	170003	1		
JR ROTC IV	170004	1		
Law Studies	220506	1		
Industrial and Plant Safety	311921	1	☐	
Introduction to Hazardous Materials	311922	1	☐	

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Workplace Safety (1 credit)	311923	1	☐	
Workplace Safety (2 credits)	311924	1	☐	
Financial Literacy (formerly Financial Mathematics) <b>INACTIVE COURSE CODE</b>	040304	Please use course code 160345 for this course		

\*- Courses that count towards an academic requirement cannot also count towards the requirement of 9 Carnegie credits for a graduation pathway.

Note: course codes beginning with "01", "04", "07", "08", "09", "10", "11" or "31" are CTE courses that qualify for the basic 6% CTE adder payment.

**Career Readiness Courses – these courses are part of every Jump Start pathway**

These courses all qualify as Career Readiness courses. Every Jump Start student must take a minimum of one Carnegie credit of Career Readiness courses.

There is no limit on the number of Career Readiness course credits a student may apply to the 9 CTE course credit requirement for the Jump Start Career Diploma.

**Career Readiness courses are universal courses – they apply to every Jump Start graduation pathway.**

Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
AgriScience I*	010301	1	☐	
Career Readiness Agriscience Agribusiness Natural Resources	010331	1	☐	
JAG I	042010	1	☐	☐
JAG II	042020	1	☐	☐
Education for Careers	080400	½	☐	
Education for Careers	080401	1	☐	
Journey to Careers Part 1	080402	½	☐	
Journey to Careers	080403	1	☐	
Journey to Careers Part 2	080404	½	☐	
Education for Careers Part I	080405	½	☐	
Education for Careers Part II	080406	½	☐	
Basic Career Readiness	080409	1	☐	
Advanced Career Readiness (including regionally-developed Career Readiness Courses)	080410	1	☐	

\*- Courses that count towards an academic requirement cannot also count towards the requirement of 9 Carnegie credits for a graduation pathway.

Note: course codes beginning with "01", "04", "07", "08", "09", "10", "11" or "31" are CTE courses that qualify for the basic 6% CTE adder payment.



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**Internships, Cooperative Courses and Virtual Workplace Experience Courses**

*Cooperative courses, Virtual Workplace Experience courses, Pre-Apprenticeship and Internships (with the exception of Non-CTE Internships) are universal courses - they apply to every Jump Start graduation pathway.*

**Internships**

There are three types of internships:

- 1) **CDF-Qualifying Internships** where students are placed in a company that operates in one of the WIC-approved high-demand industry sectors. CDF-Qualifying Internships qualify for *both* the 6% MFP adder paid for all CTE courses *and* the 6% Career Development Fund (CDF) adder;
- 2) **CTE Internships** where students are placed in a company that operates in any other industry sectors. CTE Internships qualify *only* for the 6% MFP adder for all CTE courses; and
- 3) **Non-CTE internships** where students are placed in a non-business internship. Non-CTE Internships do not qualify for any MFP adder. Examples of Non-CTE Internships include internships at a school office, a volunteer organization or a religious organization. **Non-CTE Internships are not part of any Jump Start graduation pathway.**

**WIC-Approved High-Demand Industry Sectors**

Internships that qualify for the 6% CDF payment must be in a WIC-approved high-demand industry sector.

<ul style="list-style-type: none"> <li>Automotive Service/Repair</li> <li>Construction Crafts</li> <li>Culinary (<u>only</u> for students pursuing the statewide ProStart/ SafeServ credentials)</li> </ul>	<ul style="list-style-type: none"> <li>Healthcare</li> <li>HVAC</li> <li>Information Technology</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturing</li> <li>Pharmacy</li> <li>Transportation and Logistics</li> </ul>
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<b>Internships</b>				
Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
CDF-Qualifying CTE Internship I (2 CREDITS)	080200	1	☐	☐
CDF-Qualifying CTE Internship II (2 CREDITS)	080201	2	☐	☐
CDF-Qualifying CTE Internship I (1 CREDIT)	080202	1	☐	☐
CDF-Qualifying CTE Internship II (1 CREDIT)	080203	2	☐	☐
CTE Internship I (1 credit; Non-CDF)	110402	1	☐	
CTE Internship I (2 credits; Non-CDF)	110403	2	☐	
CTE Internship II (1 credit; Non-CDF)	110404	1	☐	
CTE Internship II (2 credits; Non-CDF)	110405	2	☐	
<b>Non-CTE Internships are <u>not</u> part of any Jump Start graduation pathway.</b>				
Non-CTE Internship I	400200	1		
Non-CTE Internship I	400210	2		
Non-CTE Internship II	400220	2		
Non-CTE Internship II	400230	1		

