

Workforce & Economic Development Monitoring Report

2017 – 2021
(Cycle 23)

Objective 1: Provide quality professional/technical education for employment, skills enhancement, and career development.

Objective 2: Partner with business, community groups, and other educational entities to provide workforce development and customized programs and services.

May 25, 2022



Workforce & Economic Development Monitoring Report

Lower Columbia College's Key Performance Indicators were initially established in 1999 through a strategic planning process. The framework was updated in 2007, and revised in 2011 with the adoption of the Northwest Commission on Colleges and Universities new standards for accreditation.

Key Performance Indicators for Workforce & Economic Development include:

- Student performance
- Demonstration of program competencies
- Licensure/exam rates
- Placement rate in the workforce
- Employer satisfaction
- College level English and math completion
- Client assessment of programs and services

Enrollment data is also included in the report.

Some of the actions that have come about as a result of reviewing data in this report include:

- LCC's Professional-Technical faculty in Advanced Manufacturing, Computer Science, Information Technology, Machine Trades, and Welding participated in an extensive pre-design process, in collaboration with the team of business and industry members and architects, for a new Center for Vocational and Transitional Studies. In addition to facilities, over \$2 million in equipment needs were identified to ensure updated and modern learning environments are a part of the center which align with local industry standards.
- Based on additional clinical site availability for summer 2022, the nursing program increased LPN2RN eLearning cohort enrollment from 56 in fall 2020 to 64 in fall 2021 (approximately 14% increase in cohort size and 4% increase in total program enrollment).
- Industrial Trades programs updated curriculum to increase work-based learning opportunities by adding cooperative education to all degree programs. In addition, based on input from industry advisory committees, the welding program added aluminum welding processes to meet emerging workforce demands.
- Overcoming the challenges of the pandemic, LCC successfully launched a second BAS degree in Organizational Leadership and Technical Management. The first cohort launched in Fall 2021 with 22 students representing a wide array of disciplines including criminal justice, industrial trades, business, education, and fire science.
- The BAS-Teacher Education program was granted full approval and accreditation from the Professional Educator Standards Board (PESB) to offer Washington State teacher certification with endorsements in Early Childhood and Elementary Education.
- As a part of the Guided Pathways initiative, all Professional-Technical programs developed program maps designed to clarify course sequencing for students. In addition, a new block schedule was created to streamline scheduling consistently across campus.

PART 1: Workforce

Key Performance Indicator: Student Performance

(Mission Fulfillment = 80% for all categories)

(Stretch Goal = 85% for all categories)

Table 1: Proportion of students receiving C grades or better in workforce classes numbered 100 and above. Grades excluded: I, N, R, NA, X and V.

	2016-17	2017-18	2018-19	2019-20	2020-21
C or better (Overall)	85.7%	86.4%	86.4%*	87.3%*	90.1%
Male	84.5%*	82.0%*	79.3%*	82.5%*	86.7%
Female	85.6%*	89.0%*	87.9%*	89.8%*	91.2%
Students of Color	84.2%*	85.3%*	83.7%*	83.1%*	86.7%
Economically Disadvantaged	83.8%*	84.7%*	84.1%*	84.6%*	88.7%

Source: Select Kind of Student = W from Student Table, link to Transcripts for relevant year where grades not like I, N, R, V, X or NA; select dept_div, course num is >=100, gr, gr_dec, item and yrq; link to Class table using item and yrq to select INSTIT_INTENT_RECAT = "V" (Workforce Courses) from Class table. Note: as of 2017-18, P grades included as successful grade. *Figures updated from previous monitoring reports.

Key Performance Indicator: Demonstration of Program Competencies

(GOALS SET BY INDIVIDUAL PROGRAMS)

Attainment of Competencies for Individual Programs

As part of the college's established Curriculum & Program Review process, all programs are required to collect and analyze data for the purpose of improving student learning outcomes. Each program review plan is unique, and addresses competencies relevant for the specific discipline. Some plans, such as Nursing and Medical Assisting, are related to external accreditation and/or industry standards. Faculty perform quarterly activities for Curriculum & Program Review according to a schedule set by the Instructional Assessment Committee. A full Curriculum & Program Review cycle lasts two years, at which point the cycle starts again.

Key Performance Indicator: Licensure/Exam Rates

(Mission Fulfillment NCLEX = exceed state benchmark of 80%; WABO = 80%; MAERB = 60%; NES = 80%) (Stretch Goal NCLEX = 90%; WABO = 100%; MAERB = 70%; NES = 90%)

Nursing graduates must be licensed in order to work in the field. Nursing completers must pass the NCLEX – a national, standardized nursing test. Similarly, welding completers must pass the WABO test to earn their degree. Medical Assisting completers must pass the Medical Assisting Education Review Board exam.

Table 2a: Licensure Rates for Nursing, Welding, and Medical Assisting

	2017	2018	2019	2020	2021
NCLEX (National Council of State Boards of Nursing) – first time pass rate					
Registered Nurse	85% (77/91)	82% (94/114)	95% (95/100)	90% (113/126)	86% (89/104)
WABO (Washington Association of Building Officials) – first time pass rate beginning in 2018					
Welding (LCC students only)	100% (n=11)	96% (n=25)	88% (n=26)	81% (n=37)	93% (n=15)
MAERB (Medical Assisting Education Review Board) – pass rate					
Medical Assistant	89% (n = 16)	92% (n = 12)	83% (n = 11)	60% (n=11)	*

Source: Nursing, Welding and Medical Assisting Departments. Source for NCLEX: [DOH NCLEX® School Reports](https://www.doh.wa.gov/Portals/1/Documents/6000/669336.pdf) at www.doh.wa.gov/Portals/1/Documents/6000/669336.pdf. *data not yet available

- NCLEX and WABO rates are by calendar year.
- MAERB rates by admission year.
- The number of welding students taking the WABO fluctuates for several reasons, including the fact that students decide when they want to test (whether or not their instructor thinks they are ready). Some people who are only able to be in the program for a short time opt to test sooner than others, sometimes before they're ready. Also, some student testers are only enrolled for a short refresher course (rather than a degree or certificate program) but appear in the student data nevertheless. Hiring trends can also affect students' decisions to test earlier rather than later in their program.

