



Bitterroot Valley Community College

Program Demand Gap Analysis:
Environmental Scan and
Review of Academic Programs

Executive Summary
March 2022

Executive Summary

Bitterroot Valley Community College (BVCC) is a public, two-year postsecondary educational institution in Montana. Although currently operating as Bitterroot College UM (BC UM) in Ravalli County (the state’s seventh most populous county), the institution will soon become an independent community college district in the county. With a targeted open date in Fall 2023, BVCC hopes to better prepare Ravalli County’s workforce for local demands, as well as demand in nearby counties. To further its goal of providing the county with well-trained and well-educated residents, BVCC continually pursues improvement in various forms. An up-to-date understanding of the county economy and the demand for skilled labor is vital to the planning efforts of the college as it seeks to create program offerings relevant to the requirements of an ever-changing workforce. BVCC partnered with Emsi Burning Glass, a leading provider of labor market data, to complete a program demand gap analysis, which assesses county job openings against educational program completions.

RECOMMENDATIONS

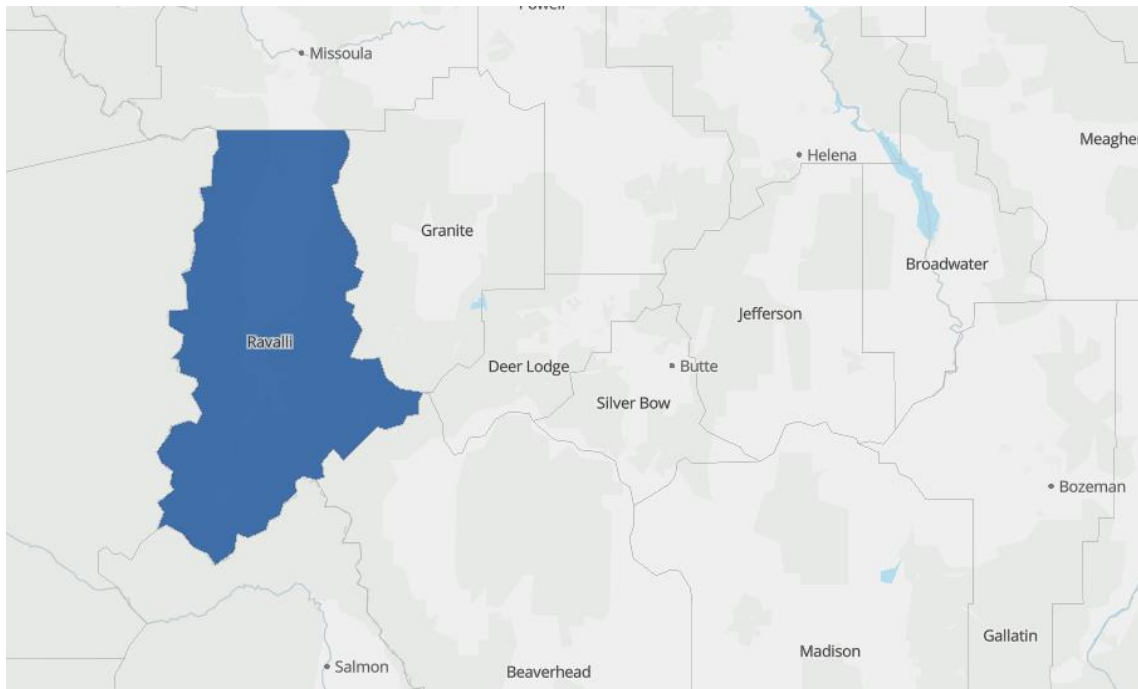
<p>HIGH DEMAND, LOW SUPPLY</p> <p><i>How can we expand these program opportunities?</i></p> <p>Certified Nurse Aide (NON-CREDIT) Bookkeeping Certification (NON-CREDIT)</p>	<p>HIGH DEMAND, HIGH SUPPLY</p> <p><i>Can we maintain focus on program quality & student success?</i></p> <p>Commercial Driver License (NON-CREDIT)</p>
<p>LOW DEMAND, LOW SUPPLY</p> <p><i>Should we reevaluate whether these programs are training for county demand, or demand outside the county?</i></p> <p>Front End Web Developer (NON-CREDIT) CompTIA A+ Virtual Computer Certification (NON-CREDIT) EKG Technician (NON-CREDIT)</p>	<p>LOW DEMAND, HIGH SUPPLY</p> <p><i>Are we connecting these programs to opportunities outside the county?</i></p> <p>Dental Assisting (NON-CREDIT) Boiler Operator (NON-CREDIT) Certified Phlebotomy Technician (NON-CREDIT) Certified Clinical Medical Assistant (NON-CREDIT)</p>

Source: Emsi Burning Glass program demand gap model.