<b>Virtual Workplace Experience Courses approved for 2016-2017</b>				
Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
Virtual Workplace Experience I	080204	½	☐	
Virtual Workplace Experience I	080205	1	☐	
Virtual Workplace Experience II	080206	½	☐	
Virtual Workplace Experience II	080207	1	☐	
Authentic Workplace Experience	080212	1	☐	

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<b>Cooperative Courses</b>				
Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
Cooperative AgriScience Education I	010323	3	☐	
Cooperative AgriScience Education II	010325	3	☐	
Cooperative Office Education	040205	3	☐	
Cooperative Marketing Education I	041010	3	☐	
Cooperative Marketing Education II	041011	3	☐	
General Cooperative Education I	080300	3	☐	
General Cooperative Education II	080301	3	☐	
Cooperative Health Occupations	090004	3	☐	
Cooperative Family and Consumer Services	100800	3	☐	
Cooperative Technology Education	110098	3	☐	

<b>Pre-Apprenticeship Courses</b>				
Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
Pre-Apprenticeship I (2 credits)	080208	2	☐	
Pre-Apprenticeship II (2 credits)	080209	2	☐	
Pre-Apprenticeship I (1 credit)	080210	1	☐	
Pre-Apprenticeship II (1 credit)	080211	1	☐	

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<b>CDF-Qualifying Pre-Apprenticeship Courses</b>				
<b>Course Title</b>	<b>Course Code</b>	<b>Carnegie Credits</b>	<b>CTE 6%</b>	<b>CDF 6%</b>
CDF-QUALIFYING PRE-APPRENTICESHIP I (1 CREDIT)	080230	1	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP I (2 CREDITS)	080231	2	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP II (1 CREDIT)	080233	1	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP II (2 CREDITS)	080234	2	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP III (1 CREDIT)	080236	1	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP III (2 CREDITS)	080237	2	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP IV (1 CREDIT)	080239	1	☐	☐
CDF-QUALIFYING PRE-APPRENTICESHIP IV (2 CREDITS)	080240	2	☐	☐

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<b>Culminating Credential(s)</b>
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<b>Statewide Credentials</b>
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Culminating Credentials/ Certifying Agencies	<p><b>ADVANCED:</b> Attain a Louisiana post-secondary institution Technical Diploma (TD) or above aligned with this pathway</p>	<p><b>BASIC:</b></p> <ol style="list-style-type: none"> <li>1) Certification for Manufacturing (C4M)– Louisiana Economic Development (LED) FastStart</li> <li>2) Certification for Machining (C4Machining) – LED FastStart OR</li> <li>3) Attain a Louisiana post-secondary institution Certificate of Technical Studies aligned with this pathway</li> </ol>
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<b>Regional Credentials</b>
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Culminating Credential(s) / Certifying Industry Agency(ies)	<p><b>Core Credentials:</b></p> <ol style="list-style-type: none"> <li>1) C4M Helper Options - Student attains passing grades in the initial two courses of the C4M curriculum (Introduction to Manufacturing, Manufacturing Tools and Equipment) AND either: a) NCCER Core; OR b) OSHA 30</li> <li>2) C4Machining Helper – Student attains passing grades in the initial two courses of the C4Machining curriculum AND either: a) NCCER Core; OR b) OSHA 30</li> </ol> <p style="background-color: yellow;">See important notes below concerning C4M Helper and C4Machining Helper modules.</p> <p><b>Complementary Credentials: students must attain two credentials from the list below:</b></p> <p><b>Recommended Safety Complementary Credentials</b></p> <ol style="list-style-type: none"> <li>1) Basic Safety Orientation - Association of Reciprocal Safety Councils</li> <li>2) First Aid for Students Certification – American Red Cross, American Heart Association, National Safety Council or approved equivalent or approved equivalent*</li> <li>3) OSHA 10 – General Industry - OSHA Certificate of Completion</li> <li>4) OSHA 10 – Construction - OSHA Certificate of Completion</li> </ol> <p>* - Jump Start policy is flexible in recognizing all legitimate First Aid programs. Currently-approved First aid for Student Certification include American Red Cross, American Heart Association and National Safety Council. If a district or charter school wants to use a different First Aid certification, they must provide Jump Start with evidence that their intended First Aid certification includes all required components as well as a practical certification. Successful completion of First Aid certification</p>
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	<p>requirements in Regional and Integrated pathways may include First Aid only, CPR and AED only, or a comprehensive combination of First Aid, CPR and AED.</p> <p><b>Recommended Computer Literacy Complementary Credentials</b></p> <p>5) Internet and Computing Core Certification (IC<sup>3</sup>) – Certiport          6) Microsoft Office Specialist Excel – Microsoft and Certiport          7) Microsoft Office Specialist PowerPoint – Microsoft and Certiport          8) Microsoft Office Specialist Word – Microsoft and Certiport</p> <p><b>Other Recommended Complementary Credentials</b></p> <p>9) Certified Guest Service Professional - American Hospitality &amp; Lodging Association          10) Customer Service and Sales – National Retail Federation          11) National Career Readiness Certificate WorkKeys Silver, Gold or Platinum - ACT          12) NCCER Core – National Center for Construction Education Research (NCCER)          13) Complementary Micro-Enterprise Credential - BRAC (may not be used in conjunction with Regional Micro-Enterprise Credential)</p> <p><b>Additional Approved (But Not Recommended) Complementary Credentials</b></p> <p>14) QuickBooks – Certiport (issue: this is a very demanding credential; students are encouraged to attain this credential, but it will be significantly more challenging to attain than the recommended Complementary credentials)</p>
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**Important Note on the C4M Helper and the C4Machining Helper Credentials**

