



LD 313

Interim Report

December 15, 2021

LD 313, *Resolve, To Advance Career and Technical Education Opportunities* in Maine was sponsored by Senator Woodsome and signed into law by Governor Mills on June 10, 2021. The premise of the bill was for the Maine Department of Education (Maine DOE) to convene a work group that would address multiple topics associated with advancing Career and Technical Education (CTE) in Maine.

Overview

During the summer of 2021, a stakeholder group was established. The group met on November 2, November 23, and December 15. Four additional meetings are scheduled for the spring of 2022. All meetings are conducted via Zoom and a link for each meeting is posted in the DOE newsroom. The public may provide feedback via the Maine DOE-CTE email address.

The workgroup is comprised of the following individuals:

Stakeholder group	Representative	Entity
One member of a regional chamber of commerce	Chris Gaunce	Central Maine Motors
One member of the Maine State Chamber of Commerce	Brian Langley	MSC Education Committee
One Superintendent of a school administrative unit that has an industrial arts program	Paul Penna	RSU 6
One representative from a trade association	Lisa Martin	Maine Manufacturing
One representative from the Maine Community College System	Mercedes Pour	Maine Community College System
One member of the Maine Association of Nonprofits:	Paul Towle	Aroostook Partners
One parent of a current career and technical student	Jennifer Williams	Lake Region Technical Center (LRTC) parent
One student from a career and technical education and Bridge Academy	Alyssa Drake	Region 2-Houlton
One representative from an organization representing superintendents	Steve Bailey	Maine School Superintendents Association (MSSA)
One representative from and organization representing principals	Holly Couturier	Maine Principals Association (MPA)
One representative from and organization representing CTE directors	Rob Callahan	LRTC Director
One principal of a school	Mary Anne Spearin	Calais Middle/High School
One member of the Maine Climate Council	Matt Marks	Associated General Contractors of Maine
The Commissioner of Labor or commissioner's designee	Karen Fraser	Director Bureau of Rehabilitation Services
The Commissioner of Economic and Community Development or the commissioner's designee	Martha Bentley	Director
*Contracted Facilitator, Carole Martin		

Work Completed to Date

Prior to the first meeting, DOE established a work plan to address the components of the bill. The plan was designed to be flexible and to ensure that the action items included within the legislation were being addressed thoughtfully by the stakeholder group. Below is the plan that has guided the work to date.

LD 313 Work Plan Working Draft

November 2021-December 2021

- A statewide inventory of available career and technical education programs
- Recommend changes to the career and technical education teacher certification process to address the shortage of career and technical education teachers by acknowledging skills demonstrated in a trade or profession
- Recommend refinements to career and technical education certification – which may include the following:
 - Change current endorsement codes to their assigned classification of instructional program codes;
 - Create an endorsement code for the career and technical education essential programs and services funded positions of career and technical education student services coordinator and career and technical education career counselor; and
 - Create a career and technical education certification sub-workgroup composed of Department of Education representatives, career and technical education directors, career and technical education student services coordinators and career and technical education career counselors to review career and technical education certification rulemaking.
- Utilize the data provided by the Maine Education Policy Research Institute draft report available in the summer of 2021 to consider the following:
 - Fully fund the essential programs and services career and technical education funding formula as proposed by the Maine Education Policy Research Institute to support the State Board of Education goal of increasing statewide career and technical education enrollment, including an additional per-pupil weight for students with special needs and English language learners;
 - Create a formula approach to include an allowance for yearly building maintenance, capital improvements and equipment costs;
 - Develop a regional index for salary adjustments across the State with a specific career and technical education teacher and administrator salary matrix;
 - Examine an adjustment to the student-to-teacher ratio for those career and technical education programs that have legal requirements or industry restrictions determining the student-to-teacher ratio.

- Fund middle school career and technical education separately from high school career and technical education based on the data provided at the completion of the current pilot projects for middle school career and technical education exploration pursuant to the Maine Revised Statutes, Title 20-A, section 15688-A, subsection 8; and
- Identify existing systemic barriers to expanding access to career and technical education programs.

January 2022-March 2022

- Options for career and technical education programs to be included in science, technology, engineering and mathematics, or STEM endorsements;
- Propose multiple college and career pathways for students to learn and demonstrate their knowledge in the career and technical education setting while creating programs that address the State's critical workforce shortage;
- Create new pathways within career and technical education programs by:
 - Developing a career and technical education course work for school counselor certification;
 - Exploring an industrial arts pathway under the career and technical education program framework;
 - Considering technical mathematics and technical writing as equivalencies to local secondary school course work requirements; and
 - Exploring the availability of internships and apprenticeships statewide related to a program of study

Below is a summary of activities completed related to the components of LD 313.

