Pathway

Manufacturing, Construction Crafts and Logistics

Integrated Pathway	**The Manufacturing, Construction Crafts and Logistics graduation pathway is an Integrated pathway. Students must:** **1) pass 9 Carnegie credits of courses from this pathway;** **2) including at least one Career Readiness course (one Carnegie credit);** **3) attain one Statewide credential (or the LCTCS equivalent certificate / diploma); *OR*** **4) one Core credential (or the LCTCS equivalent certificate / diploma); and** **5) two Complementary credentials.**

High-Demand Careers Related to this Pathway	5 Star: Service Unit Operator; Heating, Air Conditioning & Refrigeration Mechanic & Installer; Cost Estimator; Inspector, Mechanical Engineer; Welder 4 Star: Derrick Operators; Rotary Drill Operator; Roustabouts; Bus & Truck Mechanic; Diesel Engine Specialist; Farm Equipment Mechanic and Service Technician; AgriScience Teacher 3 Star: Engine & Other Machine Assembler Also: Industrial Engineering Technicians, Petroleum Pump Systems Operators, Refinery Operators, Chemical Plant and System Operators, Maintenance Workers, Electricians, Construction Mangers, Manchinists, Mechanical Drafters

Starting Salary Ranges for this Pathway	$25,000 - $38,000

Manufacturing, Construction Crafts and Logistics Graduation Pathway: Sections

1	**Pathway-Specific Courses**	This section lists the course titles and codes for courses specific to this pathway Each table also indicates those courses that qualify for the basic 6% CTE adder (*course codes beginning with "01", "04", "07", "08", "09", "10", "11" or "31" are CTE courses)* as well as those courses that qualify for the additional 6% Career Development Fund (or CDF) payment.
2	**Universal Jump Start Courses**	This section lists the course titles and course codes for courses that are part of every Jump Start graduation pathway
3	**Career Readiness Courses**	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.

4	**Internships**	This section indicates the three types of internships and the appropriate course codes.
5	**Culminating Credentials**	This section indicates the required culminating credential(s) for this pathway.
6	**Sample Schedule**	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 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

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.*

Pathway-Specific Courses: Manufacturing, Construction Crafts and Logistics

Course Title	Course Code	Carnegie Credits	CTE 6%	CDF 6%
Advanced Electrical and Electronics Laboratory	310384	1	✔	
Advanced Electrical Electronics	310383	1	✔	
Advanced Electricity / Electronics	110610	1	✔	
Advanced Sheet Metal	110240	1	✔	
Advanced Technical Drafting	110590	1	✔	
Advanced Wood Technology	110120	1	✔	
Aerospace Engineering	110830	1	✔	
Ag Construction Technology	010444	1	✔	
Ag Power Equipment	010446	1	✔	
AgriScience II	010302	1	✔	
AgriScience III	010303	1	✔	
Agriscience IV	010304	1	✔	
Agriscience Construction Technology	010344	½	✔	
Agriscience - Leadership Development	010354	½	✔	
Agriscience - Leadership	010364	1	✔	
Air Conditioning/Refrigeration I	310102	2	✔	
Air Conditioning/Refrigeration I	310103	3	✔	
Air Conditioning/Refrigeration II	310105	1	✔	
Air Conditioning/Refrigeration II	310112	2	✔	
Air Conditioning/Refrigeration II	310113	3	✔	
Architectural Drafting	110580	1	✔	

Pathway	Manufacturing, Construction Crafts and Logistics

Automation in Manufacturing (C4M)	110258	1	✔	✔
Auto Body Repair 1	310200	1	✔	✔
Auto Body Repair 1	310202	2	✔	✔
Auto Body Repair 1	310203	3	✔	✔
Auto Body Repair 2	310305	1	✔	✔✗
Auto Body Repair 2	310212	2	✔	✔
Auto Body Repair 2	310213	3	✔	✔
Auto Body Repair 3	310214	1	✔	✔
Auto Body Repair 3	310215	2	✔	✔
Auto Body Repair 3	310216	3	✔	✔
Auto Body Repair 4	310217	1	✔	✔
Auto Body Repair 4	310218	2	✔	✔
Auto Body Repair 4	310219	3	✔	✔
Automotive Technician 1	310300	1	✔	✔
Automotive Technician 1	310312	2	✔	✔
Automotive Technician 1	310313	3	✔	✔
Automotive Technician 2	310305	1	✔	✔
Automotive Technician 2	310322	2	✔	✔
Automotive Technician 2	310323	3	✔	✔
Automotive Technician 3	310306	1	✔	✔
Automotive Technician 3	310332	2	✔	✔
Automotive Technician 3	310333	3	✔	✔
Automotive Technician 4	310307	1	✔	✔

