

Instructional Program Review

Program: Health Science & Medical Technology

Including: Vocation Nursing/Registered Nursing/Allied
Health/Emergency Medical Services/Oral Health

Academic Year: 2022-2023

Author(s): Heidi Gray, MSN, RN., Celeste Wisner, MSN, RN., Christi Myers, MSN, RN,

PHN. Accepted by Academic Senate: December 14, 2022

Accepted by Consultation Council: January 9, 2023

Accepted by Governing Board: January 10, 2023

Executive Summary

The LCC Health Science and Medical Technology (HSMT) Department consists of two full-time nursing faculty members, Celeste Wisner and Heidi Gray, and one nursing Director Christi Myers as well as adjunct faculty members. The department worked together to determine program successes and barriers in the creation of this Instructional Program Review. HSMT programs are comprised of multiple vocational career pathways designed to support the educational needs of our community and the surrounding region. Current program offerings include Licensed Vocational Nursing (LVN), Certified Nurse Assistant (CNA), Emergency Medical Technician (EMT), Certified Phlebotomy Technician (CPT), and Certified / Registered Medical Assistant (C/R MA). The department has plans for expansion including the establishment of an associate degree in Registered Nursing program as well as opportunities in Oral Health including Dental Assisting and Dental Hygiene.

Our LVN program is accredited by the California Board of Vocational Nursing and Psychiatric Technicians (BVNPT) and has been in operations and accredited at LCC for nearly half a century, being established in 1978. The vocational nursing program was revitalized in 2016 when Celeste Wisner and Christi Myers took on the responsibility of recreating a program that had been dark for several years. The LCC Licensed Vocation Nursing program ceased operations temporarily starting on August 31, 2012. Over three years later the program was entrusted to Christi Myers and Celeste Wisner under the premise of revitalization. The program never lost accreditation with the BVNPT. However, students were not served for far too long. In 2016 all program content was rewritten to meet current standards and the program approval was renewed by the BVNPT with full board authorization to accept students and re-establish the program with a start date of February 1st, 2017. The spring 2017 LVN cohort concluded their program on December 8th, 2017. On August 21st, 2017 a second cohort began the program to align with program start and end dates with the traditional school year. Since the reinstatement of the LVN program in 2017, LCC has graduated over 78 students prepared to complete their nursing examination and begin their career in the healthcare field. To date 77 of the graduated students have successfully passed the National Council Licensure Examination (NCLEX) and all have found employment. The program has a current enrolment of thirteen students who are entering term two.

LCC nursing students are provided opportunities to learn skills using low-fidelity to high-fidelity simulations. Throughout the LVN program, Virtual Simulation (VSIM) is used to help develop clinical reasoning skills. VSIM is developed through Laerdal and the National League of Nursing (NLN). LCC nursing students complete the virtual scenario and after receiving a passing score they can enter our simulation lab and experience the same scenario through high fidelity simulations.

LCC nursing has 2 SIM Annes and a SIM Mom from Laerdal, allowing student learning to flourish when learning about obstetrics. SIM Kid and SIM Baby provide many opportunities for students to use their assessment skills as well as communicate with the child and caregiver. To help student progress to taking care of a high-fidelity manikin, we provide many learning tools to practice their skills. The program offers focused learning using additional equipment including but not limited to, blood pressure arms, Foley catheter manikins, airway manikins, and a variety of wounds, and manikins that focus solely on auscultation of the heart and lung. LCC has recently developed a virtual reality simulation ab opportunity that will provide the students with real-world virtual simulations using 4 sets of Oculus VR goggles utilizing scenarios created by SimX.

Being in a rural community LCC nursing is the only nursing school in a 60+ mile radius. We have been able to partner closely with Lassen County Public Health Department (LCPH) who provides our students with many opportunities in providing essential services around Lassen County. Since 2017, our nursing students have participated in the “Annual Drive Thru Flu Clinic”. Under the direct supervision of the LCC nursing faculty, our students vaccinate 800+ community members every year.

The 2020/2021 classes were able to participate in the COVID-19 protocol for our county. They learned and participated in contact tracing, drive-thru testing, documentation, and finally, they were able to vaccinate our community. Under the direction of LCPH and LCC Nursing Faculty, the class of 2021 partook in the COVID-19 vaccine drive-thru clinic. As a class over 1,000 vaccinations were administered safely and efficiently in just one day.

Upon reinstatement of the LVN program, the Health Science department also took on the endeavor of re-establishing the EMT programs with approval from the Local Emergency Services Authority (LEMSA), Nor Cal Emergency Medical Services. The EMT program offers an entry-level life-saving course called Emergency Medical Responder. The HSMT department also began instructing Emergency Medical Technician Basic, a course preparing individuals for state and national registry licensure as an EMT Basic. The department also offers a refresher course for EMT-B necessary for license renewal. The EMT program currently has ten students who have recently started their clinical experience with our local ambulance company, they will complete the program in December 2022. The next EMT cohort will start in the spring of 2023. Further, LCC offered an Emergency Medical Responder program that is accredited by NorCal EMS. This program has provided training to 143 individuals over the past five years. These individuals often join a career in firefighting or volunteer for one of our many local volunteer fire agencies.

The Health Science department has partnered with the local ambulance company and a local fire department to create a community Cardiopulmonary Resuscitation (CPR) program offering Basic Life Support CPR as well as specialized courses for child-care providers and public safety employees. Over the past five years, LCC has trained 197 individuals in Basic Life Support, 14 individuals in CPR for childcare, and 64 individuals in Public safety-First Aid.

The Health Science department has established a Medical Assisting program offering educational preparation for students to become certified to work as both an administrative and clinical Medical Assistant. The Medical Assisting Program is only offered when there is an identified community need, to date 19 Medical Assistance have been trained and the program will run again in the Spring of 2023 at our clinical partners requests.

The HSMT Department established a Certified Phlebotomy Technician (CPT) program in 2018 and has the program maintains accreditation by the California Department of Public Health (CDPH). This course allows students to prepare for certification as a Phlebotomy Technician. This program has graduated 30 students and is currently only offered when requested based on community needs.

The HSMT department has also effectively created a Certified Nurse Assistant (CNA) program that has been accredited by CDPH and trains critical basic care providers to our community. Since 2019 the program has produced 69 Certified Nursing Assistance to join our community’s workforce. CNA is not currently being offered and is scheduled to begin the next cohort in the spring of 2023.

The HSMT Advisory Committee made up of local industry partners has identified priority areas for growth including the addition of a Registered Nursing program, the additions of Dental Assisting and Dental Hygiene programs, and the opportunities for current program offerings to be duplicated as Adult Education offerings. Labor market data supports all recommendations made by the Advisory Committee.

Based on Advisory Committee recommendations the HSMT department is seeking approval of an Associate Degree in Registered Nursing program with a projected start date of August 14, 2023. The HSMT department has worked diligently over the past several months to ensure supportable staffing levels and has created a robust Registered Nursing curriculum. The department is further seeking approval for the consideration of an advanced placement option for current Licensed Vocational Nurses to enter the program at the beginning of year 2.

The advanced placement option for current LVNs will require that all applicants meet all requirements of advanced placement including current unencumbered licensure as a Licensed Vocational Nurse, further applicants will be required to complete an LVN to ADN bridge class that will ensure competencies including nursing process, clinical decision making, pharmacology and math competencies and will include opportunities for challenging content not covered in their LVN program. LCC will use mastery level examinations through 'The Point' to ensure competencies in the challenge process and to ensure a high success rate for advanced placement students.

The intended initial class size each year will be 30 students with the option of enrolling an additional 10 in year 2 to complete the advanced placement option for LVNs. The projected class size for the next five cohorts is displayed below and is based on current available staffing. LCC will offer one program every two years and will request a revision to this timing if staffing allows for further offerings. Current data and local needs support the addition of an Associate Degree in Registered Nursing program to our region.

In response to Advisory Committee recommendations, the HSMT department is also beginning the process of developing and seeking approval for both a Dental Assisting and Dental hygienist program offering. The development of these programs is supported by the newly developed Lassen County Healthcare Education Collaborative and financially backed by North State Together.

HSMT faculty have worked together to identify the following program goals:

1. Increase enrolment in current programs through outreach and advertising.
2. Increase enrolment through creating new program offerings.
3. Improve student retention through increasing staffing and student support opportunities.

SECTION 1: ACADEMIC PLANNING

Program Overview, Objectives, and Student Learning Outcomes

The HSMT Program is aligned with the vision and mission of LCC. The HSMT Program is an academic leader in our region related to health career pathways, providing quality instruction and encouraging student success. The department is dedicated to expanding outreach and student access with an equity mindset acting as an educational leader. The department is a trusted steward providing capable leadership and accountability, dedicated as a cultural leader in the community, acting as a civic and social leader in the community. These values are evident through the program's commitment to students and outreach to our community.

LCC Vision

Lassen College will be a highly efficient self-sustaining rural community college, a catalyst for the region's image, economy, and human capital, and an example of a "we can" culture" of collective impact by being:

- The Academic Leader by ensuring quality instruction and encouraging student success
- The Educational Leader by expanding outreach and student access with an equity mindset
- A Trusted Steward by providing capable leadership and accountability
- The Economic and Workforce Development Leader for the community
- The Cultural Leader in the community
- The Civic and Social Leader in the community

The HSMT department provides programs for individuals perusing higher education goals and mentors students through the process. The program serves a diverse population of students with an equity mindset always striving to better understand the needs of students and provide areas for support.

LCC Mission

Lassen Community College provides programs for all perusing higher education goals. The core programs offer a wide range of educational opportunities including transfer degrees and certificates, economic and workforce development, and basic skills instruction. The College serves diverse students, both on campus and in outreach areas in its effort to build intellectual growth, human perspective and economic potential.

The Lassen Community College Health Science & Medical Technology (HSMT) Department offers a combination of multiple healthcare relate career pathways and programs including:

1. Associates in Arts and Certificate in Vocation Nursing - accredited by the California Board of Vocational Nursing and Psychiatric Technicians:
 - a. Licensed Vocational Nursing

- b. IV Therapy and Blood Withdrawal
- 2. Allied Health Programs
 - a. Administrative Medical Assisting recognized by American Medical Technologies
 - b. Clinical Medical Assisting recognized by American Medical Technologies
 - c. Certified Nursing Assisting recognized by American Medical Technologies
 - d. Certified Phlebotomy Technician accredited by California Department of Public Health
 - e. Basic Life Support certified by American Heart Association
- 3. Emergency Medical Services accredited by NorCal EMS the Local Emergency Medical Service Authority
 - a. Emergency Medical Technician Basic
 - b. Emergency Medical Responder

The HSMT department is currently in the process of developing the following opportunities:

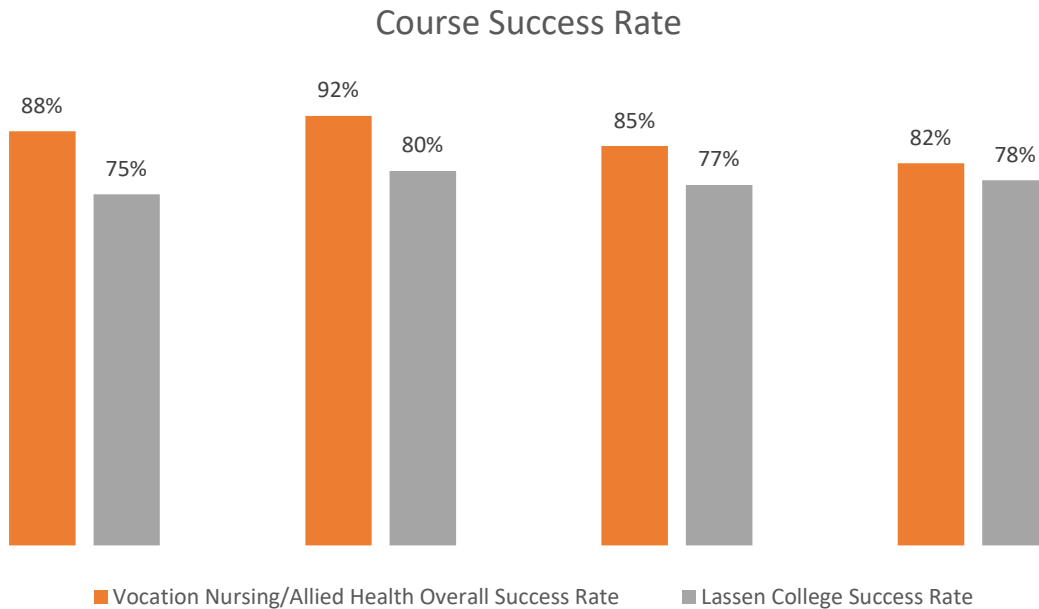
- 1. Registered Nursing (Projected Start Fall 2023)
- 2. Oral Health
 - a. Dental Assisting (Projected Start 2024)
 - b. Dental Hygiene (Projected Start 2024)

Labor market data shows that there is an abundance of job opportunities available in all career paths currently offered at LCC as well as future planned offerings. Further, students completing nursing programs and allied health degrees have an opportunity to transfer to higher education. The HSMT department currently offers a health career pathway through the local high school. Students begin the pathway their junior year and have an opportunity to complete prerequisite courses for a health career pathway during high school. The LCC HSMT department is currently working with Cal Poly Humboldt to create a pathway for future nursing student to seamlessly transfer into a Bachelor of Science program supported locally upon completion of their nursing program here at LCC.

Student Achievement and Learning Outcomes

Trends and Patterns in Student Achievement

This figure demonstrates LCC HSMT Program overall course success rates in comparison to the rest of the institution.



This figure demonstrates LCC HSMT course success percentage over the past five years. Blank boxes indicate that the course was not offered during that particular time frame.