A statewide inventory of available career and technical education programs

During the November 2nd meeting the stakeholder group expressed interest in deepening their understanding of current CTE programs and a multi-year comparison of programs to examine trends in recent program growth. The group was also interested in examining enrollment numbers for programs. In response to the request, DOE's CTE data specialist compiled the data and then provided a detailed presentation at the November 23rd meeting. The tables below are a summary of the data that was shared with the work group.

2022 Unique CTE Program Offerings
(01.0000) Agriculture, General
(01.0205) Agricultural Mechanics and Equipment/Machine Technology
(01.0303) Aquaculture
(01.0304) Crop Production
(01.0601) Applied Horticulture/Horticulture Operations, General
(01.1101) Plant Sciences, General
(03.0101) Natural Resources/Conservation, General
(03.0506) Forest Management/Forest Resources Management
(03.0511) Forest Technology/Technician
(09.0702) Digital Communication and Media/Multimedia
(10.0202) Radio and Television Broadcasting Technology/Technician
(10.0303) Prepress/Desktop Publishing and Digital Imaging Design
(10.0305) Graphic and Printing Equipment Operator, General Production
(11.0103) Information Technology
(11.1003) Computer Information Systems/Information Assurance
(12.0401) Cosmetology/Cosmetologist
(12.0503) Culinary Arts/Chef Training
(12.0505) Food Preparation/Professional Cooking/Kitchen Assistant
(14.1801) Materials Engineering
(15.0000) Engineering Technology, General
(15.0613) Manufacturing Technology/Technician
(15.0805) Mechanical Engineering/Mechanical Technology/Technician
(15.1301) Drafting and Design Technology/Technician, General
(15.1302) CAD/CADD Drafting and/or Design Technology/Technician
(15.1303) Architectural Drafting and Architectural CAD/CADD
(19.0709) Child Care Provider/Assistant
(31.0301) Parks, Recreation and Leisure Facilities Management
(31.0601) Outdoor Education
(41.0101) Biology Technician/Biotechnology Laboratory Technician
(43.0000) Security and Protective Services
(43.0107) Criminal Justice/Police Science
(43.0203) Fire Science/Fire-fighting
(46.0000) Construction Trades, General
(46.0101) Mason/Masonry
(46.0201) Carpentry/Carpenter
(46.0302) Electrician
(46.0503) Plumbing Technology/Plumber
(47.0101) Electrical/Electronics Equipment Installation and Repair, General
(47.0104) Computer Installation and Repair Technology/Technician
(47.0201) Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician

2022 Unique CTE Program Offerings
(47.0302) Heavy Equipment Maintenance Technology/Technician
(47.0603) Autobody/Collision and Repair Technology/Technician
(47.0604) Automobile/Automotive Mechanics Technology/Technician
(47.0605) Diesel Mechanics Technology/Technician
(47.0606) Small Engine Mechanics and Repair Technology/Technician
(47.0616) Marine Maintenance/Fitter and Ship Repair Technology/Technician
(48.0501) Machine Tool Technology/Machinist
(48.0506) Sheet Metal Technology/Sheetworking
(48.0508) Welding Technology/Welder
(49.0202) Construction/Heavy Equipment/Earthmoving Equipment Operation
(49.0205) Truck and Bus Driver/Commercial Vehicle Operation
(50.0102) Digital Arts
(50.0301) Dance
(50.0402) Commercial and Advertising Art
(50.0409) Graphic Design
(50.0602) Cinematography and Film/Video Production
(50.0913) Music
(51.0000) Health Services/Allied Health/Health Sciences, General
(51.0801) Medical/Clinical Assistant
(51.0904) Emergency Medical Technology/Technician (EMT Paramedic)
(51.1004) Clinical/Medical Laboratory Technician
(51.3902) Nursing Assistant/Aide and Patient Care Assistant/Aide
(52.0201) Business Administration and Management, General.
(52.0302) Accounting Technology/Technician and Bookkeeping
(52.0401) Administrative Assistant and Secretarial Science, General
(52.0407) Business/Office Automation/Technology/Data Entry
(52.0801) Finance, General
(52.0901) Hospitality Administration/Management, General
(52.1401) Marketing/Marketing Management, General
(52.1701) Insurance
(52.1803) Retailing and Retail Operations
(52.1910) Hospitality and Recreation Marketing Operations
(90.1166)-Applied Academics-Mathematics
(91.3372)-Applied Academics-English
(91.3374) Applied Academics-Social Sciences
(97.3088)-Applied Academics-History
(99.1000) Maine CIP-Co-op
(99.3001) Maine CIP
(99.4000) Maine CTE Academics
(99.6000) Maine CTE Exploratory