Pathway	Manufacturing, Construction Crafts and Logistics

Automotive Technician 4	310342	2	✔	✔
Automotive Technician 4	310343	3	✔	✔
AWS Welding I	313100	1	✔	✔
AWS Welding I	313102	2	✔	✔
AWS Welding I	313103	3	✔	✔
AWS Welding II	313105	1	✔	✔
AWS Welding II	313106	2	✔	✔
AWS Welding II	313107	3	✔	✔
Basic Electricity I	310400	1	✔	
Basic Electricity I	310402	2	✔	
Basic Electricity I	310403	3	✔	
Basic Electricity II	310410	1	✔	
Basic Electricity II	310412	2	✔	
Basic Electricity II	310413	3	✔	
Basic Electricity/Electronics	110600	1	✔	
Basic Sheet Metals	110200	1	✔	
Basic SMAW	313120	1	✔	
Basic Technical Drafting	110560	1	✔	
Basic Wood Technology	110100	1	✔	
Building Materials and Estimating	310620	1	✔	
Business in a Global Economy	080660	½	✔	
C4M in Agriscience I	010913	1	✔	✔
C4M in Agriscience I	010914	2	✔	✔

Pathway	Manufacturing, Construction Crafts and Logistics

C4M in Agriscience I	010915	3	✔	✔
C4M in Agriscience II	010916	1	✔	✔
C4M in Agriscience II	010917	2	✔	✔
C4M in Agriscience II	010918	3	✔	✔
C4M in Agriscience III	010919	1	✔	✔
C4M in Agriscience III	010920	2	✔	✔
C4M in Agriscience III	010921	3	✔	✔
C4M in Agriscience IV	010922	1	✔	✔
C4M in Agriscience IV	010923	2	✔	✔
C4M in Agriscience IV	010924	3	✔	✔
Carpentry Calculations	310621	1	✔	
Chemistry*	150401	1		
Civil Engineering & Architecture	110840	1	✔	
CMAD Drafting	110570	1	✔	✔
CMAD Drafting	110571	2	✔	✔
CMAD Drafting	110572	3	✔	✔
Computer Integrated Manufacturing	110850	1	✔	
Computer Science and Software Engineering	tbd	1	✔	
Computer Science Applications	tbd	1	✔	
Construction Crafts	313726	1	✔	
Design, Blueprint Reading and Codes	310622	1	✔	
Digital Electronics	110820	1	✔	
Drafting	110560	1	✔	

Pathway	Manufacturing, Construction Crafts and Logistics

Drafting Design & Tech. I	311300	1	✔	
Drafting Design & Tech. I	311302	2	✔	
Drafting Design & Tech. I	311303	3	✔	
Drafting Design & Tech. II	311305	1	✔	
Drafting Design & Tech. II	311312	2	✔	
Drafting Design & Tech. II	311313	3	✔	
Electronics I	311500	1	✔	
Electronics I	311505	2	✔	
Electronics I	311503	3	✔	
Engineering & Design I: Intro to STEM Careers	080110	1	✔	
Engineering & Design II: STEM & Industrial Problem Solving	080120	1	✔	
Engineering Design (& Product) Development	110860	1	✔	
Environmental Science*	150310	1		
Environmental Sustainability	tbd	1	✔	
Exterior Finishes	310627	1	✔	
Foundation and Floor Framing	310624	1	✔	
Fundamentals of Industrial Scaffolding	310631	1	✔	
Fundamentals of Industrial Scaffolding	310632	2	✔	
General Technology Education	110010	1	✔	
Geometry*	160323	1		
Industrial and Plant Safety	311921	1	✔	
Industrial Electronics I	311800	1	✔	
Industrial Electronics I	311802	2	✔	