INTRODUCTION

For purposes of the program demand gap analysis, BVCC serves the region of Ravalli County, which is located directly south of Missoula County. This report outlines the county's economy and uses the county's average annual projected job openings between 2020 and 2030 as a measurement of labor market demand. When job openings are compared to the county's supply of educational program completions, the analysis determines how well BVCC's program offerings satisfy county workforce demand. Please note that current programs will be labeled as offered by BC UM, since that is currently the name of the institution. However, program recommendations will reference BVCC, due to the upcoming transition mentioned in the second sentence of the Executive Summary. In addition, this report offers recommendations for new program development. In its entirety, the analysis is a starting point for BVCC as the college continues to develop programs using data-based decision-making strategies. The following figures and table display key findings of the analyses.

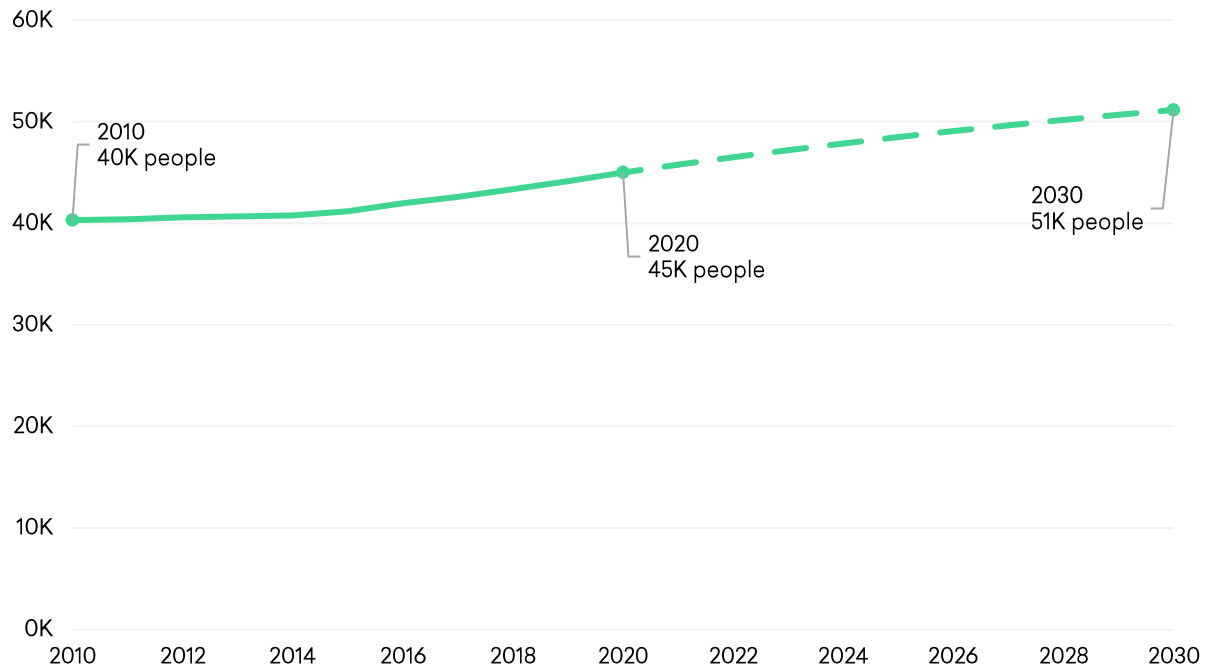
Figure 1: Map of Ravalli County



Source: Emsi Burning Glass Analyst. Region provided by BVCC.