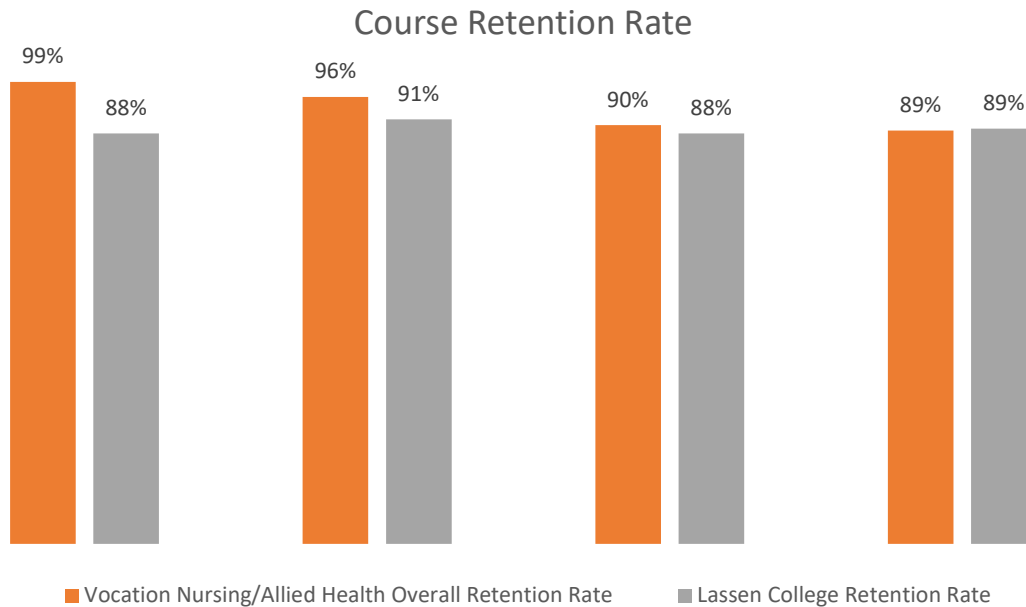
Course Success Rate	2018-19	2019-20	2020-21	2021-22
Program-Level				
Vocation Nursing/Allied Health Overall Success Rate	88%	92%	85%	82%
Lassen College Success Rate	75%	80%	77%	78%
Course-Level				
CD 50	-	75%	100%	100%
EMT 21	83%	88%	89%	88%
EMT 60	67%	82%	84%	73%
EMT 61	100%	100%	100%	-
FS 20	-	-	88%	94%
HO 120	100%	100%	94%	100%
HO 3	84%	81%	72%	65%
HO 49	75%	-	0%	-
HO 70	-	75%	-	-
HO 71	88%	75%	-	-
HO 72	82%	75%	100%	-
HO 80A	-	100%	94%	96%
HO 88	93%	-	94%	-
VN 50	79%	95%	79%	64%
VN 51	84%	96%	79%	64%

VN 52	78%	87%	71%	50%
VN 53	100%	100%	81%	75%
VN 54	92%	100%	94%	90%
VN 55	100%	100%	94%	100%
VN 56	100%	100%	94%	100%
VN 57	100%	100%	94%	100%
VN 58	100%	100%	94%	100%
VN 59	100%	100%	100%	100%
VN 60	100%	95%	100%	100%
Modality				
Correspondence	-	-	-	-
Face-to-Face	88%	94%	90%	84%
Online	90%	81%	72%	69%
Hybrid	-	-	-	-

This data aggregates LCC HSMT success related to demographics and is utilized to ensure gaps in equity are addressed to ensure student success.

Success Rate by Student Demographic	2018-19	2019-20	2020-21	2021-22
Program-Level				
Vocation Nursing/Allied Health Overall Success Rate	88%	92%	85%	82%
Lassen College Success Rate	75%	80%	77%	78%
Gender				
Female	90%	91%	85%	80%
Male	80%	94%	85%	87%
Unreported	-	-	0%	-
Ethnicity-Race-Ancestry				
American Indian or AK Native	78%	86%	93%	65%
Asian	67%	100%	72%	100%
Black or African American	97%	90%	67%	81%
Filipino	100%	100%	86%	100%
Hispanic or Latinx	95%	93%	83%	78%
Other	0%	-	-	-
Pacific Islander	33%	100%	75%	50%
Unreported	100%	100%	67%	78%
White	89%	90%	87%	83%
Age Group				
17 and Under	71%	100%	77%	75%
18 to 24	86%	87%	90%	85%
25 to 49	93%	95%	86%	80%
50 and Over	71%	83%	67%	100%

The institution has experienced a campus-wide decline in retention rates since returning to on campus learning after the pandemic. The LCC HSMT department has experienced the same decline. These trends are being analyzed and plans are being created to address the decline in retention across the board. These retention concerns are being explored at the student level in the HSMT department and an action plan is in the process of being created to ensure student success. Actions include increases in student services including behavioral health and assistance with food insecurities. Further, the nursing director has worked to check in regularly with staff and students to determine further barriers to retention.



This data displays HSMT course retention rates over the past five years as a percentile and further defines retention by modality.

Retention Rate	2018-19	2019-20	2020-21	2021-22
Program-Level				
Vocation Nursing/Allied Health Overall Retention Rate	99%	96%	90%	89%
Lassen College Retention Rate	88%	91%	88%	89%
Course-Level				
CD 50	-	100%	100%	100%
EMT 21	100%	97%	94%	88%
EMT 60	100%	91%	89%	91%
EMT 61	100%	100%	100%	-
FS 20	-	-	100%	98%
HO 120	100%	100%	100%	100%
HO 3	98%	84%	81%	86%
HO 49	75%	-	0%	-
HO 70	-	90%	-	-
HO 71	94%	83%	-	-
HO 72	100%	75%	100%	-

HO 80A	-	100%	94%	96%
HO 88	100%	-	100%	-
VN 50	100%	100%	79%	64%
VN 51	100%	100%	79%	64%
VN 52	100%	100%	79%	64%
VN 53	100%	100%	81%	75%
VN 54	100%	100%	94%	100%
VN 55	100%	100%	94%	100%
VN 56	100%	100%	94%	100%
VN 57	100%	100%	94%	100%
VN 58	100%	100%	94%	100%
VN 59	100%	100%	100%	100%
VN 60	100%	100%	100%	100%
Modality				
Correspondence	-	-	-	-
Face-to-Face	99%	98%	93%	89%
Online	100%	84%	81%	86%
Hybrid	-	-	-	-

Student demographics are considered to determine and address equity gaps in retention.

Retention Rate by Student Demographic	2018-19	2019-20	2020-21	2021-22
Program-Level				
Vocation Nursing/Allied Health Overall Retention Rate	99%	96%	90%	89%
Lassen College Retention Rate	88%	91%	88%	89%
Gender				
Female	99%	96%	89%	87%
Male	100%	97%	93%	95%
Unreported	-	-	0%	-
Ethnicity-Race-Ancestry				
American Indian or AK Native	89%	90%	93%	76%
Asian	100%	100%	72%	100%
Black or African American	100%	97%	83%	89%
Filipino	100%	100%	95%	100%
Hispanic or Latinx	98%	94%	88%	84%
Other	100%	-	-	-
Pacific Islander	100%	100%	88%	100%
Unreported	100%	100%	89%	78%
White	99%	96%	91%	91%
Age Group				
17 and Under	100%	100%	85%	90%
18 to 24	99%	92%	95%	91%
25 to 49	99%	98%	89%	85%
50 and Over	100%	92%	73%	100%

Representative data does not include technical certifications. Vocational Nurses have had the option in the past to complete a Certificate of Achievement in Vocational Nursing or an AS in Vocational Nursing. Program faculty has worked with the counseling department to ensure that students are encouraged to complete the AS to increase their personal accomplishment and become more employable. Students completing Allied Health Degrees are generally interested in transferring to a Registered Nursing program and completing their General Education requirements here at Lassen.

Degree and Certificates	2018-19	2019-20	2020-21	2021-22
Allied Health Degrees Awarded	15	16	22	24
Lassen College Degrees Awarded	310	260	338	236
Allied Health Certificates Awarded	9	10	19	23
Lassen College Certificates Awarded	156	128	161	72
Degree or Certificate Program				
AA University Studies: Emphasis in Allied Health-CSU	6	5	3	2
AA University Studies: Emphasis in Allied Health-IGETC	1	1		
AS Vocational Nursing	8	10	19	22
Cert. of Achievement Vocational Nursing	9	10	19	23

Achievement

Both HSMT course success and retention rates remain at or above average in comparison to the rest of the institution. The HSMT department provides a good number of awards and has a high success rate on external licensing examinations. The program will focus on enrolment and retention over the next year in order to increase enrolment and student success.

Equity

Data trends show that the HSMT department serves a diverse population of students who obtain success in the programs offered. Currently, there appears to be an equity gap in the program success rates for students who identify as Native American, African American, and Hispanic. Program staff will explore these equity gaps and determine a plan for improvement. The department will also ensure that the Equity Plan that is being created by the student services department is tied into plans once it is made available. The department is dedicated to ensuring an equitable opportunity for students and has added an equity statement to all course outlines. Further faculty have participated in multiple equity training and have implemented practices learned in the classroom. Faculty have also taken steps to receive training on equity and accessibility and will continue to implement practices learned to ensure an inclusive learning environment that supports the success of all students.

Student Learning Outcomes

All HSMT SLO results have remained above average with 100% achievement on most and no less than 90% achievement on some. ALL HSMT SLOs and SLO maps have been reviewed and submitted to curriculum for approval with no changes. All SLO data and PSLO data is available for review in the new data portal.

Course Assessed	Recommendations for Improvement
CD-50 ECE Child Health and Safety	No change recommended
EMT-21 Emergency Medical Responder	No change recommended
EMT-60 Emer Med Tech B	No change recommended
EMT-61 Emt -B Refresher	No change recommended
FS-20 1st Aid/Cpr Pub Emp	No change recommended
HO-120 Cardiopulmonary Res	No change recommended
HO-3 Medical Terminology	No change recommended
HO-49 Health Occupations Work Exp	No change recommended
HO-70 Medical Assisting: Core	No change recommended
HO-71 Medical Assist Administrative	No change recommended
HO-72 Medical Assisting Clinical	No change recommended
HO-80A Nurse Assistant	No change recommended
HO-88 Phlebotomy	No change recommended
VN-50 Pharmacology	No change recommended – a new math support is being utilized to increase support for student in this course as medical math has been identified as a barrier for many student.
VN-51 Nursing Fundamentals	No change recommended
VN-52 Clinical Lab 1	No change recommended
VN-53 Adult Nursing Theory	No change recommended
VN-54 Clinical Lab II	No change recommended
VN-55 Nursing Leadership Prof Dev	No change recommended
VN-56 Clinical Lab III	No change recommended
VN-57 Maternity Nursing	No change recommended

VN-58 Pediatric Nursing	No change recommended
VN-59 IV Therapy & Blood Withdrawal	No change recommended
VN-60 Comprehensive Nursing Review	No change recommended

PSLO Summary: Associates in Science Degree in Vocational Nursing (Date Last Reviewed 5/16/2022)

Measure: Ratio of achieved SLOs to SLOs assessment. **Target:** 75% of PSLOs will be achieved.

Program Student Learning Outcomes	Summarize Findings
PSLO 1	Successfully pass the National Council Licensure Examination (NCLEX) state board examination for licensure as a Vocational Nurse.
PSLO 2	Work in a variety of healthcare settings performing safe and effective nursing care.
Recommendations for Improvement	
Of the 77 past graduates of the program over the past five years all but one has completed the NCLEX, the one student that has not was unable to take the exam due to changes in family circumstances. Of all graduates, all reported have found meaningful employment in the field of nursing. Current PSLO success rates are at 98%, substantially higher than the set goal.	

PSLO Summary: Certificate of Achievement in Vocational Nursing (Date Last Reviewed 5/16/2022)

Measure: Ratio of achieved SLOs to SLOs assessment. **Target:** 75% of PSLOs will be achieved.

Program Student Learning Outcomes	Summarize Findings
PSLO 1	Successfully pass the National Council Licensure Examination (NCLEX) state board examination for licensure as a Vocational Nurse.
PSLO 2	Work in a variety of healthcare settings performing safe and effective nursing care.
Recommendations for Improvement	
Of the 77 past graduates of the program over the past five years all but one has completed the NCLEX, the one student that has not was unable to take the exam due to changes in family circumstances. Of all graduates, all reported have found meaningful employment in the field of nursing. Current PSLO success rates are at 98%, substantially higher than the set goal.	

PSLO Summary: Certificate of Achievement in Medical Assisting (Date Last Reviewed 5/16/2022)

Measure: Ratio of achieved SLOs to SLOs assessment. **Target:** 75% of PSLOs will be achieved.

Program Student Learning Outcomes	Summarize Findings
PSLO 1	Demonstrate the knowledge about medical assisting and other allied health professions
PSLO 2	Demonstrate beginning level medical assisting skills
PSLO 3	Display understanding of basic medical terminology, anatomy and physiology

PSLO 4	Access and navigate basic computer systems
PSLO 5	Perform exam room procedures autonomously
PSLO 6	Demonstrate knowledge of Pharmacology
PSLO 7	Assist with minor surgery and laboratory procedures
PSLO 8	Provide patient education
Recommendations for Improvement	
The medical assisting program has not been offered recently as community partner need has not required the program, the program will be offered in Spring of 2023. PSLOs will be assessed and revised next year to better match measurable program goals.	

PSLO Summary: Certificate of Accomplishment in Administrative Medical Assisting (Date Last Reviewed 5/16/2022)

Measure: Ratio of achieved SLOs to SLOs assessment. **Target:** 75% of PSLOs will be achieved.

Program Student Learning Outcomes	Summarize Findings
PSLO 1	Demonstrate the knowledge about medical assisting and other allied health professions
PSLO 2	Demonstrate beginning level medical assisting skills
PSLO 3	Display understanding of basic medical terminology, anatomy and physiology
PSLO 4	Access and navigate basic computer systems
PSLO 5	Perform exam room procedures autonomously
PSLO 6	Demonstrate knowledge of Pharmacology
PSLO 7	Assist with minor surgery and laboratory procedures
PSLO 8	Provide patient education
Recommendations for Improvement	
The medical assisting program has not been offered recently as community partner need has not required the program, the program will be offered in Spring of 2023. PSLOs will be assessed and revised next year to better match measurable program goals.	