Industrial Electronics I	311803	3	✔	
Industrial Electronics II	311805	1	✔	
Industrial Electronics II	311812	2	✔	
Industrial Electronics II	311813	3	✔	
Industrial Machines Shop I	311900	1	✔	✔
Industrial Machines Shop I	311902	2	✔	✔
Industrial Machines Shop I	311903	3	✔	✔
Industrial Machines Shop II	311905	1	✔	✔
Industrial Machines Shop II	311912	2	✔	✔
Industrial Machines Shop II	311913	3	✔	✔
Industrial Machines Shop III	311915	1	✔	✔
Industrial Machines Shop III	311916	2	✔	✔
Industrial Machines Shop III	311917	3	✔	✔
Industrial Machines Shop IV	311918	1	✔	✔
Industrial Machines Shop IV	311919	2	✔	✔
Industrial Machines Shop IV	311920	3	✔	✔
Introduction to Engineering Design	110800	1	✔	
Introduction to Fabrication P-Tech and Machining (C4M)	110258	1	✔	✔
Introduction to Hazardous Materials	311922	1	✔	
Introduction to Logistics	313831	1	✔	
Introduction to Manufacturing (C4M) *Also called: Manufacturing Process and Team Building*	110256	1	✔	✔
Interior Finishes	310628	1	✔	
Land Design, Construction and Maintenance	010470	1	✔	

Pathway	Manufacturing, Construction Crafts and Logistics

LCTCS course(s) that generate Dual Enrollment credit aligned with approved pathway courses				
Logistics I	313837	1	✔	
Logistics II	313838	1	✔	
Logistics III	313839	1	✔	
Logistics IV	313840	1	✔	
Maintenance Assistant	313836	1	✔	
Management Information Systems	313834	1	✔	
Manufacturing Tools and Equipment (C4M)	110257	1	✔	✔
NCCER Carpentry I	110701/313300	1	✔	✔
NCCER Carpentry I	110702/313302	2	✔	✔
NCCER Carpentry I	110703/313303	3	✔	✔
NCCER Carpentry II	110706/313305	1	✔	✔
NCCER Carpentry II	110707/313312	2	✔	✔
NCCER Carpentry II	110708/313313	3	✔	✔
NCCER Carpentry III	110700	1	✔	✔
NCCER Carpentry III	110704	2	✔	✔
NCCER Carpentry III	110705	3	✔	✔
NCCER Carpentry IV	110709	1	✔	✔
NCCER Carpentry IV	110710	2	✔	✔
NCCER Carpentry IV	110714	3	✔	✔
NCCER Carpentry in AgriScience	010601	1	✔	✔
NCCER Carpentry in AgriScience	010602	2	✔	✔
NCCER Carpentry in AgriScience	010603	3	✔	✔

NCCER Construction Technology	110110	1	✔	✔
NCCER Core	311720	1	✔	✔
NCCER Electrical I	110711/313400	1	✔	✔
NCCER Electrical I	110712/313402	2	✔	✔
NCCER Electrical I	110713/313403	3	✔	✔
NCCER Electrical II	110716/313405	1	✔	✔
NCCER Electrical II	110717/313412	2	✔	✔
NCCER Electrical II	110718/313413	3	✔	✔
NCCER Electrical in Agriscience	010701	1	✔	✔
NCCER Electrical in Agriscience	010702	2	✔	✔
NCCER Electrical in Agriscience	010703	3	✔	✔
NCCER Electrical in Agriscience II	010705	2	✔	✔
NCCER Electrical in Agriscience II	010706	3	✔	✔
NCCER Electrical in Agriscience III	010707	1	✔	✔
NCCER Electrical in Agriscience III	010708	2	✔	✔
NCCER Electrical in Agriscience III	010709	3	✔	✔
NCCER Electrical in Agriscience IV	010710	1	✔	✔
NCCER Electrical in Agriscience IV	010711	2	✔	✔
NCCER Electrical in Agriscience IV	010712	3	✔	✔
NCCER Heavy Equipment	313722	1	✔	✔
NCCER Heavy Equipment	313723	2	✔	✔
NCCER HVAC I	310100	1	✔	✔
NCCER HVAC I	310102	2	✔	✔