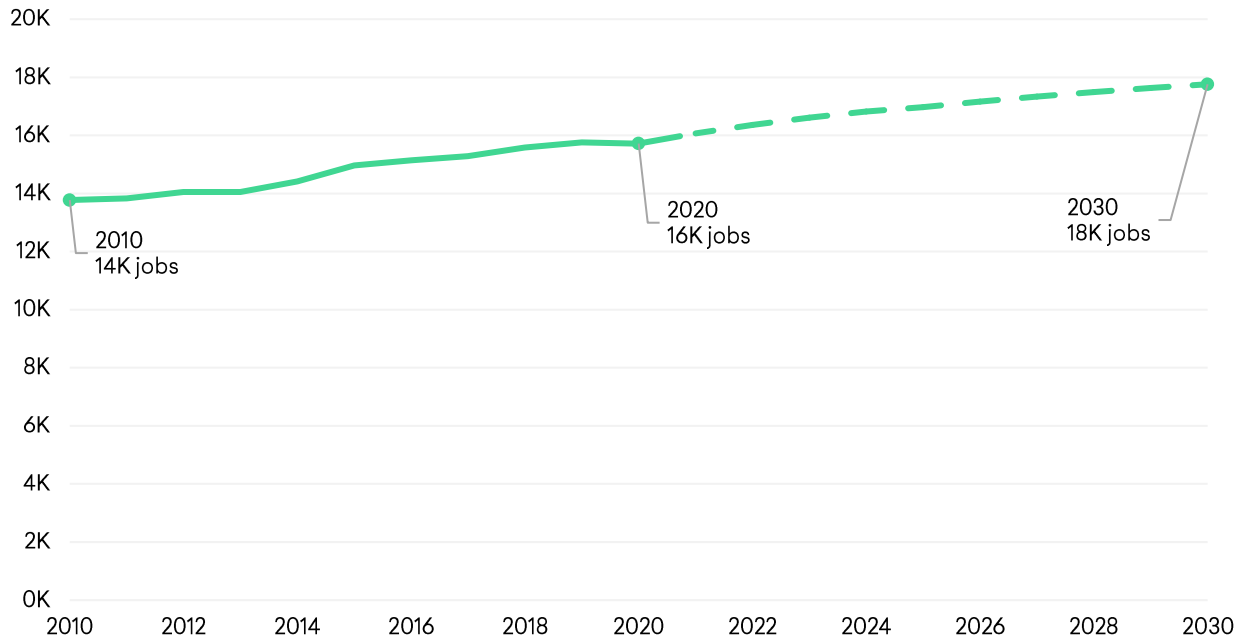
In 2010, 40,320 people lived in Ravalli County, and 51,170 people are projected to live in the county by 2030 (Figure 2). As shown in Figure 3, Ravalli County supported 13,770 jobs in 2010. By 2020, that number increased to 15,720 jobs for an increase of 14%. Due to data limitations, projections may not capture the impact of COVID-19 on future labor markets.

Figure 2: Historical and Projected Population in Ravalli County, 2010 to 2030



Source: Emsi Burning Glass demographics data, U.S. Census Bureau, U.S. Health Department.