PSLO Summary: Certificate of Accomplishment in Clinical Medical Assisting (Date Last Reviewed 5/16/2022)

Measure: Ratio of achieved SLOs to SLOs assessment. **Target:** 75% of PSLOs will be achieved.

Program Student Learning Outcomes	Summarize Findings
PSLO 1	Demonstrate the knowledge about medical assisting and other allied health professions
PSLO 2	Demonstrate beginning level medical assisting skills
PSLO 3	Display understanding of basic medical terminology, anatomy and physiology
PSLO 4	Access and navigate basic computer systems
PSLO 5	Perform exam room procedures autonomously
PSLO 6	Demonstrate knowledge of Pharmacology
PSLO 7	Assist with minor surgery and laboratory procedures
PSLO 8	Provide patient education
Recommendations for Improvement	

The medical assisting program has not been offered recently as community partner need has not required the program, the program will be offered in Spring of 2023. PSLOs will be assessed and revised next year to better match measurable program goals.

Proposed PSLOs for New Program

PSLO Summary: Associates of Science in Registered Nursing (Date Last Reviewed 5/16/2022)

Measure: Ratio of achieved SLOs to SLOs assessment. **Target:** 75% of PSLOs will be achieved.

Program Student Learning Outcomes	Summarize Findings
PSLO 1	Employ scientific and evidence-based knowledge in response to alterations in health and wellness to guide actions which promote holistic patient-centered care.
PSLO 2	Demonstrate critical thinking skills that support the nursing process.
PSLO 3	Safely provide competent and confident care both individually and in the team setting.
PSLO 4	Display therapeutic communication techniques with a diverse patient population and healthcare team.
Recommendations for Improvement	
These are proposed PSLOs for the proposed Registered Nursing program and have not been measured yet, the program is projected to begin Fall 2023.	

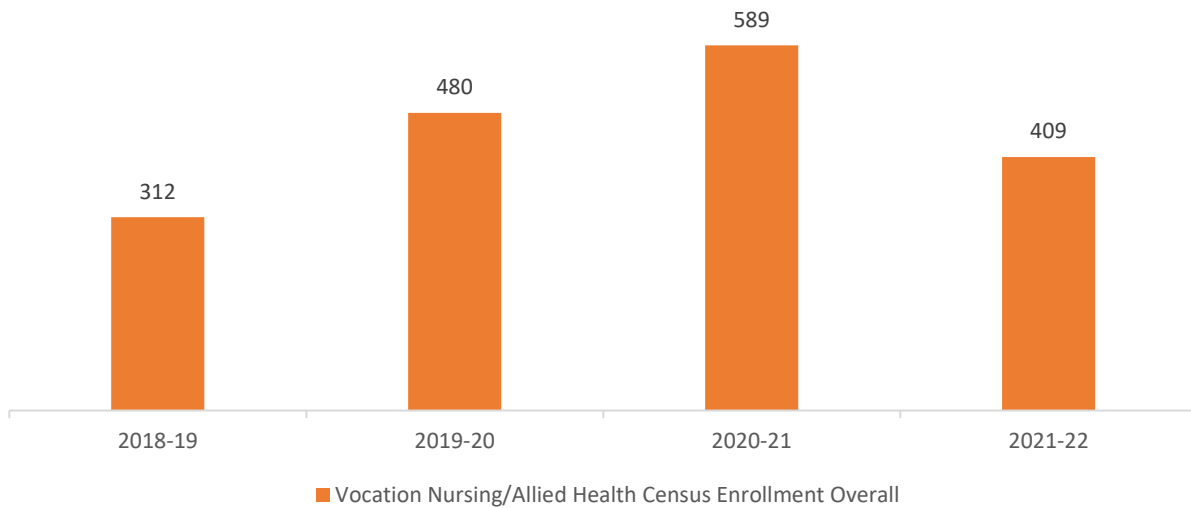
Enrollment Management

Representation of program enrolment by FTES and FTEF over the past five years.

Enrollment Management	2018-19	2019-20	2020-21	2021-22
Vocation Nursing/Allied Health Census Enrollment Overall	312	480	589	409
Lassen College Census Enrollment	15,117	14,320	12,244	11,847
Vocation Nursing/Allied Health Full-Time Equivalent Students (FTES)	59.8	84.8	98.3	72.2
Lassen College Full-Time Equivalent Students (FTES)	1,648	1,561	1,340	1,269
Vocation Nursing/Allied Health Number of Sections	26	29	42	32
Lassen College Number of Sections	883	851	758	818
Vocation Nursing/Allied Health Fill Rate	49%	66%	70%	58%
Lassen College Fill Rate	55%	54%	55%	51%
Vocation Nursing/Allied Health Full-Time Equivalent Faculty (FTEF)	5.1	6.4	7.3	5.6
Lassen College Full-Time Equivalent Faculty (FTEF)	79.8	77.7	70.6	74.2
Vocation Nursing/Allied Health FTES/FTEF	11.7	13.3	13.4	12.8
Lassen College FTES/FTEF	20.7	20.1	19	17.1

The following data represents program enrolment in HSMT courses at LCC over the past five years.

Enrollment (Seats Filled at Census)



The following data represents program enrolment in HSMT courses at LCC over the past five years including modality. The majority of LCC HSMT courses were able to remain Face-to-Face during the pandemic thanks to low infection rates in student population and procedural safety measures. Most online studies were for HO3 which is medical terminology, this class is regularly offered online.

Enrollment	2018-19	2019-20	2020-21	2021-22
Course-Level				
CD 50	0	8	2	4
EMT 21	40	33	54	16
EMT 60	9	13	19	11
EMT 61	3	5	3	0
FS 20	0	0	16	48
HO 120	19	69	72	37
HO 3	49	83	147	98
HO 49	4	1	1	0
HO 70	0	20	0	0
HO 71	16	12	0	0
HO 72	11	4	5	0
HO 80A	0	10	35	24
HO 88	14	0	16	0
VN 50	19	23	25	23
VN 51	19	23	25	23
VN 52	18	23	25	23
VN 53	13	19	21	14
VN 54	12	20	18	11
VN 55	11	20	17	10
VN 56	10	21	17	10
VN 57	11	21	17	10
VN 58	10	21	17	10
VN 59	14	10	21	27
VN 60	10	21	16	10
Modality				
Correspondence	0	0	0	0
Face-to-Face	281	397	442	335
Online	31	83	147	74
Hybrid	0	0	0	0

This data aggregates student demographics in the HSMT programs and is utilized to ensure gaps in equity are addressed to ensure student success.

Vocation Nursing/Allied Health Enrollment by Student Demographic	2018-19	2019-20	2020-21	2021-22
Program-Level				
Vocation Nursing/Allied Health Census Enrollment Overall	312	480	589	409
Gender				
Female	258	385	464	310
Male	54	95	124	99
Unreported	0	0	1	0
Ethnicity-Race-Ancestry				
American Indian or AK Native	9	22	28	17
Asian	12	35	18	7
Black or African American	31	31	12	27
Filipino	3	10	37	14
Hispanic or Latinx	55	98	114	102
Pacific Islander	6	2	8	2
White	184	266	363	231
Other	1	0	0	0
Unreported	11	16	9	9
Age Group				
17 and under	7	12	102	61
18 to 24	110	176	205	160
25 to 49	174	280	267	183
50 and over	21	12	15	5

Data trends above show that the HSMT department has experienced a shift in enrollment, FTES, FTES/FTEF, and fill rates in alignment with trends experienced by the institution. Our programs, however, have maintained higher rates than many health sciences programs in our regions. Program priority this year is to increase enrolment into current and proposed programs through ensuring adequate staffing and advertising. Retention will also be prioritized through ensuring adequate staffing and student support services.

Curriculum

Degrees and/or Certificates

Degree or Certificate Title	Award Type (AA, AS, AAT, AST, etc.)	Units	Term of Last Revision
Associate in Arts Degree University Studies: Emphasis in Allied Health	Associate in Arts	60	Fall 2022
Associate in Science Degree in Vocational Nursing	Associate in Science	74	Fall 2022
Certificate of Achievement in Vocational Nursing	Certificate of Achievement	64	Fall 2022
Certificate of Accomplishment in Administrative Medical Assisting	Certificate of Accomplishment	13.5	Fall 2022
Certificate of Accomplishment in Clinical Medical Assisting	Certificate of Accomplishment	14.5	Fall 2022
Certificate of Achievement in Medical Assisting	Certificate of Achievement	23	Fall 2022

All HSMT Certificates and Programs have been reviewed with no revisions made and sent to Curriculum Committee on 11/10/2022 for review at the 11/29/2022 Curriculum Committee Meeting.

Courses

There have been no substantial revisions made to any current courses, minor revisions submitted to curriculum are included in the list below but do not change course content or intent. The HSMT department is currently working on the beginning phase of development of a Dental Assisting and Dental Hygiene program which will be supported by funds from North State Together which has furnished a million dollar grant for development, the programs will be pioneered by the newly formed Lassen County Healthcare Education Collaborative. The HSMT department is in the approval process with the Board of Registered Nursing and the Chancelors Office for the creation of a Registered Nursing program. Program proposal documents and the program submitted Feasibility Study is available for review upon request.

Course	Last Offered	Term of Last Revision
CD-50 ECE Child Health and Safety	Fall 2021	Fall 2022
EMT-21 Emergency Medical Responder	Spring 2022	Fall 2022
EMT-60 Emer Med Tech B	Fall 2022	Fall 2022
EMT-61 EMT -B Refresher	Spring 2022	Fall 2022
FS-20 1st Aid/CPR Pub Emp	Fall 2022	Fall 2022
HO-120 Cardiopulmonary Res	Fall 2022	Fall 2022
HO-3 Medical Terminology	Fall 2022	Fall 2022
HO-49 Health Occupations Work Exp	Fall 2022	Fall 2022
HO-70 Medical Assisting: Core	Fall 2020	Fall 2022
HO-71 Medical Assist Administrative	Fall 2020	Fall 2022
HO-72 Medical Assisting Clinical	Spring 2021	Fall 2022
HO-80A Nurse Assistant	Spring 2022	Fall 2022
HO-88 Phlebotomy	Fall 2021	Fall 2022

VN-50 Pharmacology	Fall 2022	Fall 2022
VN-51 Nursing Fundamentals	Fall 2022	Fall 2022
VN-52 Clinical Lab 1	Fall 2022	Fall 2022
VN-53 Adult Nursing Theory	Fall 2022	Fall 2022
VN-54 Clinical Lab II	Fall 2022	Fall 2022
VN-55 Nursing Leadership Prof Dev	Spring 2022	Fall 2022
VN-56 Clinical Lab III	Spring 2022	Fall 2022
VN-57 Maternity Nursing	Spring 2022	Fall 2022
VN-58 Pediatric Nursing	Spring 2022	Fall 2022
VN-59 IV Therapy & Blood Withdrawal	Summer 2022	Fall 2022
VN-60 Comprehensive Nursing Review	Spring 2022	Fall 2022

The following revisions have been made to HSMT course curriculum in Fall of 2022:

1. EMT 21 Emergency Medical Responder - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Changed textbook to no textbook
2. EMT 60 Emergency Medical Technician (Basic) - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Updated Textbook edition
3. EMT 61 Emergency Medical Technician-B Refresher - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Removed recommended textbook.
4. HO 3 Medical Terminology - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Changed textbook to OER
6. Added discipline of Nursing and Health
5. HO 3 Medical Terminology - Adding Discipline of Nursing, Adding Discipline of Health
6. HO 70 Medical Assisting: Core - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.
7. HO 70 Medical Assisting: Core - Adding Discipline of Vocational Nursing
8. HO 71 Medical Assisting: Administrative - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.
9. HO 71 Medical Assisting: Administrative- Adding Discipline of Vocational Nursing
10. HO 72 – Medical Assisting: Clinical - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.
10. HO 72 – Medical Assisting: Clinical- Adding Discipline of Vocational Nursing
11. HO 80A Nurse Assistant - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 6. Changed Textbook
12. HO 80A Nurse Assistant - Adding Discipline of Vocational Nursing
13. HO 88 Phlebotomy Technician - 1. Reviewed all maps, no changes recommended. 2. Added

diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added discipline of Vocational Nursing 6. Removed hybrid options per CDPH requirement, temporary approval during COVID-19

14. HO 88 Phlebotomy Technician - Adding Discipline of Vocational Nursing

15. HO 120 Cardiopulmonary Resuscitation (CPR) - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added discipline of Nursing 6. Added Hybrid Delivery 7. Changed Description to remove Red Cross and include AHA 8. Changed textbook

16. HO-120 Cardiopulmonary Resuscitation (CPR) - Adding Discipline of Nursing

17. VN 50 Pharmacology - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added discipline of Vocational Nursing 6. Updated textbook

18. VN 50 Pharmacology - Adding Discipline of Vocational Nursing

19. VN 51 Nursing Fundamentals - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added discipline of Vocational Nursing 6. Updated and new textbook 7. Increased student fee

20. VN 51 Nursing Fundamentals - Adding Discipline of Vocational Nursing

21. VN 52 Clinical Lab I - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added discipline of Vocational Nursing 6. Updated and textbook

22. VN 52 Clinical Lab I - Adding Discipline of Vocational Nursing

23. VN-53 Adult Nursing Theory - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.

24. VN 53 Adult Nursing Theory - Adding discipline of Vocational Nursing

25. VN 54 Clinical Lab II -1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.

26. VN 54 Clinical Lab II - Adding discipline of Vocational Nursing

27. VN-55 Nursing Leadership and Professional Development - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.

29. VN 55 Nursing Leadership and Professional Development - Adding discipline of Vocational Nursing

20. VN 56 Clinical Lab III - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.

31. VN 56 Clinical Lab III - Adding Discipline of Vocational Nursing

32. VN 57 Maternity Nursing - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Updated textbooks

33. VN 57 Maternity Nursing - Adding Disciplined of Vocational Nursing

34. VN 58 Pediatric Nursing - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours.
35. VN 58 Pediatric Nursing - Adding Discipline of Vocational Nursing
36. VN 59 Intravenous Therapy and Blood Withdrawal - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added lab and certification fee
37. VN 59 Intravenous Therapy and Blood Withdrawal - Adding Discipline of Vocational Nursing
38. VN 60 Comprehensive Nursing Review - 1. Reviewed all maps, no changes recommended. 2. Added diversity statement. 3. Updated method of evaluation and delivery to uniform description. 4. Updated hours to include contact, outside, and total learning hours. 5. Added exam, registration, and clearance fee.
39. VN 60 Comprehensive Nursing Review - Adding Discipline of Vocational Nursing

Articulation/Integration of Curriculum

Currently the HSMT department offers one degree for transfer. This degree is the Allied Health Associates in Arts Degree University Studies – Emphasis in Allied Health. No courses in this degree are offered by our department. The degree for transfer will be used for future nursing students who plan to transfer to a Bachelor of Nursing program.