NCCER HVAC I	310103	3	✔	✔
NCCER HVAC II	310105	1	✔	✔
NCCER HVAC II	310112	2	✔	✔
NCCER HVAC II	310113	3	✔	✔
NCCER HVAC III	310114	1	✔	✔
NCCER HVAC III	310115	2	✔	✔
NCCER HVAC III	310116	3	✔	✔
NCCER HVAC IV	310117	1	✔	✔
NCCER HVAC IV	310118	2	✔	✔
NCCER HVAC IV	310119	3	✔	✔
NCCER Industrial Maintenance Electrical & Instrumentation	313730	2	✔	✔
NCCER Industrial Maintenance Electrical & Instrumentation II	tbd	1	✔	
NCCER Instrumentation Control Mechanic I	110721/313500	1	✔	✔
NCCER Instrumentation Control Mechanic I	110722/313502	2	✔	✔
NCCER Instrumentation Control Mechanic I	110723/313403	3	✔	✔
NCCER Instrumentation Control Mechanic II	110726/313505	1	✔	✔
NCCER Instrumentation Control Mechanic II	110727/313512	2	✔	✔
NCCER Instrumentation Control Mechanic II	110728/313513	3	✔	✔
NCCER Instrumentation Control Mechanic III	313517	1	✔	✔
NCCER Instrumentation Control Mechanic IV	313520	1	✔	✔
NCCER Insulating	313830	2	✔	✔
NCCER Millwright Level 1	313714	1	✔	✔
NCCER Millwright Level 2	313715	1	✔	✔

NCCER Millwright Level 3	313716	1	✔	✔
NCCER Millwright Level 4	313717	1	✔	✔
NCCER Mobile Crane 1	313720	1	✔	✔
NCCER Mobile Crane 2	313721	1	✔	✔
NCCER Pipefitter I	110731/313600	1	✔	✔
NCCER Pipefitter I	110732/313602	2	✔	✔
NCCER Pipefitter I	110733/313603	3	✔	✔
NCCER Pipefitter II	110736/313605	1	✔	✔
NCCER Pipefitter II	110737/313612	2	✔	✔
NCCER Pipefitter II	110738/313613	3	✔	✔
NCCER Pipefitter III	313617	1	✔	✔
NCCER Pipefitter IV	313620	1	✔	✔
NCCER Plumbing I	321500	1	✔	✔
NCCER Plumbing I	321502	2	✔	✔
NCCER Plumbing I	321503	3	✔	✔
NCCER Plumbing II	321505	1	✔	✔
NCCER Plumbing II	321512	2	✔	✔
NCCER Plumbing II	321513	3	✔	✔
NCCER Rigging I	313731	1	✔	✔
NCCER Rigging I	313732	2	✔	✔
NCCER Rigging I	313733	3	✔	✔
NCCER Rigging II	313734	1	✔	✔
NCCER Rigging II	313735	2	✔	✔

NCCER Rigging II	313736	3	✔	✔
NCCER Rigging III	313737	1	✔	✔
NCCER Rigging III	313738	2	✔	✔
NCCER Rigging III	313739	3	✔	✔
NCCER Welding in AgriScience I	010901	1	✔	✔
NCCER Welding in AgriScience II	010902	2	✔	✔
NCCER Welding in AgriScience III	010903	3	✔	✔
NCCER Welding Technology I	110741/313700	1	✔	✔
NCCER Welding Technology I	110742/313702	2	✔	✔
NCCER Welding Technology I	110743/313703	3	✔	✔
NCCER Welding Technology II	110748/313705	1	✔	✔
NCCER Welding Technology II	110747/313712	2	✔	✔
NCCER Welding Technology II	110748/313713	3	✔	✔
Oil & Gas	110955	1	✔	✔
Oil Patch Preparation System	110957	½	✔	✔
Outdoor Power Equipment Technician I	312300	1	✔	
Outdoor Power Equipment Technician I	312302	2	✔	
Outdoor Power Equipment Technician I	312303	3	✔	
Outdoor Power Equipment Technician II	312305	1	✔	
Outdoor Power Equipment Technician II	312312	2	✔	
Outdoor Power Equipment Technician II	312313	3	✔	
Principles of Engineering	110810	1	✔	
Pre-Apprenticeship I (Carpentry)	080208	2	✔	