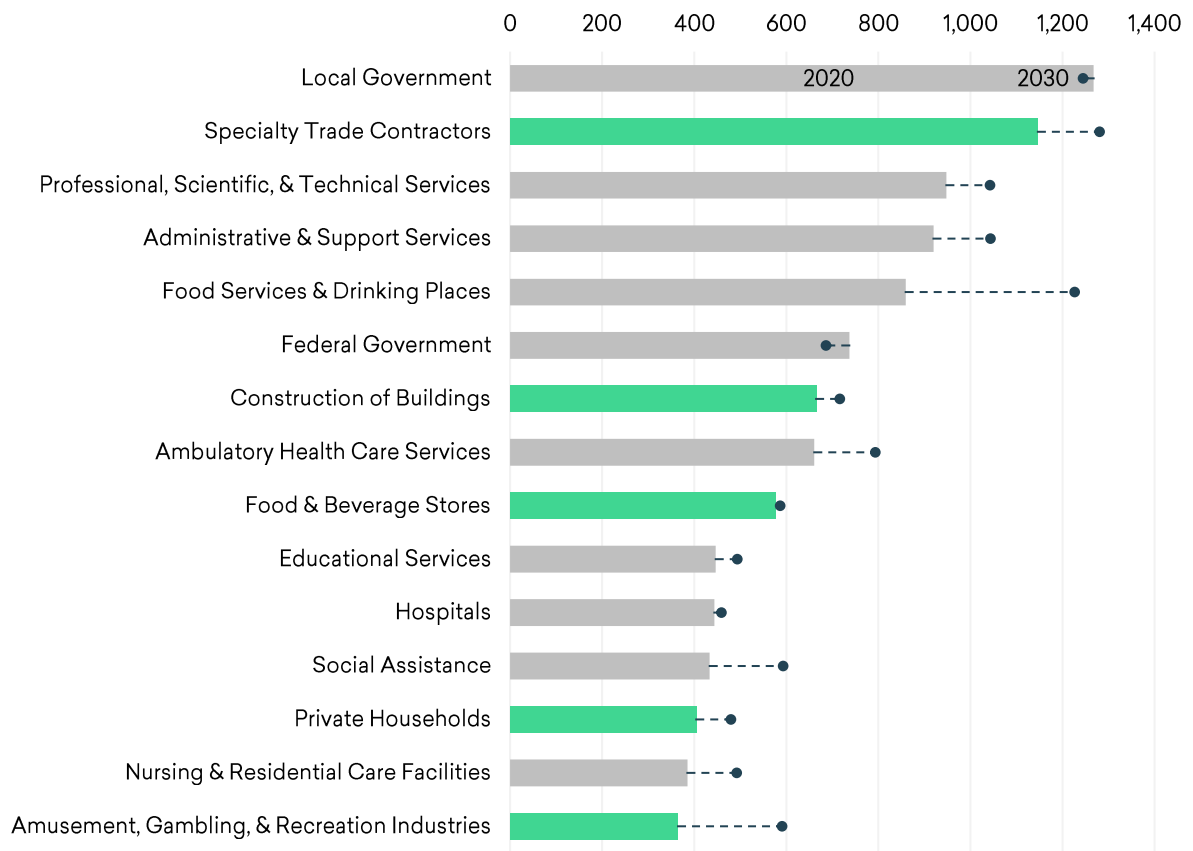
Figure 3: Historical and Projected Jobs in Ravalli County, 2010 to 2030



Source: Employees & Self-Employed 2021.4.

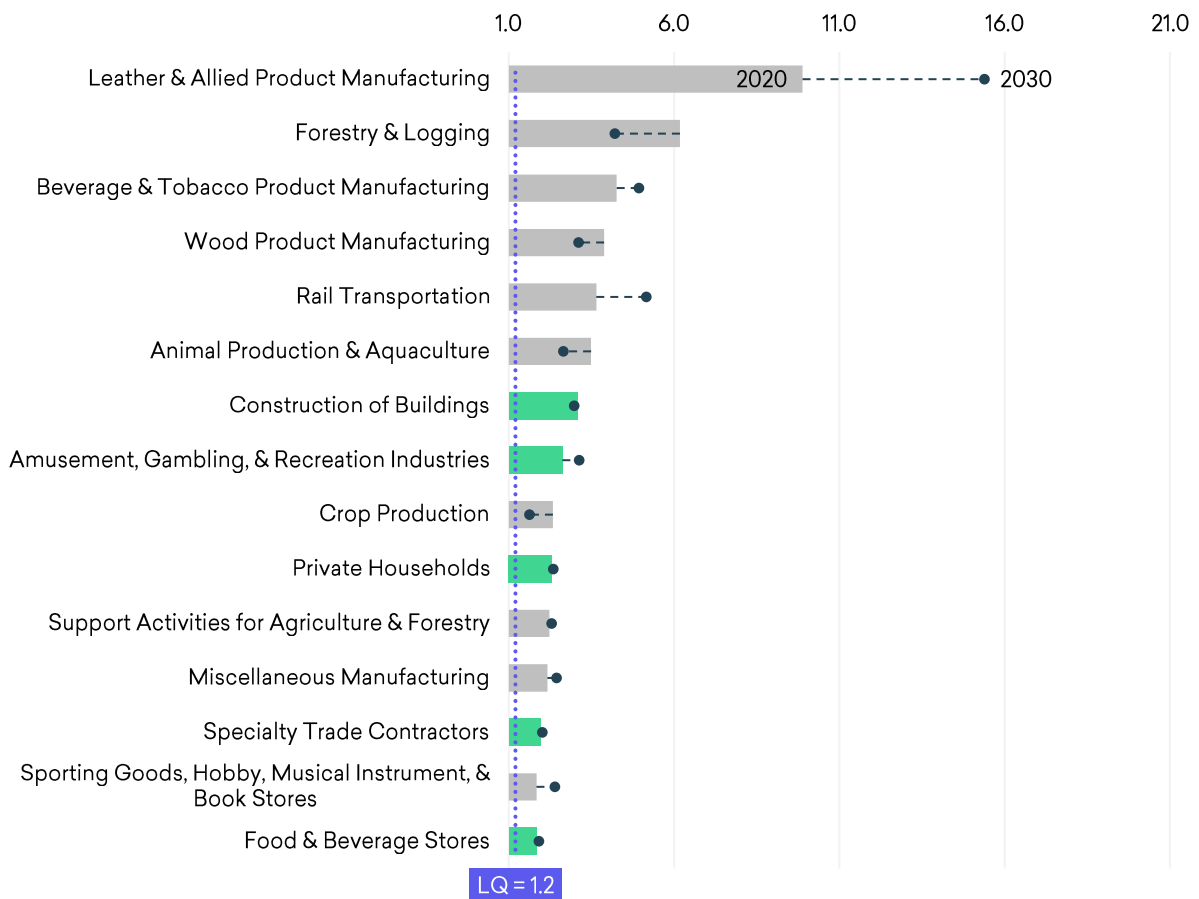
Figure 4 displays the top industry subsectors in terms of employment in Ravalli County, and Figure 5 shows the top industry subsectors in terms of employment concentrations, referred to as location quotients (LQs). High LQs (usually anything greater than 1.2) are an indication that the county has a comparative advantage or specialization in certain industry subsectors relative to the rest of the nation or potentially to other regions.