Table 2b: Licensure Rates for Elementary & Early Childhood Education

	2017	2018	2019	2020	2021
NES (National Evaluation Series) – pass rate					
Early Childhood Education (101)	*	*	*	*	100% (9/9)
Elementary Education Subtest I (102)	*	*	*	*	81% (13/16)
Elementary Education Subtest II (103)	*	*	*	*	88% (14/16)

Source: Instruction (Director of BAS Programs). *First cohort rates were in 2021.

- The NES pass rates are reported by academic year.

Key Performance Indicator: Placement Rate in the Workplace
(Mission Fulfillment = no more than 2% below system average for all categories)
(Stretch Goal = exceed system average for all categories)

The State Board for Community and Technical Colleges coordinates annually with Employment Security to match records of employed students to determine employment placement rates. Students who continue their education in the Washington system are excluded from totals.

Table 3: Employment Rates for Lower Columbia College
(Indicates year students were employed—having completed studies the prior year)
Percent of Completers Placed in UI-Covered Jobs or Continuing Education

	2016-17	2017-18	2018-19	2019-20	2020-21
LCC: Overall	80%	74%	86%	76%	73%
Male	78%	69%	85%	65%	67%
Female	80%	77%	86%	81%	75%
Students of Color	79%	73%	86%	73%	69%
System Average: Overall	77%	76%	77%	77%	71%
Male	78%	74%	75%	74%	69%
Female	78%	77%	79%	79%	73%
Students of Color	77%	76%	79%	79%	73%

Source: [SBCTC After College Outcomes Dashboard](#), Prof/Tech Placement View, located at sbctc.edu/colleges-staff/research/data-public/after-college-outcomes-dashboard.aspx. Excludes those who are self-employed and work out of state.

Key Performance Indicator: Employer Satisfaction
(Mission Fulfillment = 90%)
(Stretch Goal = 100%)

Table 4: Employer ranking of LCC Graduates’ professionalism

	2016-17	2017-18	2018-19	2019-20	2020-21
Professionalism is “Average” or “Above Average” (“Exceeds Expectations” or “Meets Standard” from Nursing survey; “Strongly Agree” or “Agree” from Medical Assisting survey)	97% (n = 140)	99% (n = 77)	99% (n = 116)	100% (n = 69)	96% (n = 52)

Source: Employer Feedback Survey, Early Childhood Education (ECED) Employer Survey, and Nursing Graduate Employer Survey. Starting in 2018-19, included Medical Assisting Employer Survey.

- Survey methodology includes surveying members of LCC’s Professional/Technical Advisory Committees in addition to other employers including employers of Nursing, Medical Assisting and Early Childhood Education graduates.

Professional/Technical Enrollment

The professional/technical enrollment summary presents the annualized FTE (Full Time Equivalent) of all state-funded professional/technical enrollments by Institutional Intent. Enrollment of Worker Retraining students has a major impact on Professional/Technical programs.

Table 5: Professional Technical Enrollment Summary (state funded only)

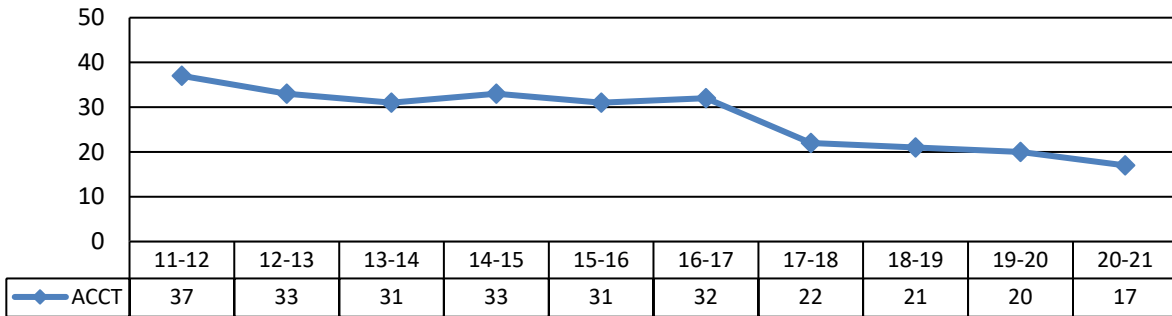
	Prof/Tech FTE	Worker Retraining FTE
2016-17	606	103
2017-18	574	110
2018-19	548	165
2019-20	569	187
2020-21	499	158
1 year change	-12%	-16%
5 year change	-18%	+53%

Source: Data Warehouse, Access Monitoring Report for Prof/Tech FTE and Worker Retraining FTE.