The LDOE supports the state’s priority (as articulated by the Louisiana Workforce Investment Council - WIC) in maximizing the opportunities for students to receive training in advanced manufacturing.

Therefore, the LDOE will approve pilot implementations of C4M Helper and the C4Machining Helper certifications that require students to: a) complete the first two courses of the C4M or C4Machining course progression; and b) attain OSHA 30 certification.

During the summer of 2019 the LDOE will evaluate the hiring experiences of students with this C4M Helper and C4Machining certifications. At that time, the LDOE (in collaboration with Louisiana Economic Development, the LWC and WIC) will determine whether the C4M Helper and C4Machining certifications will continue to allow OSHA 30 as a substitute for NCCER Core.

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## Sample Schedule

This schedule is *only one example* of how a student can meet the requirements of this pathway and graduate on time with the required culminating credential(s).

Each high school will develop its own standard schedules for Jump Start students based on the courses available to its students (in school, at the local technical college, or via Course Choice).

Sample Schedule – Statewide Credential			
9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
Algebra I English I Physical Science Civics <b>IBCA</b> <b>Regional Career Readiness Course</b> Physical Education I	Geometry English II Biology I <b>Agriscience I</b> <b>Principles of Business</b> Physical Education II / Health <i>Elective Course</i>	Algebra II English III U.S. History <b>Introduction to Manufacturing*</b> <b>Manufacturing Tools &amp; Equipment</b> <i>Elective Course</i> <i>Elective Course</i>	Advanced Math – Functions and Statistics English IV <b>Advanced Career Readiness</b> <b>Automation in Manufacturing</b> <b>Introduction to Fabrication PTech and Machining</b> <i>Elective Course</i> <i>Elective Course</i>
7 credits	7 credits	7 credits	7 credits
Credentials Earned by this Hypothetical Student	Certification for Manufacturing (C4M)– Louisiana Economic Development FastStart		
<b><i>Bold italicized courses count as one of the required 9 Carnegie credits for graduating via this CTE pathway</i></b>			

\* - includes course material that enables students to attain the NCCER Core credential

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Sample Schedule – Regional Credential			
9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
Algebra I English I Physical Science Civics <b>IBCA</b> <b>Regional Career Readiness Course I</b> Physical Education I	Geometry English II Biology U.S. History <b>First Responder</b> <b>Speech I</b> Physical Education II / Health	Financial Math English III <b>Drafting</b> <b>Introduction to Manufacturing*</b> <i>NCCER Math Prep (Course Choice offering)</i> <i>Elective Course</i> <i>Elective Course</i>	Business Math Business English <b>CTE Internship</b> <b>Manufacturing Tools &amp; Equipment</b> <b>Regional Career Readiness Course II</b> <i>Elective Course</i> <i>Elective Course</i>
7 credits	7 credits	7 credits	7 credits
Credentials Earned by this Hypothetical Student	Core Credential		Complementary Credentials
	Passing grades on the C4M Introduction to Manufacturing and Manufacturing Tools & Equipment courses above AND NCCER Core		1) First Aid for Students Certification – Red Cross 2) OSHA 10 General Industry – OSHA Certification of Completion
<b><i>Bold italicized courses count as one of the required 9 Carnegie credits for graduating via this CTE pathway</i></b>			

\* - includes course materials that enable students to attain the NCCER Core credential

***Every Pathway Can be Adapted for Students Meeting the April Dunn Act Eligibility Criteria***

***Every Jump Start graduation pathway can be adapted for students with disabilities who meet the April Dunn Act eligibility criteria.*** Students must complete nine credits of CTE courses from the courses listed in the pathway. The IEP team has the authority to determine the credentialing level a student must achieve for the purposes of graduation (analogous to using individual performance criteria to meet EOC requirements for the purposes of graduation).

IEP teams with questions about how to adapt this graduation pathway for their student should contact [JumpStart@la.gov](mailto:JumpStart@la.gov)