Figure 4: Top Industry Subsectors in Ravalli County by Jobs



Source: Employees & Self-Employed 2021.4.

Figure 5: Top Industry Subsectors in Ravalli County by Employment Concentration (LQ)



Source: Employees & Self-Employed 2021.4.

Note the green bars in the figures. Across all of Ravalli County’s industry subsectors, five are within the top 15 in terms of jobs with relatively high LQs. The appearance of these industry subsectors provides an indication of their strength in the county’s economy and offers the college insight into potential employment opportunities for its students. These industry subsectors, ranked by 2020 jobs, are:

- Specialty Trade Contractors;
- Construction of Buildings;
- Food & Beverage Stores;
- Private Households; and
- Amusement, Gambling, & Recreation Industries.

The data in Table 1 show several of the county’s socioeconomic indicators compared to those at the state and national level. Household income, reported as a median annual value, includes the income of all individuals in a household, 15 years and over, whether they are related to the householder or not. Per capita income is calculated as the mean income for every person in the area divided by the aggregate income of the total population.

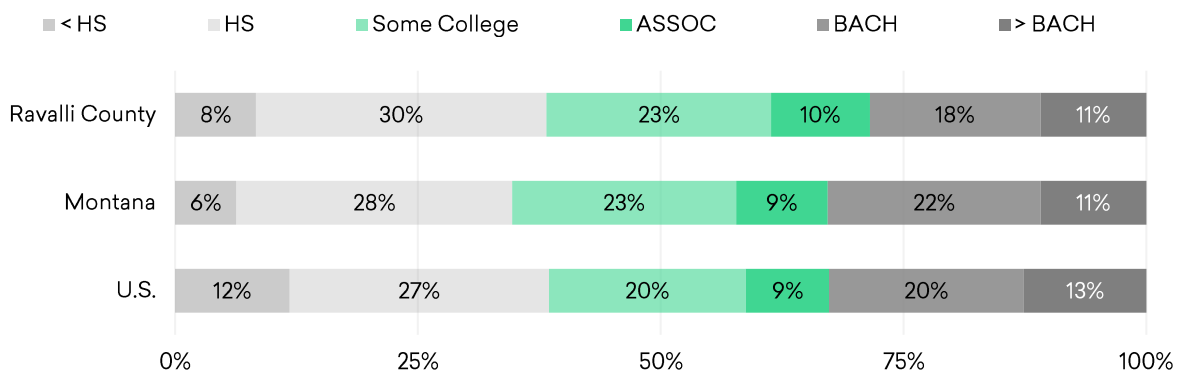
Table 1: Income, Unemployment, and Poverty Characteristics for Ravalli County

	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	PER CAPITA INCOME	POVERTY ALL PEOPLE
Ravalli County, MT	\$53,054	5.3%	\$29,761	12.3%
Montana	\$54,970	4.0%	\$31,151	13.1%
United States	\$62,843	5.3%	\$34,103	13.4%

Source: American Community Survey (ACS) 2019 five-year estimates from the U.S. Census Bureau Data. While the ACS 2019 five-year estimates provide the most recent figures related to the table, the U.S. Census website notes that 2020 five-year estimates will be available starting March 17, 2022.