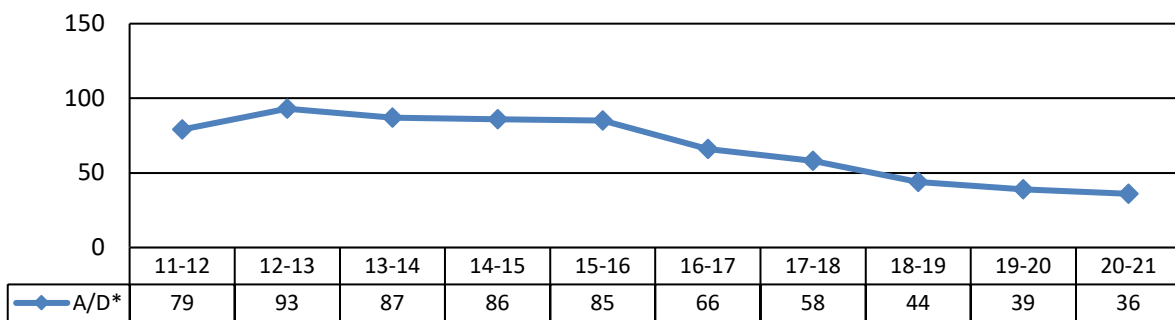
- In 2020-21, Professional/Technical and Worker Retraining enrollment decreased.

Figure 6: Professional Technical Enrollment by Discipline (annual state funded FTE)

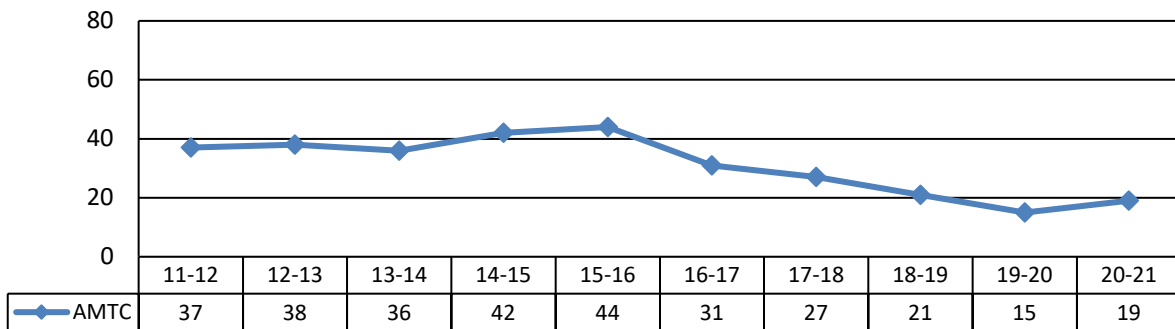
Accounting



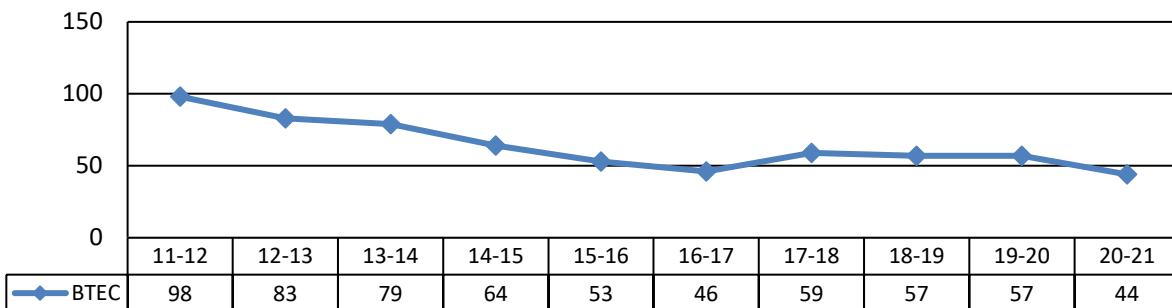
Auto/Diesel (combined; see also Automotive Tech and Diesel & Heavy Equipment)