Pre-Apprenticeship II (Carpentry)	080209	2	✔	
Process Instrumentation I	110915	1	✔	
Process Instrumentation II	110916	1	✔	
Process Technician I	110911	1	✔	✔
Process Technician II	110912	1	✔	✔
Process Technician I	110913	2	✔	✔
Process Technician I	110914	3	✔	✔
Process Technician II	110917	2	✔	✔
Process Technician II	110918	3	✔	✔
Process Technician III	110919	1	✔	✔
Process Technician III	110920	2	✔	✔
Process Technician III	110921	3	✔	✔
Project Management	310630	1	✔	
Rod Identifier/Runner	110232	1	✔	
Roofing Construction	310626	1	✔	
Safety and Construction Skills: Year 1	313724	2	✔	
Safety and Construction Skills: Year 2	313725	2	✔	
Site Layout	310623	1	✔	
Supply Chain Management	313833	1	✔	
T-2 Safety Systems	110956	1	✔	✔
Transportation Management	313832	1	✔	
Wall and Ceiling Framing	310625	1	✔	
Warehouse and Inventory Management	313835	1	✔	

Pathway	Manufacturing, Construction Crafts and Logistics

Workplace Safety	311923	1	✔	
Workplace Safety	311924	2	✔	

*- 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.*

Pathway	Manufacturing, Construction Crafts and Logistics

Universal Jump Start Courses – these courses are part of every Jump Start graduation pathway				
Course Title	**Course Code**	**Carnegie Credits**	**CTE 6%**	**CDF 6%**
Accounting	040101	1	✔	
Accounting II	040104	1	✔	
Assistive Technology for the Visually Impaired	080900	1		
Braille I	080902	1		
Braille II	080903	1		
Business Communications	040305	1	✔	
Business Communications	125030	1		
Business Computer Applications (BCA)	040400	1	✔	
Business Enterprises for the Visually Impaired	080901	1		
Business Law	040303	½	✔	
Business Math*	040307	1	✔	
Career Success Skills	080407	1	✔	
Computer Technology Literacy	040220	1	✔	
Customer Service	080720	½	✔	
Customer Service	041001	1	✔	
Entrepreneurship (Business)	040110	1	✔	
Entrepreneurship	041040	1	✔	
Entrepreneurship II	041041	1	✔	
Entrepreneurship (NAF)	080685	½	✔	
~~Financial Literacy (formerly Financial Mathematics)~~ *INACTIVE COURSE CODE*	~~040304~~	Please use course code 160345 for this course		
Financial Literacy (formerly Financial Mathematics)*	160345	1		

Pathway	Manufacturing, Construction Crafts and Logistics

First Responder	090710	½	✔	
First Responder	090711	1	✔	
First Responder	090712	2	✔	
Introduction to Business Computer Applications (IBCA)	040401	1	✔	
JAG III	042030	1	✔	
JAG IV	042040	1	✔	
JR ROTC III	170003	1		
JR ROTC IV	170004	1		
Keyboarding	040229	1	✔	
Keyboarding	040225	½	✔	
Keyboarding Applications	040226	½	✔	
Law Studies	220506	1		
Managerial Accounting	080691	½	✔	
Personal Finance	041022	½	✔	
Principles of Business	040306	1	✔	
Principles of Finance	080670	1	✔	
Principles of Marketing I	041025	1	✔	
Principles of Marketing II	041026	1	✔	
Speech I	051101	1		
Speech II	051102	1		
Technical Math*	165010	1		
Technical Reading and Writing* (NOT a TOPS Tech-qualifying course)	125010	1		
Technical Writing* *[TOPS Tech-qualifying English course]*	120350	1		

Pathway	Manufacturing, Construction Crafts and Logistics

Word Processing	040203	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.*

Pathway	Manufacturing, Construction Crafts and Logistics

Career Readiness Courses

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%
Advanced Career Readiness (including regionally-developed Career Readiness Courses)	080410	1	✔	
AgriScience I (Career Readiness)*	010301	1	✔	
Basic Career Readiness	080409	1	✔	
Education for Careers	080400	½	✔	
Education for Careers	080401	1	✔	
Education for Careers Part I	080405	½	✔	
Education for Careers Part II	080406	½	✔	
JAG I	042010	1	✔	
JAG II	042020	1	✔	
Journey to Careers (Career Readiness)	080403	1	✔	
Journey to Careers Part 1 (Career Readiness)	080402	½	✔	
Journey to Careers Part 2 (Career Readiness)	080404	½	✔	

*- 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.*

Internships, Cooperative Courses and Virtual Workplace Experience Courses

Cooperative courses, Virtual Workplace Experience courses 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.