2022 Unique CTE Program Offerings
(99.7000) Maine CIP-Diversified Occupations
(99.8000) Maine CIP
(99.9991) Business Non-counted Enrollment

Summary Local Approved CTE Program Differential Report 2016-2022	Counts
2016 Local Approved CTE Programs List Count	330
2022 Local Approved CTE Programs List Count	439
New Program approvals since 2016 (expansions/replacements)	109
New Program changes since 2016	33.03%
Years between 2016-2022	6
Average expansions and replacements per year	18+

Summary Student Enrollments for all CTE Programs Differential Report 2016-2022	Counts
Total Student Enrollments for 2016	8073
Total Student Enrollments for 2022	9164
Student Enrollment difference since 2016	+1091
Student Enrollment change since 2016	13.51%
Years between 2016-2022	6
Average change per year	181+

Top 15 Decreasing Programs											
CIP and Title	2016	2017	2018	2019	2020	2021	1st Year Enrollment (between SY2016-21)	2022	Difference	Increase / Decrease	Notes
(51.0000) Health Services	853	844	773	785	753	657	853	508	345	Decreased	Data may be misleading. Historically enrollments several other programs have been reported in this CIP.
(52.0201) Business Admin	245	235	140	142	155	137	245	130	115	Decreased	
(43.0000) Security/Protec	192	171	82	137	113	88	192	86	106	Decreased	
(52.0401) Admin Assist	189	197	197	156	201	83	189	83	106	Decreased	
(52.0407) Business/Office	143	133	61	79	48	58	143	49	94	Decreased	
(47.0104) Computer Repair	273	258	249	246	238	213	273	210	63	Decreased	
(50.0101) Visual/ Performance Arts	50	44	42	46	45	37	50		50	Decreased	Data may be misleading. Program was retired and 2 new CIP were added to the approved list (50.0301; 50.0913)
(15.1301) Drafting	125	107	110	94	80	82	125	81	44	Decreased	
(48.0501) Machine Tool	174	167	145	156	159	148	174	133	41	Decreased	
(51.1614) Nursing Assist	41	39	131	47	25	30	41		41	Decreased	Data may be misleading. This CIP has been retired and is now 51.3902. Also, most 51.3902 had been reported in 51.0000
(99.7000) Diversified Occs	174	138	176	174	170	140	174	133	41	Decreased	
(50.0402) Commercial Art	120	121	108	113	131	82	120	81	39	Decreased	
(52.1801) Sales	39	41	33	18			39		39	Decreased	
(10.0305) Graphics	84	64	60	58	58	60	84	50	34	Decreased	
(12.0503) Culinary Arts	621	630	547	566	606	543	621	590	31	Decreased	

Top 15 Increased Programs											
CIP and Title	2016	2017	2018	2019	2020	2021	1st Year Enrollment (between SY2016-21)	2022	Difference	Increase / Decrease	Notes
(99.6000) CTE Exploratory	87	106	146	181	215	598	87	761	674	Increased	Data IS NOT misleading. Much effort to expand this program
(51.0801) Medical/Clinical	0	0	0	8	88	95	8	154	146	Increased	Data may be misleading. Historically enrollments have been reported it in a different CIP code
(51.3902) Nursing Assist				11	21	16	11	149	138	Increased	Data may be misleading. Historically enrollments have been reported it in a different CIP code
(46.0503) Plumbing Tech	66	90	117	124	147	150	66	198	132	Increased	
(99.4000) Maine CTE Acad	91	102	378	364	321	367	91	197	106	Increased	Data may be misleading. Several new programs have been added since 2016 but all 99.4000 are currently being divided into corrected CIP's (90.1166; 91.3372; 91.3374; 97.3088)
(51.0904) EMT Paramedic	30	41	71	90	109	88	30	125	95	Increased	Data may be misleading. Historically enrollments have been reported it in different CIP codes
(46.0302) Electrician	243	221	204	236	280	285	243	322	79	Increased	
(12.0401) Cosmetology	0	0	16	44	43	36	16	90	74	Increased	
(19.0709) Child Care	430	412	377	420	431	429	430	499	69	Increased	
(46.0201) Carpentry	440	451	421	430	451	456	440	483	43	Increased	
(48.0508) Welding	382	377	362	372	388	383	382	422	40	Increased	
(50.0102) Digital Arts	0	0	0	0	0	28	28	65	37	Increased	
(11.1003) Computer	0	0	0	0	20	26	20	54	34	Increased	
(50.0602) Cinematography	91	110	99	136	122	117	91	124	33	Increased	
(31.0301) Parks/Rec	23	23	17	18	49	51	23	50	27	Increased	

***CIP 99.3001 was removed because of possible misaligned enrollments and needs to be researched

Recommended changes to the career and technical education teacher certification process to address the shortage of career and technical education teachers by acknowledging skills demonstrated in a trade or profession

As with the Maine Community College System (MCCS), the stakeholder group recognized the importance of acknowledging industry experience. The group reviewed the DOE’s pending rulemaking proposal under Chapter 115 and noted that industry experience is acknowledged within the Chapter 115 proposal.