External Compliance

The LCC HSMT department currently offers many programs that require extensive external compliance, including annual reports, program reviews, instructor compliance, etc. All external accreditations are current. No gaps have been identified, accreditation reports and certifications are available upon request.

Program Name	External Compliance/Accrediting Body
Licensed Vocational Nursing	Accredited by California Board of Vocational Nursing and Psychiatric Technicians
IV Therapy and Blood Withdrawal	Accredited by California Board of Vocational Nursing and Psychiatric Technicians
Certified Nursing Assistant	Accredited by California Department of Public Health – Training Program Review Unit
Certified Phlebotomy Technician	Accredited by California Department of Public Health - Laboratory Field Division
Certified/Registered Medical Assisting	Recognized by American Medical Technologies
Emergency Medical Responder	Accredited by Nor Cal EMS the Local Emergency Medical Services Authority
Emergency Medical Technician Basic	Accredited by Nor Cal EMS the Local Emergency Medical Services Authority
Basic Life Support	Accredited by American Heart Association

External Analysis: Job Market Assessment

Labor market data for all current and future program offerings has been requested from the Center for Excellence and is on file in the HSMT department. Labor Market data is available upon request. The need for all current and proposed programs in the HSMT department are supported with Labor Market data and have been identified as priorities by the HSMT Advisory Board.

Program Planning and Communication Strategies

The HSMT department is in a continuous cycle of program level planning, the department director communicates directly with the Dean of Instruction. Current program planning includes the maintenance and improvement of all current program offerings as well as the addition of both a Registered Nursing program and two Oral Health programs. Program level planning, curriculum, SLOs, PSLOs, equity, student achievement and performance data are discussed among department faculty and recommendations are presented to the Dean of Instruction for review.

Academic Planning Analysis Summary

The HSMT department has experienced great success over the past several years as displayed throughout this report and evident through past student success in the community. The HSMT faculty have worked together to identify the following priority areas for growth:

1. Increase enrolment in current programs through outreach and advertising.
2. Increase enrolment through creating new program offerings.
3. Improve student retention through increasing staffing and student support opportunities.

Section 2: Human Resource Planning

Workload and Staffing Assessment

Year	F/T Faculty	P/T Faculty
Previous Year	2 F/T Faculty 1 director with 60/40 split 1 F/T ISS	Multiple
Current Year	2 F/T Faculty 1 director with 60/40 split 1 F/T ISS	Multiple
Next 2 Years	<ol style="list-style-type: none"> 1. Current staff with the addition of: 2. 2 F/T LVN instructors 3. 1 F/T Nursing instructor 4. 1 F/T EMS instructor 5. 1 F/T HO instructor 6. Consideration of integrated HSMT director or dean 7. 2 additional director positions 1 for Registered Nursing and 1 for Oral Health 8. Consideration of director positions for all program requiring external compliance if HSMT director is not considered 9. Consideration of assistant director position to comply with external compliance and succession planning 10. 1 F/T Director for Oral Health programs 11. 2 F/T Oral Health instructors 12. 2 F/T ISS 13. 1 Lab Technician (new position) 14. 1 HSMT consoler/student support 	Multiple

The HSMT department currently has 2 full-time faculty members and one director with a 60/40 load split. Our faculty members regularly work at near a 200% instructional load, our current staffing structure does not meet current program needs and cannot support future growth without additional positions. Many programs within the HSMT department require specific qualifications and specialties. We have adjunct faculty supporting many of our program offerings, which is difficult due to their full-

time commitment in their other jobs and the required specialties of our instructor preventing program growth. Our department supported 5.6 F/T faculty positions this year, which is usually higher due to program offerings being postponed this year as a result of adjunct staffing shortages. To support student success and program growth, the HSMT department will be additional F/T faculty positions as well as instructional support and counseling/student support. Current nursing staffing including one additional F/T faculty member will be utilized to support the need for instruction in the Registered Nursing program and all current positions will need to be under filled to support the current LVN program. Further all programs currently are directed by one director with the same load as other directors who direct only one program, this should be evaluated, and additional time and compensation should be considered if each program is not considered separately. A HSMT director position should be considered including all programs with an assistant director position created to ensure succession planning and to meet external agency requirements.

Professional Development

HSMT faculty and staff take full advantage of professional development opportunities provided throughout the year, in 2022 all F/T faculty attended the National League of Nursing conference which was instrumental to professional development. The HSMT department has also participated in many online professional development opportunities. In the future the department will benefit by attending both the NLN conference and Laerdal Conference as they become available. Further, the department has identified opportunities for professional development in leadership through the NLN, the NLN leadership tracts will be requested for professional development in 2023 for identified faculty, this opportunity is an investment in our faculty members and will increase program success.

Section 3: Infrastructure Planning

Facilities

- The HSMT department has outgrown the current dedicated space and needs expansion to support current offerings and future growth.
- Program needs include regular and dedicated use of multiple areas within the Creative Arts building to support current and future program offerings, needs include:
 - Lecture Space Needs
 - Large lecture hall for RN with WIFI
 - Additional lecture room for LVN with WIFI
 - Additional lecture room for HO/EMS with WIFI
 - 2 Additional lecture rooms for Oral Health with WIFI
 - Nursing Lab Space Needs
 - Current nursing lab
 - Additional nursing simulation lab with dedicated network
 - Virtual simulation lab space with WIFI
 - HO/EMS Lab Space Needs
 - Can continue to share with nursing but will consider the need for growth.
 - Oral Health Lab Space Needs
 - Lab space for 6+ examination stations with running water, electricity, and drains.
 - Lab space for scans and procedures with electricity and WIFI
 - Staff offices to support full time staffing needs
 - Additional study and support space for all programs and Humboldt Extension.

Equipment

- Current equipment requires regular update and maintenance, a full list of program equipment is available upon request. Program equipment needs include additional mannequins and mannequins to support needs in Registered Nursing and Oral Health. Equipment needs for current programs are sufficient, however the department is working with our local EMS agency to procure an ambulance for EMS training which may have some equipment update needs and maintenance costs associated. Registered Nursing and Oral Health equipment needs are to be determined and will be required to support program success.

Technology

- Current student laptops need update and or replacement, many were loaned out to staff during Covid and have not been retrieved. The LVN program needs 34 working student laptops for use at all times.
- The Registered Nursing program will have a need for 40 working student laptops starting Fall of 2023.
- The Oral Health program will have a need for student laptops as well starting in 2024, this need is TBD.
- Classroom technology will be required as lab and lecture space are identified and made

available.

- Simulation labs need recording equipment properly set up and usable, this project has halted and needs to be reassessed.
- All programs will need sufficient WIFI in all working areas and study spaces.
- Additional dedicated networks will be needed for all simulation spaces.
- Subscriptions to Virtual Simulation services.
- Subscriptions to Sim Capture

Section Four: Program Planning

Progress update on previous action plans

The previous IPR from 2020 included 37 planning agenda items that involved program faculty prioritization and implementation, the majority of items have been addressed or are currently under development by staff. Items listed in the current EMP do not represent specific priorities from the prior IPR but include continued needs including the following:

1. Make a Director of Allied Health position either fulltime director to oversee all VN and all HO programs or allow Director 50% release time for director duties
2. Program Development – Nursing/Health Occupations
3. Review and update Strategic Planning process for Health Sciences and Medical Technologies
4. Sustain and further develop the LVN, Medical Assisting, Phlebotomy, EMS, LVN to RN Bridge, and Certified Nurse Assistant and Home Health Aid programs
5. Continue partnership with Lassen High School and support development of a health career pathway.
6. Secure additional space for instruction for future growth
7. Peruse regional, state, and federal funding
8. 1 Full time health occupations instructor
9. 1 full time nursing instructor

All other prioritized recommendations for inclusion in the Educational Master Plan are listed below.

Action Plan	Progress Detail	Outcomes
Develop curriculum and seek approval for an LVN to RN bridge program	Curriculum has been developed for a generic Registered Nursing program with an LVN to RN bridge option and is in the process of approval with both the Chancellor's office and the state board of nursing.	In progress.
Explore partnership opportunities for Public Health Program with UC Merced	This was driven by a past administrator and directions were never provided to department staff.	Removed from priorities.
Consider services required to support additional students in LVN to RN bridge program	The HSMT program has considered needs and continues to advocate for needs of additional student in a generic Registered Nursing program with an optional LVN to RN Bridge.	In progress.
Support development of LVN to RN bridge program through governance, leadership, integrated planning and accountability.	HSMT faculty continue to drive program development and are in current state processes for approval.	In progress.

Hire Full Time 10-month EMT Faculty	This was not prioritized in the EMP and has not occurred; a need exists in order for this program to continue to grow and increase enrolment.	No action but still prioritized.
Create assistant director position with a 20% administrative, and 80% instructional split as stipend position.	This was not prioritized in the EMP but the need continues to meet the requirements of external accreditors.	No action but still prioritized.
Hire full-time nursing faculty	One full time nursing faculty is currently scheduled to be hired by the beginning of Spring 2023.	In progress.
Increase current ISS position to full-time	This has occurred with the support of grant funding however this cost should be included in institutional funds.	Continued priority for adjusting funding of position.
Support professional development opportunities	Professional development opportunities have been supported through grant funding; this is a continued need.	Continued priority.
Consider Live Scan needs impact on current HR staffing and plan accordingly	Faculty is unaware of this consideration at a higher level, all programs require initial live scan processing, and many require additional live scan processing upon completion of the program. The department is willing to add this function to the current ISS job duties if the facility is willing to have our ISS trained and certified in live scan.	In progress.
Complete study of classroom use in the Creative Arts building and determine potential area for Health Program growth based on potential for FTE growth.	This study has been completed by both the facility director as well as the program staff and modifications are planned for program growth.	In progress.
Increase instructional space by rehabbing two to three classrooms on the ground floor of the Creative Arts building.	This has occurred. However, the classroom space has not been dedicated to HSMT, the department began use of one lecture space this semester and moved willingly early in the semester to accommodate the needs of another department. Dedicated space will be essential to program growth.	Continued priority.
Create secondary lab space that can house all high-fidelity simulation scenarios.	A secondary lab space has been identified and is in the process of planning for construction.	In progress.
Modernize building appearance to match instructional space.	This has not occurred; however, it remains a priority for the department.	Continued priority.
Acquisition and installation of technology for new program space.	Technology has been installed in new instructional spaces; staff members need training in the new technology.	In progress.

Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

Complete SWOT analysis

<p>Strengths</p>	<p>The HSMT department has grown substantially over the past several years and has the most dedicated staff possible committed to the current program offerings and program growth. Students have experienced and continue to experience great success through our program offerings and are contributing to our community in amazing ways. The HSMT department continues to grow and will increase enrolment substantially for our institution with the staffing, facilities, and technical support required to run such high intensity programs. The departments biggest success remains with our past students who are now working in a healthcare field both in our community and in other areas. The quality of student produced from our programs are high level and desired by employers. With continued support the HSMT department will continue to grow program offerings and ensure a highly trained equitable workforce for our healthcare community.</p>
<p>Weaknesses</p>	<p>Current weaknesses include advertising, sufficient staffing level and support programs to maintain student retention. Increasing advertising statewide is a program priority to ensure enrolment in our programs, increasing staffing levels will be essential for continued success and future growth. Additional support services will be required to ensure student retention in current and future programs.</p>
<p>Opportunities</p>	<p>Current opportunities include increasing program offerings to increase enrolment. The HSMT department is in the approval process of starting a Registered Nursing program including an opportunity for advanced placement of LVN to RN bridge students. The department is also working with Cal Poly Humboldt to provide opportunities for students to start and complete a Bachelor of Science in Nursing degree through Humboldt here at LCC. The RN program feasibility study will be placed on the January Board of Registered Nursing agenda for advancement to the next stage which will require a comprehensive self-study. The projected start date of the RN program will be August 2023. Further the department is working on the beginning steps of two Oral Health programs with a projected start in 2024.</p>
<p>Threats</p>	<p>Current threats include limited staffing to support current and future program offerings. The most notable and urgent threat to the HSMT programs includes unprepared students after the programs prerequisites required for admission into HSMT programs. Over the past year many issues related to prerequisite programs have been brought to the department's attention as well as administrations attention. Strong prerequisite courses are essential to enrolment and retention in the HSMT programs and must be prioritized for support.</p>

Program Plan

LCC Mission

Lassen Community College provides programs for all perusing higher education goals. The core programs offer a wide range of educational opportunities including transfer degrees and certificates, economic and workforce development, and basic skills instruction. The College serves diverse students, both on campus and in outreach areas in its effort to build intellectual growth, human perspective and economic potential.