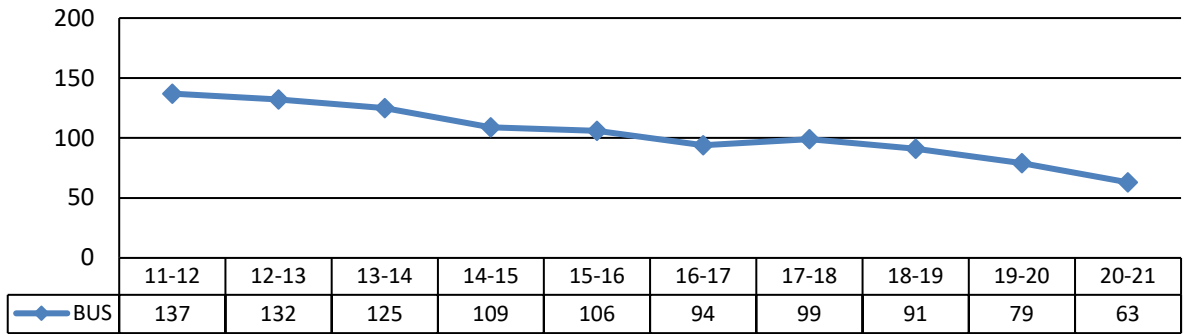
Automotive Technology



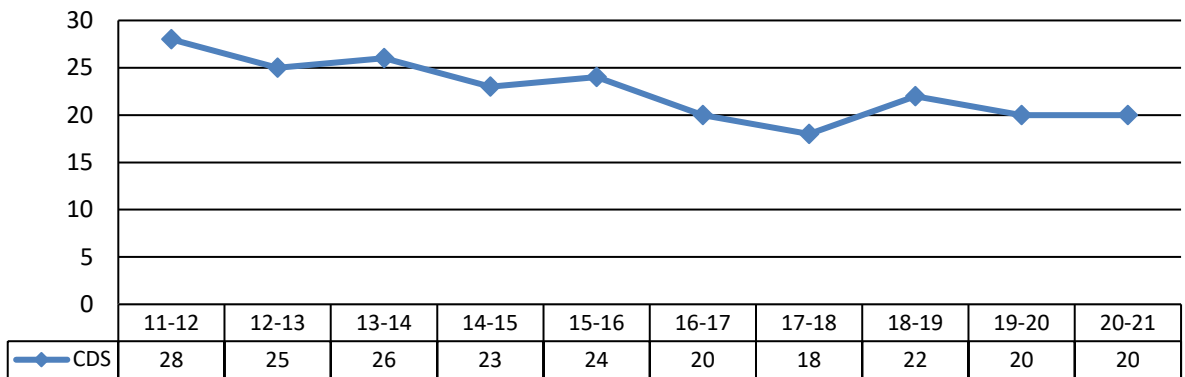
Business Technology



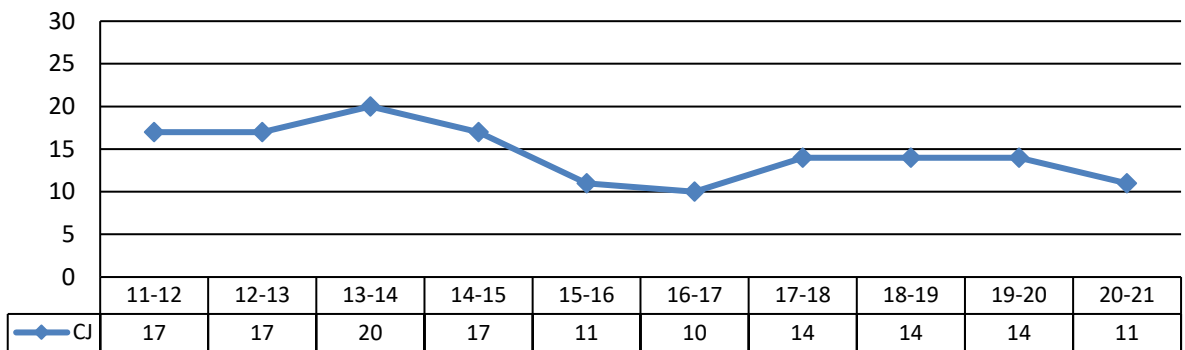
Business



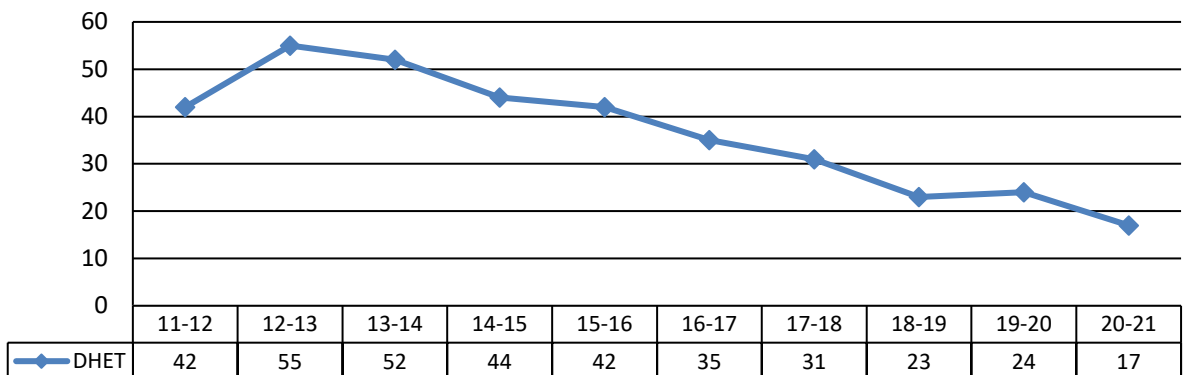
Chemical Dependency Studies



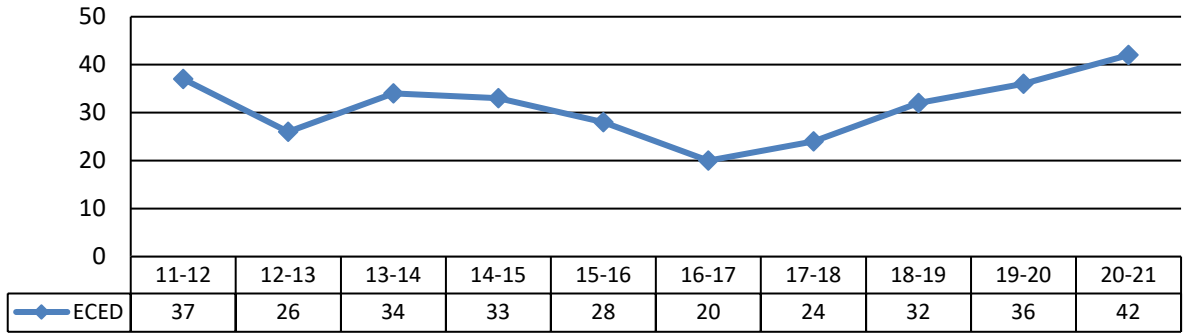
Criminal Justice



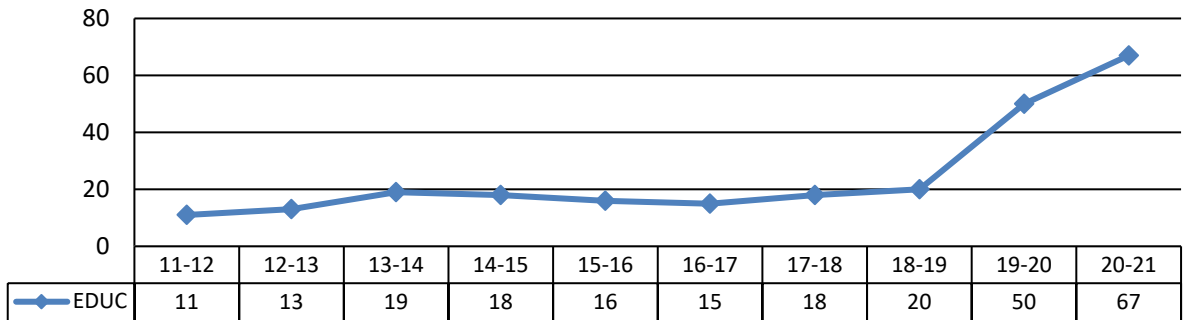