Recommended refinements to career and technical education certification including:

- *Changing current endorsement codes to their assigned classification of instructional program codes (CIP);*

The stakeholder group stated that this is an important move to ensure alignment with CTE schools across the country and the MCCS.

- *Creating an endorsement code for the career and technical education essential programs and services funded positions of career and technical education student services coordinator and career and technical education career counselor.*

- *Create a career and technical education certification sub-workgroup composed of Department of Education representatives, career and technical education directors, career and technical education student services coordinators and career and technical education career counselors to review career and technical education certification rulemaking.*

The DOE's CTE and certification teams committed to co-facilitating a committee comprised of CTE administrators to explore additional changes needed during the spring and summer of 2022.

The stakeholder group welcomed this proposed action by the DOE and noted that the committee should not become an additional burden to those that are asked to participate. It also recommended that there be clear expectations related to participation.

Utilizing the data provided by the Maine Education Policy Research Institute draft report available in the summer of 2021 to consider the following options:

- *Fully funding the essential programs and services career and technical education funding formula as proposed by the Maine Education Policy Research Institute to support the State Board of Education goal of increasing statewide career and technical education enrollment, including an additional per-pupil weight for students with special needs and English language learners;*
- *Creating a formula approach to include an allowance for yearly building maintenance, capital improvements and equipment costs;*
- *Developing a regional index for salary adjustments across the State with a specific career and technical education teacher and administrator salary matrix; and*
- *Examining an adjustment to the student-to-teacher ratio for those career and technical education programs that have legal requirements or industry restrictions determining the student-to-teacher ratio.*

As of December 1, 2021, the MEPRI report had not been published. As a result, the stakeholder discussion regarding the components outlined above has been postponed. MEPRI has offered to attend a spring of 2022 stakeholder meeting.

Identification of existing systemic barriers to expanding access to career and technical education programs;

At the November 23 meeting, members identified systemic barriers. Their findings are included below. The group will prioritize the list and brainstorm possible solutions during the December 15 meeting. This information will be included within the final report for LD 313 in March of 2022.

Sending school schedules

- Need to provide maximum opportunity for students
- Need to prioritize CTE as an option for students
- Ensuring that sending schools are working closely with CTE schools

Distance/Transportation

- Students who have to leave their “home” school to attend CTE

Increase in graduation requirements at sending schools

- Students who may have struggled with a class as a freshman could immediately eliminate their opportunity to attend as a junior
- Possible solution: look at offering English and/or Math at the CTE. Look at Bonny Eagle High School/Westbrook Regional Vocational Center model.

Look for ways to market CTE at even the younger grades; such as K-5

- Addressing the stigma of CTE at an earlier age could be beneficial
- Change the perception of what “cool” looks like
- Overall need to change the stigma as students go through the system that it’s an “either/or” approach - “you go to CTE or you prep for college”

Teacher recruitment/retention

- Pay is a challenge - private sector pay exceeds teacher pay
- Windfall elimination on folks leaving private sector and coming into Maine State Retirement

Capacity

- Physical capacity
- Many CTEs are seeing higher enrollments and are running out of space

Possible Solution: Pathway Concept

- Start at the 9th grade level in a CTE exploratory

Where are students going that aren’t able to attend and drop outs

- Look at why students are dropping out
- Students with disabilities participation rates - are they unable to participate because of the lack of support?
- How are we going to support the 21-24-year-old students with disabilities?
- Could the CTEs play a role in this?

Summary

The stakeholder group has provided thoughtful insights on each of the components of LD 313 that have been discussed to date. Each meeting has been well attended with meaningful engagement between members. The following components have been completed:

- A statewide inventory of available career and technical education programs.
- Recommended changes to the career and technical education teacher certification process to address the shortage of career and technical education teachers by acknowledging skills demonstrated in a trade or profession. This work is ongoing.

Progress has been made on the following components:

- Recommended refinements to career and technical education certification including.
- Identification of existing systemic barriers to expanding access to career and technical education programs.

The stakeholder group has shown an unwavering commitment to provide more opportunities for students to engage in CTE statewide. Four additional meetings have been scheduled in 2022 and the final report will be completed in March of 2022.