• Automotive Service/Repair	• Healthcare	• Manufacturing
• Construction Crafts	• HVAC	• Pharmacy
• Culinary (*only* for students pursuing the statewide ProStart/ SafeServ credentials)	• Information Technology	• Transportation and Logistics

Pathway	Manufacturing, Construction Crafts and Logistics

Internships				
Course Title	**Course Code**	**Carnegie Credits**	**CTE 6%**	**CDF 6%**
CDF-Qualifying CTE Internship I	080202	1	✔	✔
CDF-Qualifying CTE Internship I	080200	2	✔	✔
CDF-Qualifying CTE Internship II	080203	1	✔	✔
CDF-Qualifying CTE Internship II	080201	2	✔	✔
CTE Internship I	110402	1	✔	
CTE Internship I	110403	2	✔	
CTE Internship II	110404	1	✔	
CTE Internship II	110405	2	✔	
Non-CTE Internships are not part of any Jump Start graduation pathway.				
Non-CTE Internship I	400200	1		
Non-CTE Internship I	400210	2		
Non-CTE Internship II	400220	2		
Non-CTE Internship II	400230	1		

Virtual Workplace Experience Courses approved for 2016-2017				
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	✔	

Pathway	Manufacturing, Construction Crafts and Logistics

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

Pathway	Manufacturing, Construction Crafts and Logistics

Culminating Credential(s)

Statewide Credentials

Culminating Credentials/ Certifying Agencies	**ADVANCED:** 1) National Center for Construction Education and Research (NCCER) Level 2 or above in the following areas: Carpentry, Electrical, Heavy Equipment Operator, HVAC, Industrial Maintenance Mechanic, Instrumentation, Millwright, Mobile Crane, Pipefitting and Welding 2) ABC-Pelican Level 2 AWS Modules, with student welds confirmed to American Society of Mechanical Engineer Standards by an independent testing company 3) HVAC Excellence EPA Universal Certification *plus* HVAC Excellence Electrical, Electric Heat and Air Condition Certifications OR 4) Attain a Louisiana post-secondary institution Technical Diploma (TD) or above aligned with this pathway	**BASIC:** 1) American Design Drafting Association (ADDA) Apprentice Drafter 2) ABC-Pelican Level 1 AWS Modules, with student welds confirmed to American Society of Mechanical Engineer Standards by an independent testing company 3) ASE Student Certifications – National Institute for Automobile Service Excellence (ASE) (see Auto Repair pathway for details on standards for basic statewide credential) 4) Autodesk AutoCAD – Autodesk 5) Basic Access Training – Scaffolding, Louisiana Industrial Scaffolding Committee 6) Certification for Manufacturing (C4M)– Louisiana Economic Development (LED) 7) Certification for Machining (C4Machining) – LED 8) Certified Logistics Associate, Manufacturing Skill Standards Council (MSSC) 9) Certified Logistics Technician, MSSC 10) Global Logistics Associate – American Society of Transportation and Logistics (AST&L) 11) HVAC Excellence EPA Universal Certification 12) NCCER Level 1 in the following areas: Carpentry, Electrical, Heavy Equipment Operator, HVAC, Industrial Maintenance Mechanic, Instrumentation, Millwright, Mobile Crane, Pipefitting and Welding 13) NIM Machining Level 1 – National Institute for Metalworking Skills (NIMS) 14) Production Safety Systems T-2 / API-U – American Petroleum Institute 15) Safety and Pollution Prevention S/P2 OR 16) Attain a Louisiana post-secondary institution Certificate of Technical Studies (CTS) aligned with this pathway