Diesel/Heavy Equipment Technology



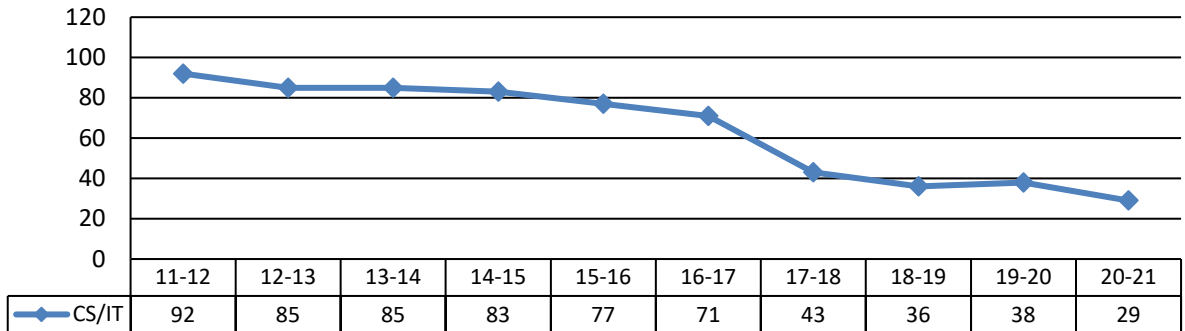
Early Childhood Education



Education

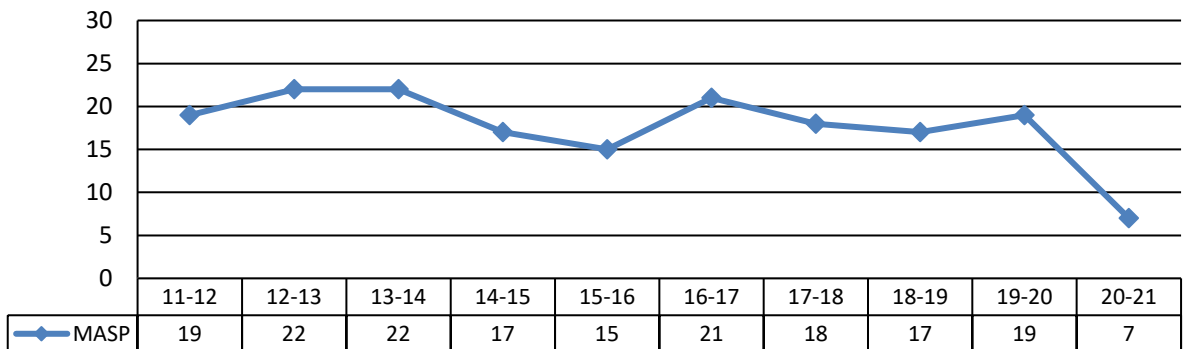


Information Technology / Computer Science

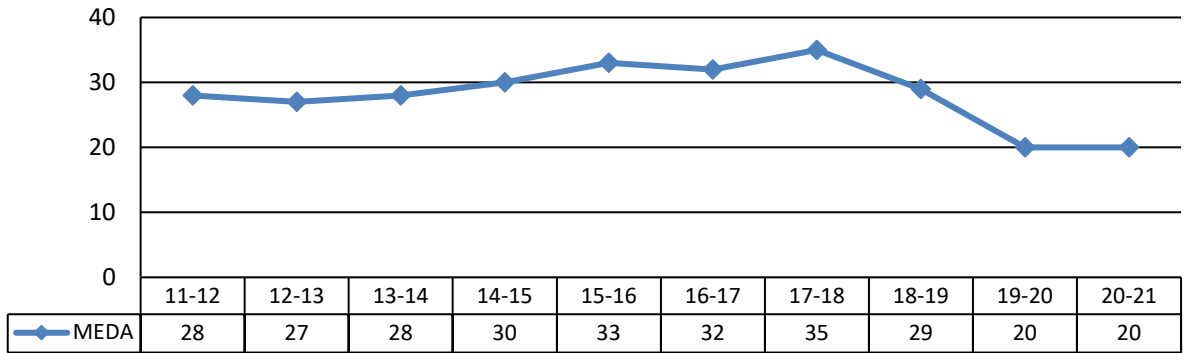


Note: includes IT FTEs beginning 2017-18. Note: 18-19 and 19-20 FTE updated from previous reports to include all CS/IT course state FTE.