HSMT department growth aligns with the mission of the college as our department provides a wide range of educational opportunities including transfer degrees and certificates, economic and workforce

development, and basic skills instruction. The HSMT department serves diverse student, both on campus and in outreach areas in its effort to build intellectual growth, human perspective and economic potential. All plans for growth created by the HSMT department take the institution's mission and vision into consideration. All current programs and future program plans in the HSMT department support the institutions' strategic goals of Institutional Effectiveness, Learning Opportunities, Resource Management, and Student success. All HSMT action plans support all institutional student learning outcomes including, Communication, Critical Thinking, Lifelong Learning, Personal and Interpersonal Responsibility. Action plan priorities, supporting evidence, expected outcomes and resource needs are listed in the chart below. All previously identified priorities remain in progress and are a continued need of department. The HSMT department will required continuous support as they develop new programs, this process is extensive and requires full support of all areas of the institution.

Action Plan	Supporting Evidence	Expected Outcome	Resource(s) to Achieve the Action Plan	Resource Category	Estimated Cost	Expense Type	Priority Ranking
Streamline hiring process of adjunct instructors and hire additional staff to support current and future HSMT programs. -1 F/T Nursing instructor	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	1
-2 F/T LVN instructors	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	2
-1 F/T EMS instructor	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	3
-1 F/T HO instructor	Prioritized need of building nursing and all HSMT programs to increase	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	4

	enrolment and support community needs.						
-Consideration of integrated HSMT director or dean	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	5
-2 additional director positions 1 for Registered Nursing and 1 for Oral Health	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	6
-Consideration of director positions for all program requiring external compliance if HSMT director is not considered	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	7
-Consideration of assistant director position to comply with external compliance and succession planning	Prioritized need of building nursing and all HSMT programs to increase	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	8

	enrolment and support community needs.						
-2 F/T Oral Health instructors	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	9
-2 F/T ISS	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	10
-1 Lab Technician (new position)	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	11
-1 HSMT consoler/student support	Prioritized need of building nursing and all HSMT programs to increase	Increased student FTE and student retention and success rates.	Additional staff and faculty positions	Human Resource Planning	Unknown staffing rates will depend of staffing start rates.	Continuous	12

	enrolment and support community needs.						
<p>Create program dedicated instructional space including:</p> <ul style="list-style-type: none"> -Lecture Space Needs -Large lecture hall for RN with WIFI -Additional lecture room for LVN with WIFI -Additional lecture room for HO/EMS with WIFI -2 Additional lecture rooms for Oral Health with WIFI -Nursing Lab Space Needs -Current nursing lab -Additional nursing simulation lab with dedicated network -Virtual simulation lab space with WIFI -HO/EMS Lab Space Needs can continue to share with nursing but will consider the need for growth. -Oral 	<p>Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.</p>	<p>Increased student FTE and student retention and success rates.</p>	<p>Additional dedicated program space</p>	<p>Facilities</p>	<p>Unknown facility needs will depend on planning and the cost of construction.</p>	<p>One Time</p>	<p>13</p>

<p>Health Lab Space Needs</p> <ul style="list-style-type: none"> -Lab space for 6+ examination stations with running water, electricity, and drains. -Lab space for scans and procedures with electricity and WIFI -Staff offices to support full time staffing needs -Additional study and support space for all programs and Humboldt Extension. 							
<p>Provide needed technology for program sustainment and growth.</p> <ul style="list-style-type: none"> -Current student laptops need update and or replacement, many were loaned out to staff during Covid and have not been retrieved. The LVN program needs 34 working student laptops for use 	<p>Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.</p>	<p>Increased student FTE and student retention and success rates.</p>	<p>Updated and new technologies to support student success.</p>	<p>Technology</p>	<p>Unknown, cost depends on current cost of technology.</p>	<p>Unknown, cost depends on current cost of technology.</p>	<p>14</p>

<p>at all times.</p> <ul style="list-style-type: none"> -The Registered Nursing program will have a need for 40 working student laptops starting Fall of 2023. -The Oral Health program will have a need for student laptops as well starting in 2024, this need is TBD. -Classroom technology will be required as lab and lecture space are identified and made available. -Simulation labs need recording equipment properly set up and usable, this project has halted and needs to be reassessed. - - All programs will need sufficient WIFI in all working areas and study spaces. - - Additional dedicated networks will be needed for 							
--	--	--	--	--	--	--	--

all simulation spaces. -Subscriptions to Virtual Simulation services. -Subscriptions to Sim Capture							
Outreach and advertisement	Prioritized need of building nursing and all HSMT programs to increase enrolment and support community needs.	Increase in enrolment and student retention.	Increased student interest in HSMT programs	Outreach	\$15, 000	Annual	15

Q1 Course Number (Examples: AGR-1-M0095, MUS-12-K0669, etc...):

Answered: 19

Skipped: 0

#	RESPONSES	DATE
1	BIOL-25-Y0083	11/1/2022 10:41 AM
2	Chem-45-Y1120	11/1/2022 9:51 AM
3	ENGL-1-N1335	10/30/2022 6:04 PM
4	SOC-1-N0076	10/30/2022 3:36 AM
5	HLTH-25-N0530.2022FA	10/29/2022 5:11 PM
6	VN-52-M1903	10/28/2022 8:39 AM
7	VN-52-M1903	10/28/2022 8:37 AM
8	VN-52-m1903	10/28/2022 8:36 AM
9	VN-52-M1903	10/28/2022 8:36 AM
10	VN-52-M1903	10/28/2022 8:35 AM
11	VN-52-m1903	10/28/2022 8:35 AM
12	VN-52-M1903	10/28/2022 8:35 AM
13	VN-52-M1903	10/28/2022 8:35 AM
14	clinical lab 1	10/28/2022 8:35 AM
15	VN-52-M1903	10/28/2022 8:32 AM
16	VN-52-M1903	10/28/2022 8:28 AM
17	bio 25	10/27/2022 9:53 AM
18	BIO20	10/27/2022 9:31 AM
19	PSY-1-N0406 10/2/2022 10:52 PM	

Student Surveys

Q2 Name of Program: (Select only one option)

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Administration of Justice	0.00%	0
Agriculture	0.00%	0
Studio Art	0.00%	0
Automotive Technology	0.00%	0
Business	0.00%	0
Child Development	0.00%	0
Fire Technology	0.00%	0
Gunsmithing	0.00%	0
Health Occupations/Medical Assisting	0.00%	0
History/Social Science/Sociology/Psychology	0.00%	0
Human Services	0.00%	0
Humanities	0.00%	0
Information Systems	0.00%	0
Natural Science	0.00%	0
Physical Education	0.00%	0
Vocational Nursing/Allied Health	100.00%	19
Welding Technology	0.00%	0
Special Instructional Programs: Athletics	0.00%	0
Special Instructional Programs: Developmental Studies	0.00%	0

Special Instructional Programs: Work Experience

0.00%

0

Q3 Course Name/Title:

Answered: 19

Skipped: 0

#	RESPONSES	DATE
1	Anatomy/Physiology	11/1/2022 10:41 AM
2	Chem-45	11/1/2022 9:51 AM
3	College Composition	10/30/2022 6:04 PM
4	Introduction to sociology	10/30/2022 3:36 AM
5	Understanding Nutrition	10/29/2022 5:11 PM
6	CLINICAL LAB 1 VN-52-M1903	10/28/2022 8:39 AM
7	Clinical Lab 1	10/28/2022 8:37 AM
8	VN-52	10/28/2022 8:36 AM
9	Clinical lab 1	10/28/2022 8:36 AM
10	Clinical Lab 1	10/28/2022 8:35 AM
11	Clinical Lab 1	10/28/2022 8:35 AM
12	Clinical Lab 1	10/28/2022 8:35 AM
13	Clinical Lab 1	10/28/2022 8:35 AM
14	VN-52 M1903	10/28/2022 8:35 AM
15	Clinical lab 1	10/28/2022 8:32 AM
16	Clinical Lab 1	10/28/2022 8:28 AM
17	vocational nursing	10/27/2022 9:53 AM
18	Microbiology	10/27/2022 9:31 AM
19	Introduction to Psychology 10/2/2022 10:52 PM	

Q4 Educational Goal: What is your educational objective at Lassen Community College? (Check all that apply):

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
General Education: Transfer to a 4-year Institution	47.37%	9
General Education: IGETC Certification	0.00%	0
General Education: CSU Certification	0.00%	0
General Education: Transfer to another Community College	5.26%	1
Degrees/Certificates: AA/AS	68.42%	13
Degrees/Certificates: Certificate of Achievement/Certificate of Completion	10.53%	2
Degrees/Certificates: Certificate of Accomplishment	15.79%	3
General Interest: Job Requirement	15.79%	3
General Interest: Continuing Education	5.26%	1

General Interest: Personal Development

5.26% 1

#	TITLE OF DEGREE OR CERTIFICATE:	DATE
1	Psychology	11/1/2022 10:41 AM
2	Bachelors	11/1/2022 9:51 AM
3	LVN License	10/30/2022 6:04 PM
4	AS Registered Nursing	10/30/2022 3:36 AM
5	LVN	10/29/2022 5:11 PM
6	Associates of Science	10/28/2022 8:37 AM
7	Associates degree of Vocational nursing	10/28/2022 8:36 AM
8	Licensed Vocational Nurse	10/28/2022 8:36 AM
9	Associates of Science in Vocational Nursing	10/28/2022 8:35 AM
10	BSN	10/28/2022 8:35 AM
11	Nursing AS	10/28/2022 8:35 AM

12	Associates of Science in Vocational Nursing	10/28/2022 8:35 AM
13	Vocational Nursing	10/28/2022 8:35 AM
14	Vocational Nursing	10/28/2022 8:28 AM
15	Allied health 10/2/2022 10:52 PM	

Q5 You need this course: Why are you taking this course?

Answered: 19 Skipped: 0

ANSWER CHOICES	RESPONSES	
Core requirement for degree or certificate	63.16%	12
Elective for Degree or Certificate	10.53%	2
General Education course for degree or transfer	15.79%	3
Job Requirement	26.32%	5
Continuing Education	15.79%	3

Personal Development

10.53% 2

#	OTHER: PLEASE SPECIFY	DATE
1	I need this course to practice in the field of nursing.	10/28/2022 8:36 AM
2	Clinical lab is a needed course to complete LVN nursing program 10/28/2022 8:36 AM	

Q6 Does the course content reasonably compare with the catalog/schedule description?

Answered: 19 Skipped: 0

ANSWER CHOICESRESPONSES	
Yes	94.74%18
No	5.26% 1

Q7 Did the catalog clearly explain the order in which the courses in this program should be taken?

Answered: 19 Skipped: 0

ANSWER CHOICESRESPONSES	
Yes	78.95%15
No	21.05% 4

Q8 Was any cost for this course/program, beyond registration and books, clearly identified in the catalog?

Answered: 19 Skipped: 0

ANSWER CHOICESRESPONSES	
Yes	73.68%14

No

26.32%

5

Q9 Did the instructor(s) use the required textbooks in the program?

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	89.47%	17
No	0.00%	0

N/A

10.53%

2

Q10 Are the textbooks purchased for this program useful to you?

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	84.21%	16
No	5.26%	1

N/A

10.53%

2

Q11 Scheduling: Did the scheduling of the course meet your needs?

Answered: 19 Skipped: 0

ANSWER CHOICES	RESPONSES	
Current schedule met my needs	73.68%	14
Needed morning offering	0.00%	0
Needed afternoon offering	0.00%	0
Needed evening offering	10.53%	2
Needed one day a week schedule	0.00%	0
Needed summer offering	0.00%	0
Needed week-end offering	0.00%	0
Needed short-term (less than semester) offering	5.26%	1

Other: Please Specify:

10.53% 2

#	OTHER: PLEASE SPECIFY:	DATE
1	Large amount of homework for students who need to work full time or more than full time.	10/30/2022 3:36 AM

2 need more time in the class to understand th context

10/27/2022 9:53 AM

Q12 I was provided with reasonable access to the facilities?

Answered: 19 Skipped: 0

ANSWER CHOICES		RESPONSES
Yes		100.00% 19
No		0.00% 0

Q13 The temperature of the facilities in summer or fall is:

Answered: 19 Skipped: 0

ANSWER CHOICES	RESPONSES
Often too hot for the season	42.11% 8
Often too cold for the season	10.53% 2
Comfortable for the season	31.58% 6

N/A

15.79% 3

Q14 The lighting in the facilities is?

Answered: 19 Skipped: 0

ANSWER CHOICES	RESPONSES	
Too bright	10.53%	2
Adequate	73.68%	14
Too dark	0.00%	0

N/A

15.79% 3

Q15 The chairs/tables/desks are?

Answered: 19 Skipped: 0

ANSWER CHOICES	RESPONSES	
Adequate	78.95%	15
Inadequate	5.26%	1

N/A

15.79% 3

Q16 Is there enough space for you to do your work in class?

Answered: 19 Skipped: 0

ANSWER CHOICES	RESPONSES	
----------------	-----------	--

Yes	73.68%	14
No	10.53%	2

N/A

15.79%

3

Q17 Please elaborate on your responses and include any additional facilities-related comments:

Answered: 10 Skipped: 9

#	RESPONSES	DATE
1	some of the chairs are broken	11/1/2022 10:42 AM
2	WE DONT HAVE GOOD INTERNET CONNECTION.	10/28/2022 8:41 AM
3	plenty of room to spread out to do work, and the chairs are comfortable. The A/C doesn't work, I assume because it gets extremely uncomfortable in here during summer time. We are required to wear a uniform, for obvious reason, so it's not like we can dress lightly.	10/28/2022 8:40 AM
4	The buildings are plenty bright, and spacious to do our work comfortably in class. They keep cool in the summer and keep warm in the winter.	10/28/2022 8:39 AM
5	We do not have a working AC for summer so the classrooms become extremely hot and almost unbearable. We stay in the classroom for 6-8 hours in one day sometimes.	10/28/2022 8:39 AM
6	Everyone is scrunched together with so much stuff that is required everyday, The nursing program needs more room and better computers, these suck!!	10/28/2022 8:38 AM
7	It was way too hot during the summer. I know the building has air conditioning but it doesn't work.	10/28/2022 8:37 AM
8	Winodws	10/28/2022 8:36 AM
9	No functional AC in summer - makes it very uncomfortable to work when you are so hot you are getting headaches.	10/28/2022 8:31 AM
10	This is an online course. 10/2/2022 10:56 PM	

Q18 Did the course/program provide the necessary equipment?