Pathway	Manufacturing, Construction Crafts and Logistics

Regional Credentials	
Culminating Credential(s) / Certifying Industry Agency(ies)	**Core Credentials: students must attain one credential from the list below:** 1) Emergency Medical Responder – Louisiana Department of Health and Hospitals – Emergency Medical Services section 2) FEMA – IS-0700.A National Incident Management System 3) Micro-Enterprise Credential (Baton Rouge Area Chamber; BRAC) 4) NCCER Construction Craft Laborer Level 1 (National Center for Construction Education and Research) 5) NCCER Core and Completion of Designated Helper Modules in the following areas: Carpentry, Electrical, Industrial Maintenance Mechanics, Instrumentation *(requested deferred at this time),* Pipefitter, *Welder (first four modules of ABC-Pelican AWS Level 1 certification)* 6) Technical Competency Area (TCAs) in the following areas (course codes may differ): a) Aviation Maintenance – 15 hours: AMTG 1010, AMTG 1020, AMTG 1030, AMTG 1040, AMTG 1050, AMTG 1060, AMTG 1070, AMTG 1080, AMTG 1090 b) General Industry Technician – 6 college credits: INDT 1010 and INDT 1030 OR PTEC 1010 and PTEC 2030 c) Industrial Instrumentation Technology – 12 hours: ORNT 1000, CPTR 1000, INST 1120, INST 1420, INST 1110 or 16 hours: INST 1111, INST 1010, INST 2722, ELEC 1220 d) Industrial Maintenance Technology – 10 hours: IMMT 1013, IMMT 1102, CPTR 1005, IMMT 1112 *OR* 7) student attains passing grades in the initial two courses of the C4M curriculum (Introduction to Manufacturing, Manufacturing Tools and Equipment) AND NCCER Core
	Complementary Credentials: students must attain two credentials from the list below: **Recommended Safety Complementary Credentials** Students may apply only one Safety Complementary Credential towards their graduation requirements 1) Basic Safety Orientation - Association of Reciprocal Safety Councils 2) First Aid for Students Certification - Red Cross or approved equivalent* 3) OSHA 10 – General Industry - OSHA Certificate of Completion 4) OSHA 10 – Construction - OSHA Certificate of Completion * - all First Aid certifications must include CPR and AED. To give districts and charter schools maximum flexibility to comply with the First Aid requirements of HB 542, districts and charter schools can provide the Jump Start team with evidence that the First Aid certification they're using includes all required components as well as a practical certification.

	Recommended Computer Literacy Complementary Credentials 5) Internet and Computing Core Certification (IC^3) – Certiport 6) Microsoft Excel Specialist – Microsoft and Certiport 7) Microsoft PowerPoint Specialist – Microsoft and Certiport 8) Microsoft Word Specialist – Microsoft and Certiport 9) Microsoft Office Specialist Other – Microsoft and Certiport **Other Recommended Complementary Credentials** 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)
Credentials No Longer Authorized for this Pathway	**Complementary Credentials No Longer Approved for this Pathway** • HAZWOPER (not a Jump Start credential) See the Jump Start Policy Regarding OSHA Courses / Credentials (available for download from the Jump Start website) for additional details

Pathway	Manufacturing, Construction Crafts and Logistics

Sample Schedule

Each 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			
9th Grade	**10th Grade**	**11th Grade**	**12th Grade**
Algebra I English I Physical Science Civics ***Journey to Careers*** ***NCCER Core*** Physical Education I	Geometry English II Biology U. S. History ***Introduction to Business Computer Applications*** ***NCCER Electrical I*** Physical Education II / Health	Math Essentials English III ***NCCER Welding Technology I*** ***Basic Technical Drafting*** *Elective Course* *Elective Course* *Elective Course*	Financial Literacy English IV ***NCCER Welding Technology II (3 credits)*** *Elective Course* *Elective Course*
7 credits	7 credits	7 credits	7 credits
Credential Earned by this Hypothetical Student	ABC-Pelican Level 1 AWS Modules		
Bold italicized courses count as one of the required 9 Carnegie credits for graduating via this CTE pathway			

Pathway	Manufacturing, Construction Crafts and Logistics

Sample Schedule – Regional Credential			
9th Grade	**10th Grade**	**11th Grade**	**12th Grade**
Algebra I English I Physical Science Civics ***Journey to Careers*** ***General Technology Education*** Physical Education I	Geometry English II Biology U. S. History ***Introduction to Business Computer Applications*** ***First Responder*** Physical Education II / Health	Math Essentials English III ***Basic Electricity*** ***Basic Technical Drafting*** ***NCCER Core*** *Elective Course* *Elective Course*	Financial Literacy English IV ***NCCER Electrical I*** ***Advanced Technical Drafting*** *Elective Course* *Elective Course* *Elective Course*
7 credits	7 credits	7 credits	7 credits

Credentials Earned by this Hypothetical Student	Core Credential	Complementary Credentials
	NCCER Core and Completion of Designated NCCER Electrician I Helper Modules	1) Basic First Aid 2) Microsoft Office Word Specialist (MOS) – Microsoft and Certiport

Bold italicized courses count as one of the required 9 Carnegie credits for graduating via this CTE pathway

Every Pathway Can be Adapted for Students Meeting Act 833 (2014) Eligibility Criteria

Every Jump Start graduation pathway can be adapted for students with disabilities who meet Act 833 (2014) 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