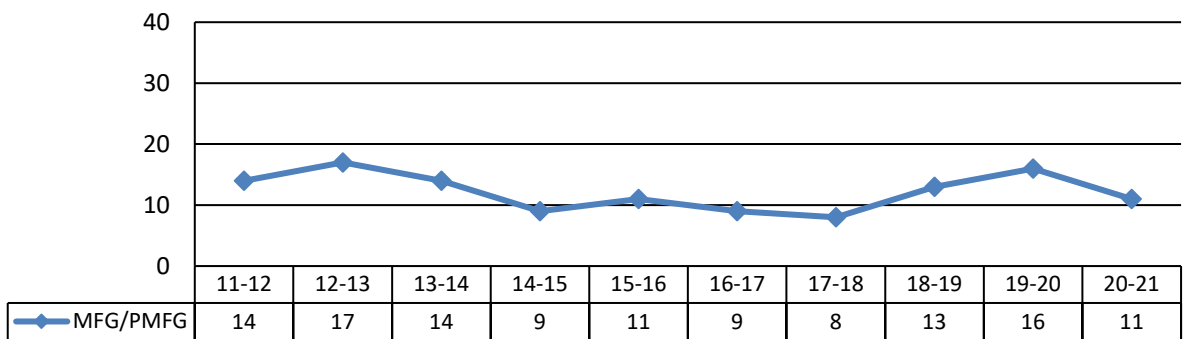
Machine Trades



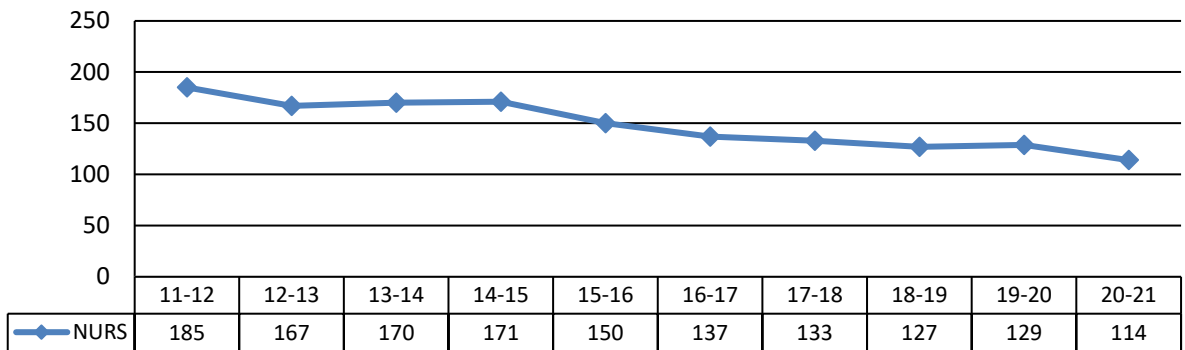
Medical Assisting



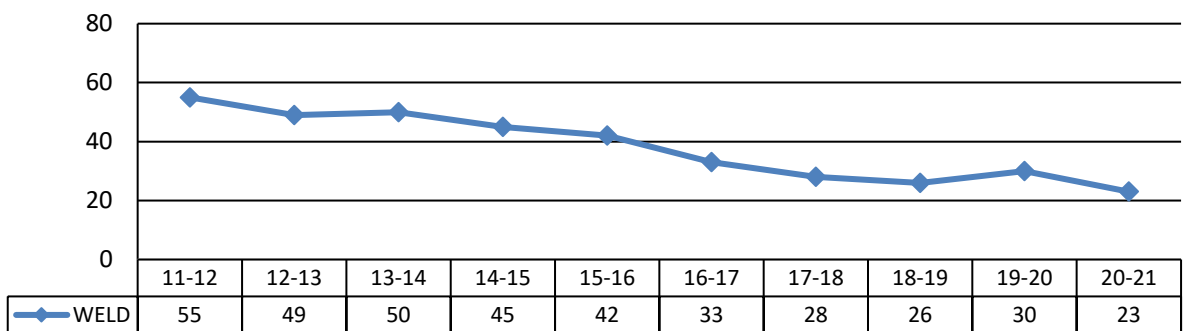
Manufacturing/Process Manufacturing (previously PULP)



Nursing (including RN, LPN and Nursing Assistant)



Welding



Source: Data Warehouse, Class Table (DEPT_DIV, COURSE_NUM, ITEM, YRQ, FTES_STATE/3).

Key Performance Indicator: College Level English & Math Completion
(Mission Fulfillment = meet system rate across all demographic categories)
(Stretch Goal = exceed system rate across all demographic categories)

Table 7a: College Level English Completion in First Year (Professional Technical Students only)

	2016-17	2017-18	2018-19	2019-20	2020-21
LCC Rate: Overall	37%	24%	27%	34%	36%
Full-time	50%	33%	39%	47%	48%
Part-time	25%	15%	16%	23%	24%
Male	33%	19%	25%	24%	32%
Female	38%	25%	29%	38%	35%
Need-Based Aid*	46%	22%	31%	33%	33%
System Rate^: Overall	27%	26%	27%	29%	29%
Full-time	32%	31%	31%	35%	35%
Part-time	20%	18%	19%	20%	21%
Male	26%	24%	25%	28%	29%
Female	28%	27%	28%	30%	29%
Need-Based Aid*	35%	33%	33%	36%	34%

Source: [SBCTC First-Time Entering Student Outcomes Dashboard](https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx), located at <https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx>. Credit Milestones View (All cohorts, Professional Technical students, summer/fall start). See dashboard for “n” size, college access only. *Students who received need-based aid. ^All Other Colleges.