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	89.47%	17
No	0.00%	0

N/A

10.53%

2

Q19 Is enough time on equipment allowed for each student?

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	78.95%	15
No	5.26%	1

N/A

15.79%

3

Q20 Is equipment current?

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	78.95%	15
No	5.26%	1

N/A

15.79%

3

Q21 Is equipment generally in good operation condition?

Answered: 19

Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	68.42%	13
No	10.53%	2

N/A

21.05%

4

Q22 Describe how this course/program could be improved to better meet the needs of the students

at Lassen Community College:

Answered: 10

Skipped: 9

#	RESPONSES	DATE
1	longer class time	11/1/2022 10:42 AM
2	N/A	10/29/2022 5:12 PM
3	The lab tops often run slow, and the internet service is terrible. Otherwise, our lab equipment is amazing, and the nursing program itself is great.	10/28/2022 8:40 AM
4	This class is very intense and they are doing a great job in teaching it, I just feel more time could be spent on dosing calculations.	10/28/2022 8:39 AM
5	More study materials provided by the instructors for mathematical portions. Their methods of teaching do not match the book's method, so students do poorly on the exams because the book is the only source to study.	10/28/2022 8:39 AM
6	More up to date equipment, they need more supplies and more time given on each skill that is required to be known and tested on.	10/28/2022 8:38 AM
7	Better Wifi in the classroom, in CA 116, we had to bring our hotspots a lot of the time.	10/28/2022 8:36 AM
8	The program utilizes almost 100% online materials which is fine except the internet in this building is very patchy so when you need to take a timed exam and you can't log into it for the first 30 minutes, it's a little frustrating.	10/28/2022 8:31 AM
9	can make the class face to face instead of hybrid and get more help than what were getting and a little less work and just break in down a little more	10/27/2022 9:55 AM

10 I'm a high school student taking this course and I love how it fits my schedule. This online course allows me to focus on high school work during the week and college course during the weekend.

10/2/2022 10:56 PM

Q23 Please provide any additional comments on the course or program:

Answered: 6

Skipped: 13

#	RESPONSES	DATE
---	-----------	------

1	This instrutor is always there if you need any help so you should ask if you are struggling.	11/1/2022 9:54 AM
2	It is a great program that I am glad to be a part of.	10/28/2022 8:39 AM
3	NA	10/28/2022 8:39 AM
4	Nobody is on the same page, when we have issues some instructors tell us too bad, that's on you. There is no trying to help figure it out. One instructor will tell you one thing and another will say no do it this way.	10/28/2022 8:38 AM
5	Improve internet coverage in the building as well as heating/air conditioning and I have no other complaints.	10/28/2022 8:31 AM

6 I love how the teacher responds to our work in a timely manner.

10/2/2022 10:56 PM

Q1 Course Number (Examples: AGR-1-M0095, MUS-12-K0669, etc...):

Answered: 2 Skipped: 0

#	RESPONSES	DATE
1	VN-52-M1903	10/28/2022 8:34 AM
2	PSY-1-NO408 9/30/2022 8:30 AM	

Q2 Name of Program: (Select only one option)

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES
Administration of Justice	0.00% 0
Agriculture	0.00% 0
Studio Art	0.00% 0
Automotive Technology	0.00% 0
Business	0.00% 0
Child Development	0.00% 0
Fire Technology	0.00% 0
Gunsmithing	0.00% 0
Health Occupations/Medical Assisting	100.00% 2
History/Social Science/Sociology/Psychology	0.00% 0
Human Services	0.00% 0
Humanities	0.00% 0
Information Systems	0.00% 0
Natural Science	0.00% 0
Physical Education	0.00% 0

Vocational Nursing/Allied Health	0.00%	0
Welding Technology	0.00%	0
Special Instructional Programs: Athletics	0.00%	0
Special Instructional Programs: Developmental Studies	0.00%	0

Special Instructional Programs: Work Experience

0.00% 0

Q3 Course Name/Title:

Answered: 2 Skipped: 0

#	RESPONSES	DATE
1	Clinical lab 1	10/28/2022 8:34 AM
2	pyschology 9/30/2022 8:30 AM	

Q4 Educational Goal: What is your educational objective at Lassen Community College? (Check all that apply):

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES
General Education: Transfer to a 4-year Institution	100.00% 2
General Education: IGETC Certification	0.00% 0
General Education: CSU Certification	0.00% 0

General Education: Transfer to another Community College	0.00%	0
Degrees/Certificates: AA/AS	50.00%	1
Degrees/Certificates: Certificate of Achievement/Certificate of Completion	0.00%	0
Degrees/Certificates: Certificate of Accomplishment	50.00%	1
General Interest: Job Requirement	0.00%	0
General Interest: Continuing Education	0.00%	0

General Interest: Personal Development

0.00% 0

#	TITLE OF DEGREE OR CERTIFICATE:	DATE
1	AA degree, LVN liscence	10/28/2022 8:34 AM
2	Allied Health 9/30/2022 8:30 AM	

Q5 You need this course: Why are you taking this course?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES
Core requirement for degree or certificate	50.00% 1
Elective for Degree or Certificate	0.00% 0
General Education course for degree or transfer	50.00% 1
Job Requirement	50.00% 1
Continuing Education	0.00% 0

Personal Development

0.00%

0

There are no responses.

Q6 Does the course content reasonably compare with the catalog/schedule description?

Answered: 2 Skipped: 0

ANSWER CHOICESRESPONSES

Yes 100.00%2

No 0.00%
0

Q7 Did the catalog clearly explain the order in which the courses in this program should be taken?

Answered: 2 Skipped: 0

ANSWER CHOICESRESPONSES

Yes 100.00%2

No 0.00%
0

Q8 Was any cost for this course/program, beyond registration and books, clearly identified in the catalog?

Answered: 2 Skipped: 0

ANSWER CHOICESRESPONSES

Yes 100.00%2

No 0.00%
0

Q9 Did the instructor(s) use the required textbooks in the program?

Answered: 2 Skipped: 0

ANSWER CHOICES

RESPONSES

Yes 100.00% 2

No 0.00% 0

N/A

0.00% 0

Q10 Are the textbooks purchased for this program useful to you?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	100.00%	2
No	0.00%	0

N/A

0.00%

0

Q11 Scheduling: Did the scheduling of the course meet your needs?

Answered: 2

Skipped: 0

ANSWER CHOICES	RESPONSES	
Current schedule met my needs	100.00%	2
Needed morning offering	0.00%	0
Needed afternoon offering	0.00%	0
Needed evening offering	0.00%	0
Needed one day a week schedule	0.00%	0
Needed summer offering	0.00%	0
Needed week-end offering	0.00%	0
Needed short-term (less than semester) offering	0.00%	0

Other: Please Specify:

0.00%

0

There are no responses.

Q12 I was provided with reasonable access to the facilities?

Answered: 2 Skipped: 0

ANSWER CHOICES RESPONSES

Yes	100.00%	2
No	0.00%	0

Q13 The temperature of the facilities in summer or fall is:

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Often too hot for the season	50.00%	1
Often too cold for the season	0.00%	0
Comfortable for the season	50.00%	1

N/A

0.00% 0

Q14 The lighting in the facilities is?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES
Too bright	0.00% 0
Adequate	100.00% 2
Too dark	0.00% 0

N/A

0.00% 0

Q15 The chairs/tables/desks are?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES
Adequate	100.00% 2
Inadequate	0.00% 0

N/A

0.00% 0

Q16 Is there enough space for you to do your work in class?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	100.00%	2
No	0.00%	0

N/A

0.00% 0

Q17 Please elaborate on your responses and include any additional facilities-related comments:

Answered: 1 Skipped: 1

#	RESPONSES	DATE
1	n/a	9/30/2022 8:32 AM

Q18 Did the course/program provide the necessary equipment?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	100.00%	2
No	0.00%	0

N/A

0.00% 0

Q19 Is enough time on equipment allowed for each student?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	50.00%	1
No	0.00%	0

N/A

50.00%

1

Q20 Is equipment current?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	100.00%	2
No	0.00%	0

N/A

0.00%

0

Q21 Is equipment generally in good operation condition?

Answered: 2 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	100.00%	2
No	0.00%	0

N/A

0.00% 0

Q22 Describe how this course/program could be improved to better meet the needs of the students at Lassen Community College:

Answered: 1 Skipped: 1

#	RESPONSES	DATE
1	it's good	9/30/2022 8:32 AM

Q23 Please provide any additional comments on the course or program:

Answered: 1 Skipped: 1

#	RESPONSES	DATE
1	none	9/30/2022 8:32 AM

Lassen Community College
Status of Curriculum Reviews

**Allied Health Instructional Program Review
Status of Curriculum Review 11/29/2022**


Course Name	Curriculum Committee Review Completed	Curriculum Committee Review Not Completed	Course SLO mapping reviewed
EMT 21 Emergency Medical Responder	11/29/2022		01/19/2021
EMT 60 Emergency Medical Technician-B (Basic)	11/29/2022		01/19/2021
EMT 61 Emergency Medical Technician –B (Basic Refresher)	11/29/2022		01/19/2021
HO 3 Medical Terminology	11/29/2022		01/19/2021
HO 70 Medical Assisting: Core	11/29/2022		01/19/2021
HO 71 Medical Assisting: Administrative	11/29/2022		01/19/2021
HO 72 Medical Assisting: Clinical	11/29/2022		01/19/2021
HO 80A Geriatric (Long-Term Care) Nurse Assistant	11/29/2022		01/19/2021
HO 88 Phlebotomy	11/29/2022		01/19/2021
HO 120 Cardiopulmonary Resuscitation (CPR)	11/29/2022		01/19/2021
VN 50 Pharmacology	11/29/2022		02/16/2021
VN 51 Nursing Fundamentals	11/29/2022		02/16/2021
VN 52 Clinical Lab I	11/29/2022		02/16/2021
VN 53 Adult Nursing Theory	11/29/2022		02/16/2021
VN 54 Clinical Lab II	11/29/2022		02/16/2021
VN 55 Nursing Fundamentals and Professional Development	11/29/2022		02/16/2021
VN 56 Clinical Lab III	11/29/2022		02/16/2021
VN 57 Maternity Nursing	11/29/2022		02/16/2021
VN 58 Pediatric Nursing	11/29/2022		02/16/2021
VN 59 IV Therapy and	11/29/2022		02/16/2021

Lassen Community College
Status of Curriculum Reviews

Blood Withdrawal			
VN 60 NCLEX Review	11/29/2022		02/16/2021
Degrees & Certificates			Program PSLO mapping reviewed
AA.US Allied Health	11/29/2022		05/23/2022
AS Vocational Nursing	11/29/2022		05/17/2022
Certificate of Achievement - Vocational Nursing	11/29/2022		05/17/2022
Certificate of Accomplishment Administrative Medical Assisting	11/29/2022		05/17/2022
Certificate of Accomplishment Clinical Medical Assisting	11/29/2022		05/17/2022
Certificate of Achievement Medical Assisting	11/29/2022		05/17/2022


Heidi Gray, Subject Area Faculty Signature

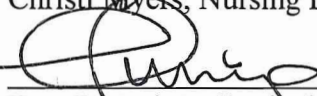
12/1/22
Date


Celeste Wisner, Subject Area Faculty Signature

12/1/22
Date


Christi Myers, Nursing Director Signature

11/29/22
Date


Tom Downing, Curriculum and Academic Standards Committee Co-Chair Signature

11/29/22
Date


Mitchell Williams, Dean of Instructional Services

12/1/2022
Date

LABOR MARKET ANALYSIS

FOR PROGRAM RECOMMENDATION



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

NURSING IN THE FAR NORTH

Far North
Center of Excellence

FEBRUARY 2022

TABLE OF CONTENTS

Contents

Summary.....	3
Introduction.....	4
Occupational Demand.....	5
Wages	6
Job Postings.....	7
Occupations and Job Titles	7
Employers.....	8
Certifications, Skills, and Experience.....	10
Education and Training	13
Educational Supply.....	14
Community College Supply	15
Other Postsecondary Supply	17
Findings.....	18
Recommendations	19
Appendix A. Methodology and Sources.....	21

If, for any reason, this document is not accessible or if you have specific needs for readability, please contact us, and we will do our utmost to accommodate you with a modified version. To make a request, contact Sara Phillips by phone at (530) 242-7635 or by email at sphillips@shastacollege.edu.

SUMMARY

The North/Far North Center of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled career pathways in the Far North subregion. This report aims to determine if demand in the local labor market is unmet by the supply from existing community college programs and other postsecondary training providers.

This report primarily focuses on training that leads to jobs in middle-skilled occupations - jobs that typically require education beyond a high school diploma but less than a Bachelor's degree - but may include higher-skilled occupations for training pathways that lead to a bachelor's degree. Lowered skilled occupations are rarely considered in this type of analysis due to the lessened barriers for entry-level work, such as no formal education and on-the-job training requirements.

Key findings include:

- The Far North subregion held 8,223 registered and licensed vocational nurse jobs in 2020. Far North nursing jobs are projected to increase by 6% over the next five years, adding 504 jobs to the subregion by 2025. Jobs for nurses are projected to grow slower in the Far North subregion than in California.
- Over the next five years, nurses are projected to have 586 annual openings in the Far North subregion.
- Wage data shows that nursing occupations earn \$11 to \$25 above the subregion's living wage of \$12.74 per hour.
- Awards data analysis shows that Far North training providers conferred an average of 410 awards (certificates and associate degrees) in nursing programs over the last three academic years.