Figure 6 displays the highest educational attainments of Ravalli County, Montana, and U.S. adults, without reference to gender and the major race and ethnic groups. Educational attainment data are useful for targeting specific population groups with less than or greater than average education levels.

Figure 6: Highest Educational Attainments of Adults in Ravalli County, Montana, and the U.S.



Numbers may not sum due to rounding.

Source: Emsi Burning Glass demographics data and U.S. Census Bureau, American Community Survey.



PROGRAM DEMAND GAP ANALYSIS

The program demand gap analysis provides results across all of BC UM's non-credit and degree level programs, which have been classified by their formal CIP code.¹ The analysis connects the college's program completers with the availability of county job openings. For BC UM's non-credit programs, the analysis connects the college's completers with the availability of county job openings but without the additional reference to non-credit program completions from other postsecondary educational institutions in Ravalli County.

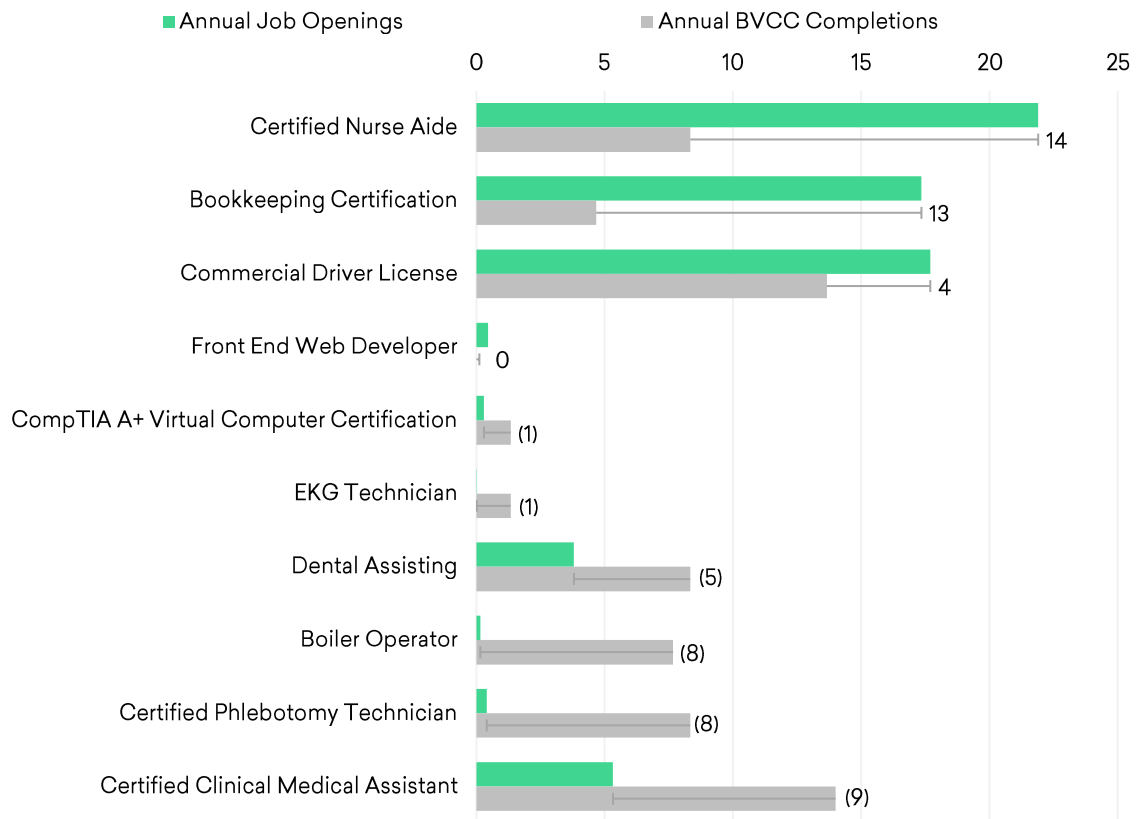
BC UM offers 10 non-credit programs, when grouped by their six-digit CIP codes. The non-credit programs can be designed for self-enrichment; however, BC UM offers them with workforce skills in mind. Using a customized non-credit program-to-occupation map, the 10 programs are analyzed using program demand gap analysis methods. The results of the analysis are an indication of the potential labor market demand for BC UM's non-credit programs, whether those programs are for people seeking employment or looking to learn new skills (Figure 7). The non-credit level programs with the three gaps are:

- Certified Nurse Aide (gap of 14; median hourly wage \$13.15)
- Bookkeeping Certification (gap of 13; median hourly wage \$15.80)
- Commercial Driver License (gap of four; median hourly wage \$20.95)

BC UM offers a General Studies program at the associate level and continuing a liberal arts program such as that at BVCC would likely be beneficial. Those in the county who are interested in saving money on their first two years of college would be provided an opportunity to receive a similar education for a reduced expense, prior to transferring elsewhere to complete a four-year degree. While difficult to project liberal arts career trajectories, BC UM and BVCC administrators should be aware that students can find success in a variety of business-related occupations. Using the Profile Analytics database, many liberal arts program completers are currently employed as retail salespersons and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in Ravalli County, and the college's liberal arts program serves as a starting point to students' future career goals.

¹CIP refers to the Classification of Instructional Program and was originally developed by the U.S. Department of Education's National Center for Education Statistics (NCES).

Figure 7: BC UM's Non-Credit Programs



Non-credit programs are grouped by their six-digit CIP code.
 Source: Emsi Burning Glass program demand gap model.

PROGRAM ADDITIONS

Fifty-one certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, many of which are related to construction & extraction occupations. At the associate degree level, there are fewer opportunities for new programs, due to low demand within Ravalli County. Nonetheless, there are three opportunities, all in healthcare practitioners & technical occupations. The three are Registered Nursing, Dental Hygienist, and Radiologic Technologist & Technician programs. Two of these potential programs are related to non-credit programs already offered at the college. BVCC should consider these programs, whether its focus is on job openings in Ravalli County or Montana. Given that demand for healthcare workers has experienced recent growth on a national level, it is important for BVCC to consult with local healthcare providers when attempting to specify county demand for these occupations. A Registered Nursing program could similarly be offered at the transfer-track degree level due to the gap in both associate degree and bachelor's degree education levels identified in the program demand gap analysis. For all

award levels, many program additions are related to the college’s current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the county’s current and projected labor market demand. A selection of these occupations, which have the most regional job openings by award level, appear in Table 2.

Table 2: Program Additions by Education Level

SOC TITLE	2020 JOBS	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE	ED. LEVEL
Home Health and Personal Care Aides	329	41	6	36	\$12.63	CERT
Carpenters	445	28	0	28	\$19.06	CERT
Office Clerks, General	349	27	0	27	\$14.63	CERT
Stockers and Order Fillers	167	24	0	24	\$13.28	CERT
Construction Laborers	259	18	0	18	\$15.86	CERT
First-Line Supervisors of Food Preparation and Serving Workers	96	14	0	14	\$16.57	CERT
First-Line Supervisors of Retail Sales Workers	175	12	0	12	\$15.27	CERT
Customer Service Representatives	117	11	0	11	\$14.79	CERT
Maintenance and Repair Workers, General	112	10	0	10	\$17.38	CERT
Teaching Assistants, Except Postsecondary	180	10	0	10	\$12.17	CERT
Dental Hygienists	20	1	0	1	\$37.67	ASSOC
Radiologic Technologists and Technicians	17	1	0	1	\$27.62	ASSOC

SOC refers to the Standard Occupational Classification system used to classify occupations. Average annual job openings represent regional data from 2020 to 2030. Numbers may not sum due to rounding.

Source: Emsi Burning Glass program demand gap model.



Emsi Burning Glass provides colleges and universities with labor market data that helps create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Emsi Burning Glass to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni’s employment outcomes, and demonstrate their institution’s economic impact on their region. Visit economicmodeling.com/higher-education to learn more or connect with us.