Table 7b: College Level English Completion in First Year by Race/Ethnicity (Professional Technical Students Only)

	2016-17	2017-18	2018-19	2019-20	2020-21
LCC Rate: Overall	37%	24%	27%	34%	36%
American Indian or Alaska Native	41%	*	20%	46%	45%
Asian	43%	19%	13%	30%	27%
Black or African American	*	24%	*	33%	23%
Hispanic or Latino	45%	38%	38%	30%	33%
Native Hawaiian or Other Pacific Islander	*	*	*	*	*
White	37%	24%	28%	37%	38%
System Rate^: Overall	27%	26%	27%	29%	29%
American Indian or Alaska Native	25%	27%	29%	29%	25%
Asian	26%	24%	25%	29%	28%
Black or African American	24%	24%	22%	25%	27%
Hispanic or Latino	28%	30%	30%	32%	34%
Native Hawaiian or Other Pacific Islander	25%	25%	26%	31%	30%
White	28%	27%	28%	30%	30%

Source: [SBCTC First-Time Entering Student Outcomes Dashboard](https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx), located at <https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx>. Credit Milestones View (All cohorts, Professional Technical students, summer/fall start). See dashboard for “n” size, college access only. *Less than 10 students; redacted to protect student privacy. ^All Other Colleges.

Key Performance Indicator: College Level English & Math Completion
(Mission Fulfillment = meet system rate across all demographic categories)
(Stretch Goal = exceed system rate across all demographic categories)

Table 8a: College Level Math Completion in First Year (Professional Technical Students Only)

	2016-17	2017-18	2018-19	2019-20	2020-21
LCC Rate: Overall	23%	28%	26%	24%	13%
Full-time	29%	35%	40%	31%	15%
Part-time	17%	21%	13%	18%	12%
Male	19%	28%	36%	20%	11%
Female	25%	28%	23%	26%	13%
Need-Based Aid*	25%	28%	32%	25%	11%
System Rate^: Overall	17%	17%	19%	19%	21%
Full-time	21%	21%	22%	23%	25%
Part-time	12%	12%	13%	13%	16%
Male	19%	18%	20%	20%	22%
Female	16%	16%	18%	19%	21%
Need-Based Aid*	20%	21%	22%	23%	25%

Source: [SBCTC First-Time Entering Student Outcomes Dashboard](https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx), located at <https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx>. Credit Milestones View (All cohorts, Professional Technical students, summer/fall start). See dashboard for "n" size, college access only. *Students who received need-based aid. ^All Other Colleges.

Table 8b: College Level Math Completion in First Year by Race/Ethnicity (Professional Technical Students Only)

	2016-17	2017-18	2018-19	2019-20	2020-21
LCC Rate: Overall	23%	28%	26%	24%	13%
American Indian or Alaska Native	6%	*	20%	23%	9%
Asian	14%	38%	40%	15%	36%
Black or African American	*	12%	*	17%	8%
Hispanic or Latino	32%	21%	26%	21%	10%
Native Hawaiian or Other Pacific Islander	*	*	*	*	*
White	24%	27%	27%	25%	14%
System Rate^: Overall	17%	17%	19%	19%	21%
American Indian or Alaska Native	15%	16%	16%	18%	17%
Asian	20%	17%	18%	22%	22%
Black or African American	11%	12%	14%	14%	18%
Hispanic or Latino	15%	17%	19%	18%	22%
Native Hawaiian or Other Pacific Islander	14%	16%	17%	20%	22%
White	19%	19%	20%	21%	22%

Source: [SBCTC First-Time Entering Student Outcomes Dashboard](https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx), located at <https://www.sbctc.edu/colleges-staff/collegeaccess/research-data/first-time-entering-student-outcomes-dashboard.aspx>. Credit Milestones View (All cohorts, Professional Technical students, summer/fall start). See dashboard for "n" size, college access only. *Less than 10 students; redacted to protect student privacy. ^All Other Colleges.

PART 2: Economic Development

Key Performance Indicator: Client assessment of programs and services
(Mission Fulfilment = 90%)
(Stretch Goal = 100%)

Table 9: Evaluation of Corporate & Continuing Education

The following evaluations were administered across a variety of Corporate & Continuing Education courses in 2020-21 (including 18 responders). Respondents ranked each category on the following scale: Exceeded Expectations, Met Expectations, or Needs Improvement.

	2016-17	2017-18	2018-19	2019-20	2020-21
Percent indicating that overall expectations were met or exceeded.	98%	98%	99%*	99%**	94%

Source: Corporate & Continuing Education Office. *In 2018-19, students were counted toward this metric if they answered “Yes” to “Overall, were you satisfied with the course?” **In 2019-20, students were counted toward this metric if they answered “Yes” to “Overall, were you satisfied with the course?” or answered “Excellent” or “Good” to “Please indicate the rating that best reflects your overall evaluation of this session.”

- Although the pandemic seriously impacted the number of respondents in 2020-21, satisfaction was high among those who completed an evaluation.

EDUCATION, TRAINING AND TESTING ACTIVITIES

Table 10: Continuing Education Enrollment: Duplicated Headcount

2016-17	2017-18	2018-19	2019-20	2020-21	1 yr Δ	5 yr Δ
2,018	2,109	1,842	892	341	-62%	-83%

Source: Fact Book/Continuing Education office. Winter 2019 – Unable to continue Better Bones and Balance due to loss of facility funding.

- Enrollment in Continuing Education activities is trending down.
- Due to COVID-19, most Spring 2020 classes were canceled and less classes were offered in the 2020-21 years.