Recommendations include:

- The North/Far North Center of Excellence recommends moving forward with a registered nursing program.
- The North/Far North Center of Excellence also recommends continuing to offer the licensed vocational nursing program.

INTRODUCTION

The Far North Center of Excellence (COE) was asked to provide labor market information for a proposed program at a regional community college. This report focuses on the following Standard Occupational Classification (SOC) occupations and codes:

- These middle-skill occupations require more education and training beyond a high school diploma but less than a four-year degree:
 - Registered Nurses (29-1141)
 - Licensed Practical and Licensed Vocational Nurses (29-2061)
 - California refers to this occupation as Licensed Vocational Nurses (LVNs)

A review of related programs revealed the following Taxonomy of Programs (TOP) title(s) and code(s) are appropriate for inclusion in this report:

- Registered Nursing (1230.10)
- Licensed Vocational Nursing (1230.20)

The corresponding Classification of Instructional Program (CIP) title(s) and code(s) are:

- Registered Nursing/Registered Nurse (51.3801)
- Licensed Practical/Vocational Nurse Training (51.3901)

OCCUPATIONAL DEMAND

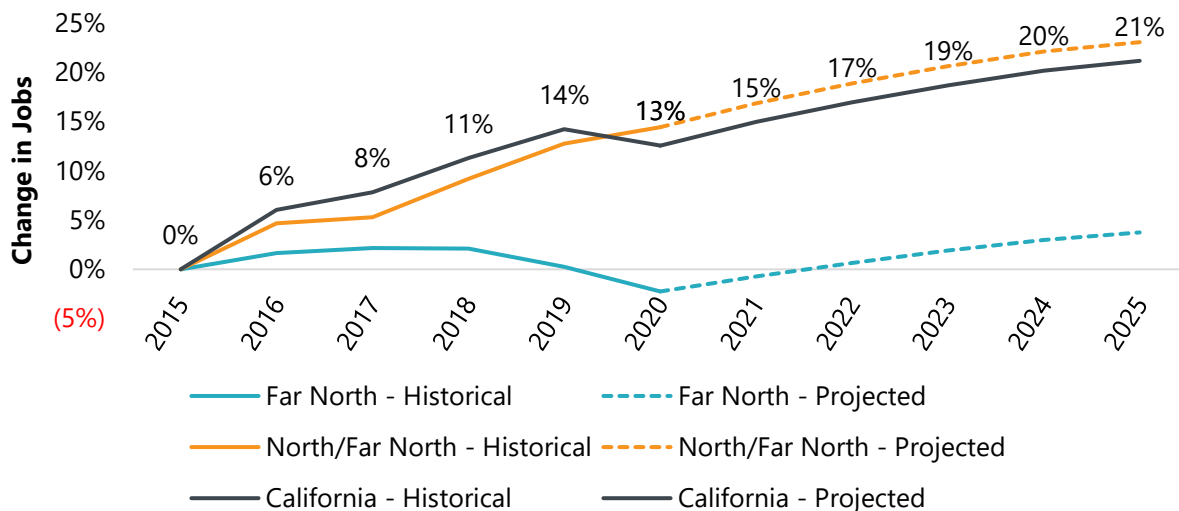
Exhibit 1 summarizes the five-year projected job growth for middle-skill and high-skill occupations in the Far North, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	2020-2025 Annual Openings
Registered Nurses	6,505	6,916	412	6%	432
Licensed Practical and Licensed Vocational Nurses	1,718	1,810	92	5%	154
Far North	8,223	8,726	504	6%	586
Registered Nurses	30,626	32,814	2,188	7%	2,093
Licensed Practical and Licensed Vocational Nurses	5,954	6,523	569	10%	584
North/Far North	36,580	39,337	2,757	8%	2,677
Registered Nurses	311,510	333,980	22,470	7%	21,293
Licensed Practical and Licensed Vocational Nurses	73,968	80,971	7,003	9%	7,206
California	385,478	414,951	29,473	8%	28,499

Exhibit 2 compares the percent change in jobs between 2015 through 2020 and the projected changes through 2025. The rate of change is indexed to the total number of jobs in 2015.

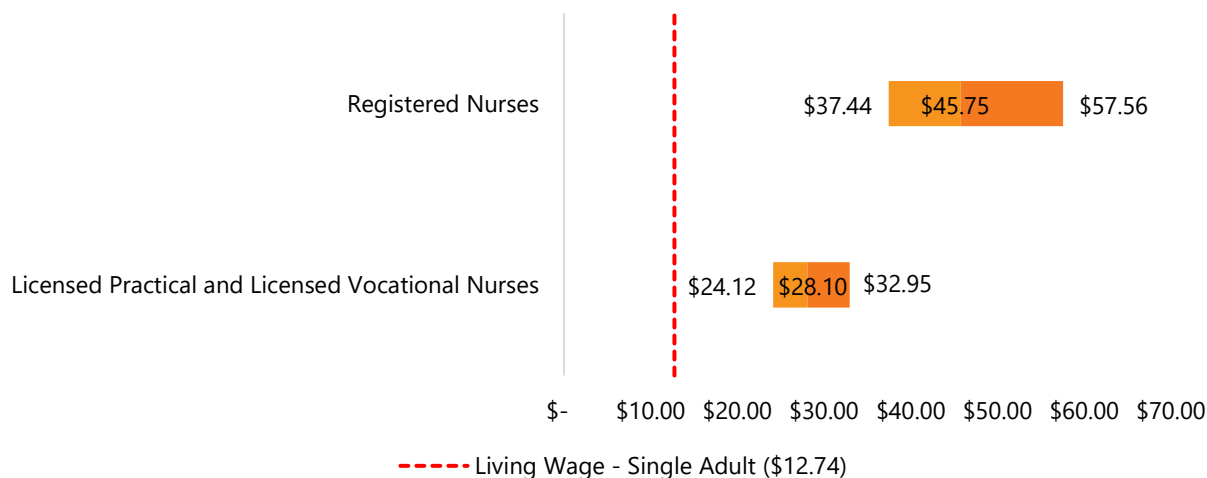
Exhibit 2. Changes in employment, 2015-2025



WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupations to the Far North living wage for a single adult - \$12.74 per hour.¹

Exhibit 3. Comparison of wages by occupation, 2020



¹ Living wage is defined as the level of income a single adult with no children must earn to meet basic needs, including food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs. The 25th-percentile and 75th-percentile hourly wages are used as proxy for entry-level and experienced-level wages.

JOB POSTINGS

This section analyzes recent data from online job postings (real-time LMI). Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends.

The Far North COE identified 5,926 online job postings for the selected occupations in the Far North subregion. Job postings data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from February 1, 2021, to January 31, 2022.

Occupations and Job Titles

Exhibit 4 details the number of online job postings for the selected occupations.

Exhibit 4. Number of job postings by occupation

Occupation	Job Postings	Share of Job Postings
Registered Nurses	5,246	88%
Licensed Practical and Licensed Vocational Nurses	680	12%
Total Job Postings	5,926	100%

Exhibit 5 shows the top 10 job titles with the most job postings and the share. All job postings included a job title.

Exhibit 5A. Top jobs titles for Registered Nurses

Job Title	Job Postings	Share of Job Postings
Registered Nurse	247	5%
Registered Nurse/Medical/Surgical M/S	40	1%
Registered Nurse/Travel Assignment	32	1%
Registered Nurse - ER	24	0%
Registered Nurse/Emergency Department Trauma	23	0%
Registered Nurse/Labor And Delivery L&D	23	0%

Job Title	Job Postings	Share of Job Postings
ER Registered Nurse	22	0%
Registered Nurse - Home Health	22	0%
Registered Nurse/Intensive Care Unit	22	0%
Registered Nurse - Covid	19	0%

Exhibit 5B. Top jobs titles for Licensed Vocational Nurses

Job Title	Job Postings	Share of Job Postings
Licensed Vocational Nurse	97	14%
Licensed Practical Nurse	23	3%
Licensed Vocational/Practical Nurse Licensed Vocational Nurse/Licensed Practical Nurse	14	2%
Licensed Vocational Nurse - Covid	11	2%
Nursing	11	2%
Dispensing Nurse	10	1%
Licensed Vocational Nurse Home Health	7	1%
Licensed Practical Nurse - Ltc/Snf	6	1%
Licensed Vocational Nurse Home Care	5	1%
Wellness Immunization Clinic Nurse Licensed Practical Nurse	5	1%

Employers

Exhibit 6 shows the top 10 employers with the most job postings for the selected occupations. Fifty percent (n = 2,638) of job postings for registered nurses and 30% (n = 204) of job postings for licensed vocational nurses did not include an employer.

Exhibit 6A. Employers with the most job postings - Registered Nurses

Employer	Job Postings	Share of Job Postings
Dignity Health	181	3%
Asante	167	3%
Oroville Hospital	152	3%
Emerald Health Services	133	3%
Adventist Health	123	2%
Enloe Medical Center	103	2%
Sutter Health	79	2%
Covenant Health	75	1%
Sutter Medical Center	69	1%
Prime Healthcare Services	67	1%

Exhibit 6B. Employers with the most job postings - Licensed Vocational Nurses

Employer	Job Postings	Share of Job Postings
Wellpath	47	7%
Adventist Health	39	6%
Dignity Health	27	4%
Oroville Hospital	24	4%
Department of Veterans Affairs	17	3%
Eastern Plumas Health Care	16	2%
Sutter Health	15	2%
Enloe Medical Center	13	2%
Aveanna Healthcare	13	2%

Employer	Job Postings	Share of Job Postings
Accentcare	11	2%

Certifications, Skills, and Experience

Exhibit 7 shows the most relevant certifications requested by employers for the selected occupations. Sixteen percent (n = 831) of job postings for registered nurses and 8% (n = 57) of job postings for licensed vocational nurses did not include certification information.

Exhibit 7A. Most in-demand certifications - Registered Nurses

Certification	Job Postings	Share of Job Postings
Registered Nurse	4,034	77%
Advanced Cardiac Life Support (ACLS) Certification	1,568	30%
Basic Life Saving (BLS)	1,178	22%
American Heart Association Certification	446	9%
First Aid CPE AED	367	7%
Basic Cardiac Life Support Certification	329	6%
Critical Care Registered Nurse (CCRN)	249	5%
Neonatal Resuscitation Program (NRP)	84	2%

Exhibit 7B. Most in-demand certifications - Licensed Vocational Nurses

Certification	Job Postings	Share of Job Postings
Licensed Vocational Nurse (LVN)	472	69%
Licensed Practical Nurse (LPN)	282	41%
Basic Life Saving (BLS)	147	22%
First Aid CPR AED	139	20%
Basic Cardiac Life Support Certification	76	11%

Certification	Job Postings	Share of Job Postings
Certified Registered Nurse Practitioner	54	8%
Advanced Cardiac Life Support (ACLS) Certification	33	5%

Exhibit 8 shows the specialized skills most requested by employers for the selected occupations.

Exhibit 8A. Most in-demand specialized skills - Registered Nurses

Specialized Skill	Skill Postings	Share of Skill Postings
Patient Care	1,714	33%
Advanced Cardiac Life Support (ACLS)	1,577	30%
Acute Care	784	15%
Life Support	742	14%
Treatment Planning	687	13%
Cardiopulmonary Resuscitation (CPR)	669	13%
Caregiving	488	9%
Critical Care	452	9%
Trauma	349	7%
Telemetry	315	6%

Exhibit 8B. Most in-demand specialized skills - Licensed Vocational Nurses

Specialized Skill	Skill Postings	Share of Skill Postings
Patient Care	236	35%
Treatment Planning	178	26%
Cardiopulmonary Resuscitation (CPR)	169	25%

Specialized Skill	Skill Postings	Share of Skill Postings
Acute Care	89	13%
Vital Signs Measurement	84	12%
Teaching	76	11%
Home Health	71	10%
Care Planning	62	9%
Discharge Planning	58	9%
Life Support	56	8%

Exhibit 9 shows employers' minimum level of education for job postings for the selected occupations. Twenty-four percent (n = 1,251) of job postings for registered nurses and 77% (n = 526) of job postings for licensed vocational nurses did not include a preferred education level.