Table 11: Other Testing Exams: Duplicated Headcount

Exam	2016-17	2017-18	2018-19	2019-20	2020-21
Pre-Employment Testing (Work Keys)	455	332	385	130	169
NREMT (EMT Test)	166	165	159	31	55
Educator Licensing Exams (NES, West-B, ORELA)	232	289	304	115	248
Automotive Service Excellence (ASE)	206	125	154	43	2
ASE Student Entry-Level Certification	*	*	26	11	21
CLEP (Prior Learning Assessment)	25	45	23	15	1
Certiport (Microsoft Office Certification)	251	200	202	93	2
Pesticide Testing (Washington State Department of Agriculture)	327	379	455	62	0
IT Exams (Comptia, Cisco, Microsoft, Juniper Networks)	41	41	45	24	12
ParaPro (certification exam for paraprofessional educators)	103	91	84	61	3
Castle Worldwide (ACE certification, BPS, certification, and others)	17	17	14	10	2
Medical Certification Exams (Pharmacy Tech, ACSM, PTI)	*	*	15	4	173
GED Passer Reports	97	100	87	45	26

Source: Fact Book/Testing Office. *Data not available because test newly offered in 2018-19.

Numbers are lower for 2019-20 due to disruptions in testing caused by relocating the testing center, which also required recertification with Pearson and Castle, as well as Covid-19 interrupting testing beginning in March 2020.

Lower Columbia College
Workforce & Economic Development Monitoring Report
Analysis from the Review Team

Members include: Merry Bond & Tamra Gilchrist, co-chairs, Leszek Cromwell, Dana Cummings, Sarah Griffith, Heidi Hamer, Mary Harris, Elissa Loren, Jamie Nelson, Anita Quirk, Connie Ramos, Stefan Rijnhart, David Rosi, Dan Ruiz, Vicky Soladey, Stefanee Sorgenfrei, Dani Trimble, Nonnie Weaver, Ann Williamson.

1) Based on the data in this report, what are LCC's strengths in providing workforce preparation and economic development?

- Student performance actually increased during the pandemic.
- We've recently added more clinical sites for the nursing program.
- The fact that enrollment in Chemical Dependency Studies is relatively flat is a strength, considering that most similar programs are down in enrollment (at other institutions). The same is true for medical assisting.
- Even though we had a slight decrease in the most recent year, we have maintained relatively high worker retraining enrollment compared to the rest of the state (note: the comparison to the rest of the state is not included in this report).
- English completion in the first year is well above the state average.
- New BAS programs are resulting in increased enrollment in related disciplines, e.g. Education and Early Childhood Education.
- Although response rates were slightly down for the employer survey, most likely due to the pandemic, the strong employer satisfaction results reflect our positive relationships with workforce partners in the community.
- Pass rates for exams like NES and Early Childhood are high.
- Although the employment rate is down slightly from the prior year, we exceeded the state rate.
- In terms of student performance, there are notable increases for economically disadvantaged and students of color from the prior year.
- We are doing a good job of building workforce pathways that also allow students to transfer.
- Looking at workforce degrees and transfer requirements to ensure that students have multiple options when they leave (good at building workforce pathways that also transfer). Every program now has a transfer pathway.

2) Based on the data in this report, what are LCC's weaknesses in providing workforce preparation and economic development?

- The proportion of LCC students achieving college level math in year one is a weakness, particularly in the most recent year.
- The downward trend in overall enrollment in professional/technical programs is a weakness.
- The decline in contract training and other non-credit corporate training, although likely due to the pandemic, is concerning.
- There are some gaps with our disaggregated data. For example, the placement rate for students of color is lower than the overall rate (and lower than the state rate) in

the most recent year. The placement rate for males is also lower than both the overall and state rate.

- The low licensure rate for medical assisting in 2020 is a concern. Although we have instituted a review course and have I-BEST available for support, some students, particularly those with high test anxiety, continue to struggle. The pandemic may have negatively impacted the 2020 rate.

3) Based on the data in this report, what are LCC's opportunities for providing workforce preparation and economic development?

- As we went from being completely online to going back to hybrid and in-person classes, we have an opportunity to see what works best for our students, potentially increasing both flexibility for students as well as enrollment. Exploring the newer "high-flex" modality is an additional opportunity.
- We've identified \$2 million in equipment needs, which creates an opportunity to identify funding sources.
- Strengthening and expanding our options for work-based learning experiences (cooperative education) will provide more students with the opportunity to work while they are going to school.
- With K-12 being back in-person, we have an opportunity to build more pathways and strengthen that pipeline.
- The number of businesses asking for apprenticeship pathways is increasing.
- We are seeing an increase with criminal justice students who are interested in bachelor and master's pathways, which creates an opportunity to increase program options for those students (such as the BAS-OLTM pathway option).
- We have an opportunity to continue to explore more baccalaureate degree options to better serve the workforce needs of the community, and increase enrollment.

4) Based on the data in this report, what are LCC's threats for providing workforce preparation and economic development?

- Inflation is a threat; specifically to equipment needed for the new vocational building and for some programs such as auto and diesel that have fuel as an ongoing program cost.
- Higher fuel costs also may limit the ability of some students to travel to campus, which could impact enrollment.
- The current environment in the healthcare industry, including burnout and other stressful conditions caused by the pandemic and new legal challenges for healthcare workers, is a threat. It may cause some prospective students to rethink their career plans. Burnout is also an increasing issue for the early childhood education industry.
- Low wages in the field is a challenge for medical assisting enrollment.
- An acceleration of apprenticeship pathways being developed by entities that are not accredited is a threat. For example, PeaceHealth is currently advertising for their own medical assistant apprentices.
- A related threat is an increasing need to respond to employers who are looking for justification from LCC about why our pathways (which may be longer than non-accredited options) will provide them with workers who are better prepared.

Board Plus/Delta

“What is good about this report and what would you like to see changed?”

+	Δ