Exhibit 9. Employer-preferred minimum education levels

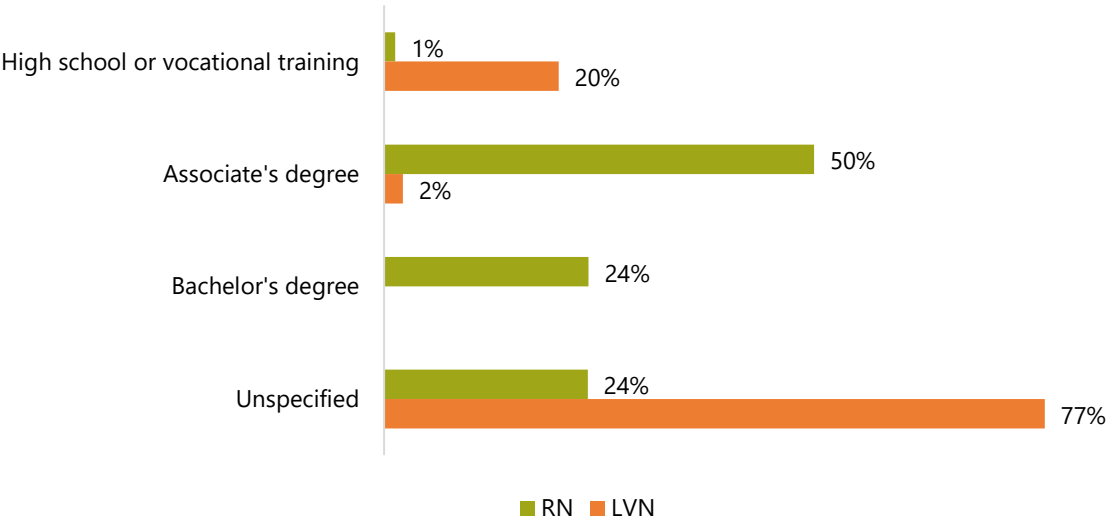
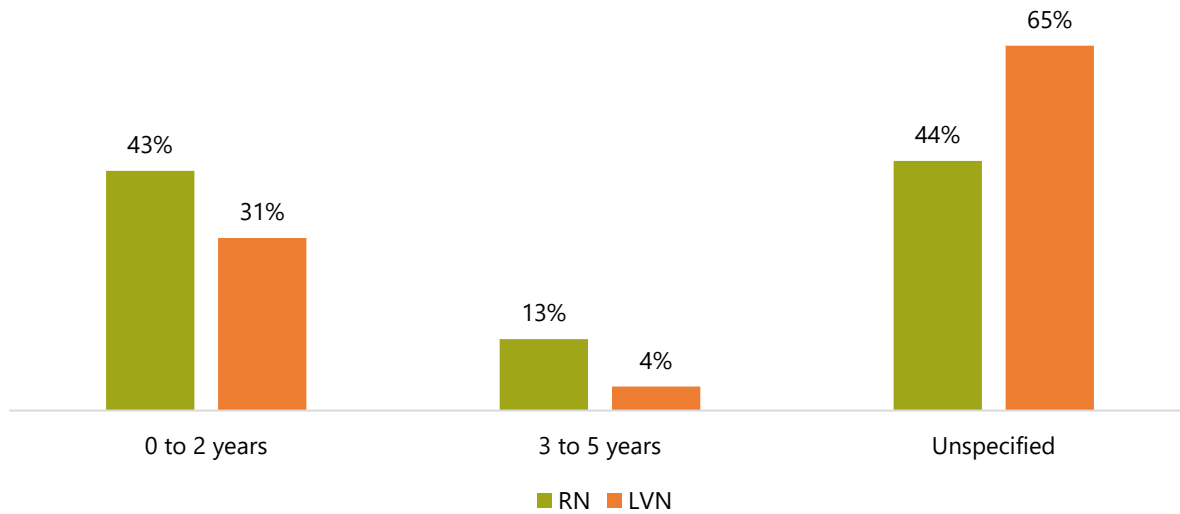


Exhibit 10 shows the experience levels required by employers for job postings for the selected occupations. Forty-four percent (n = 2,324) of job postings for registered nurses and 65% (n = 440) for licensed vocational nurses did not include a preferred education level.

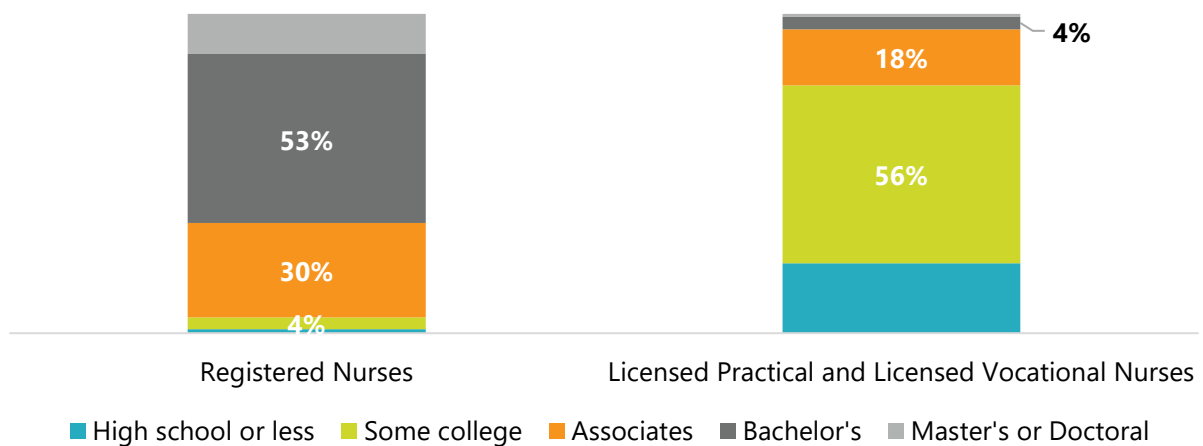
Exhibit 10. Employer-preferred experience levels



EDUCATION AND TRAINING

The U.S. Census Bureau and Bureau of Labor Statistics collected data on education achieved by workers employed in occupations. Exhibit 11 shows the national-level educational attainment of the current workforce in the selected occupations.

Exhibit 11. National worker educational attainment for selected occupations, 2019



The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which the BLS publishes projections data. Exhibit 12 shows the skill level and entry-level job requirements for the selected occupations.

Exhibit 12. Typical education, work experience, and on-the-job training requirements

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Registered Nurses	Bachelor's degree	None	None
Licensed Practical and Licensed Vocational Nurses	Postsecondary nondegree award	None	None

EDUCATIONAL SUPPLY

Educational supply for an occupation can be estimated by analyzing the number of awards issued in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. Exhibit 13 shows the TOP and CIP codes for educational programs related to the selected occupations.

Exhibit 13. TOP and CIP codes for training programs related to the selected occupations

TOP Programs and Codes	Aligned CIP Programs and Codes
Registered Nursing (1230.10)	Registered Nursing/Registered Nurse (51.3801)
Licensed Vocational Nursing (1230.20)	Licensed Practical/Vocational Nurse Training (51.3901)

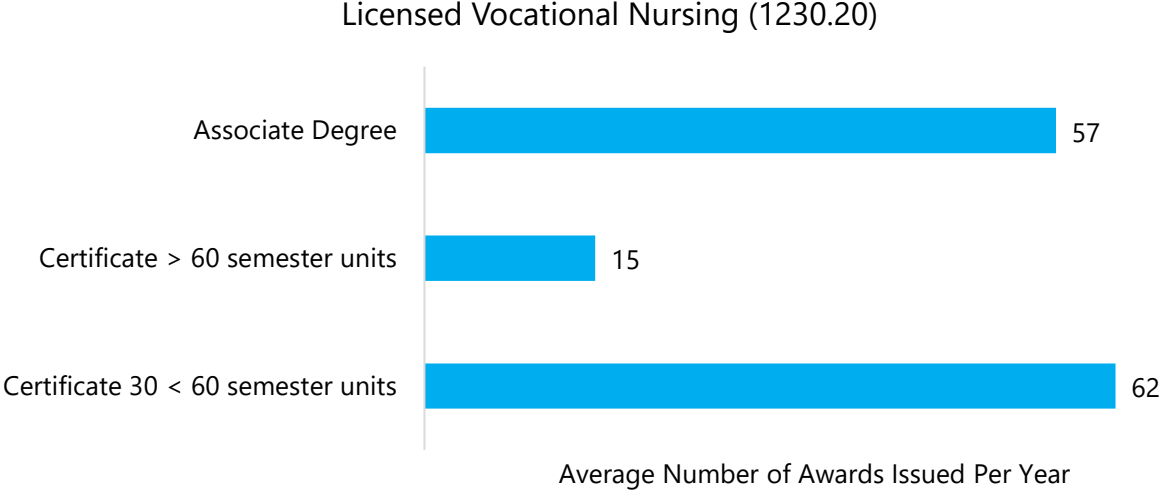
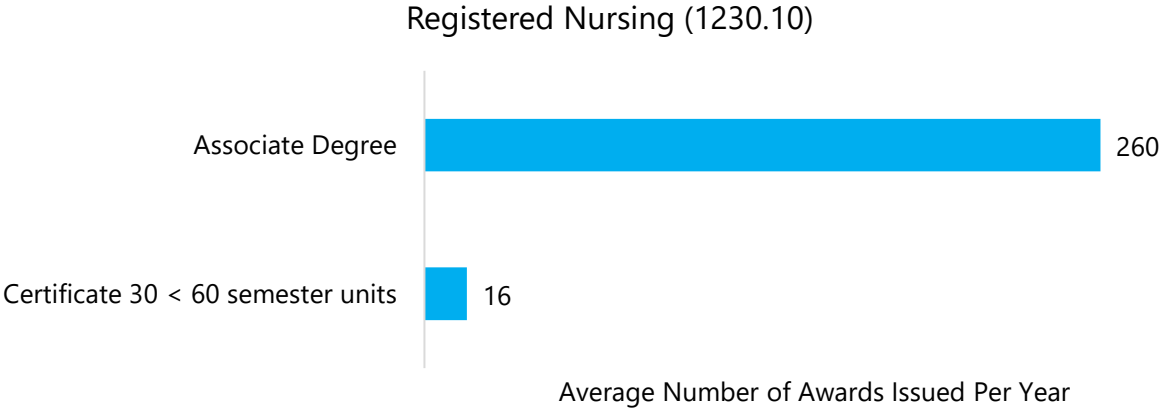
Community College Supply

Exhibits 14 and 15 compare the average number of certificates and degrees conferred in selected community college programs over the last three academic years.

Exhibit 14. Annual average community college awards by program, 2018-19 through 2020-21

Program - TOP Code	College	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Yr Annual Awards Average
Registered Nursing (1230.10)	Butte	104	117	113	111
	Mendocino	22	23	23	23
	Redwoods	76	55	84	72
	Shasta	51	51	58	53
	Siskiyou	27	25	0	17
	Subtotal	280	271	278	276
Licensed Vocational Nursing (1230.20)	Butte	46	44	1	30
	Feather River	1	49	1	17
	Lassen	16	20	38	25
	Redwoods	65	7	44	39
	Shasta	21	0	14	12
	Siskiyou	4	29	2	12
	Subtotal	153	149	100	134
	Grand Total	433	420	378	410

Exhibit 15. Annual average community college awards by type, 2018-19 through 2020-21



Other Postsecondary Supply

Exhibit 16 compares the average number of degrees that non-community college training providers conferred in the Far North over the last three academic years. Please note that non-community college data lags by one year.

Exhibit 16. Other postsecondary awards by program, 2017-18 through 2019-20

Program - CIP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
Registered Nursing/Registered Nurse (51.3801)	CSU Chico (Bachelor's Degree)	110	110	117	112
	Simpson University	30	30	35	32
	Grand Total	140	140	152	144

FINDINGS

- This report focuses on four occupations in nursing pathways, including registered nurses and licensed vocational nurses.
- The Far North subregion held 8,223 nursing jobs in 2020. Far North nursing jobs are projected to increase by 6% over the next five years, adding 504 jobs to the subregion by 2025. Jobs for nurses are projected to grow slower in the Far North subregion than in California.
 - Jobs for registered nurses represent the majority of nursing job growth in the Far North. Registered nurses will add 412 jobs by 2025, while licensed vocational nurses will add 92 jobs.
- Over the next five years, nurses are projected to have 586 annual openings in the Far North subregion.
 - Registered nurses will have 432 openings each year between 2020 and 2025, while licensed vocational nurses will have 154 annual openings.
- Wage data shows that nursing occupations earn \$11 to \$25 above the subregion's living wage of \$12.74 per hour.
 - Entry-level wages for registered nurses are around \$37 per hour, while licensed practical nurses earn about \$24 per hour.
- According to real-time labor market information, there were about 5,926 online job postings for nursing occupations between February 1, 2021, and January 31, 2022.
 - Eighty-eight percent (n = 5,246) of job postings were for registered nurses. There were 680 job postings for licensed vocational nurses.
- Between 34% and 74% of incumbent nurses have educational attainment levels consistent with community college offerings (some college or associate degrees).
 - Seventy-four percent of licensed vocational nurses have education consistent with community college offerings.
 - Thirty-four percent of incumbent registered nurses have some college training or an associate degree, while another 53% hold a bachelor's degree.
- Seven Far North community colleges offer degrees and certificates in nursing programs. Together, these programs conferred an average of 410 awards (certificates and associate degrees) in nursing programs over the last three academic years (2018-19 through 2020-21).

- Far North community colleges conferred an average of 16 certificates and 260 degrees in the registered nursing (1230.10) TOP code, for a total average of 276 awards issued each year between 2018-19 and 2020-21.
- Far North community colleges conferred an average of 77 certificates and 57 degrees in the licensed vocational nursing (1230.20) TOP code, for a total average of 134 awards issued each year between 2018-19 and 2020-21.
- Local non-community college postsecondary training providers also offer training related to the studied occupations. Between 2017-18 and 2019-20, non-community college training providers conferred an average of 144 awards in registered nurse training programs over the last three years. Please note that non-community college awards data lags by one year.

RECOMMENDATIONS

Far North Nursing Supply Gap Analysis

Occupation	Demand (Avg. Annual Job Openings)	Supply (Total Avg. Annual Awards)	Gap Analysis (Demand vs. Supply)
Registered Nurses	432	420	Near Parity
Licensed Vocational Nurses	154	134	Near Parity

- Based on a three-year average of annual awards in Far North region nursing programs and projected yearly openings, the supply gap analysis shows that the region seems to be nearing parity.
 - The demand for registered and licensed vocational nurses is slightly greater than the training supply (a 3% and 13% gap between supply and demand).
- The Far North Center of Excellence recommends continued collaboration with relevant employers to understand their demand for these occupations.
- The North/Far North Center of Excellence recommends moving forward with the registered nursing program and continuing to offer training for licensed vocational nurses.

COE Recommendation

**Move forward
with the
program**



**Proceed with
caution**



**Program is
not
recommended**



APPENDIX A. METHODOLOGY AND SOURCES

This report identified Occupations using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and O*Net OnLine. This report's findings were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

Cal-PASS Plus LaunchBoard. California Community Colleges Chancellor's Office.

<https://www.calpassplus.org/LaunchBoard/Home.aspx>.

Emsi 2021.4; QCEW Employees, Non-QCEW Employees, and Self-Employed.

<https://www.economicmodeling.com/>. EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors).

Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-2017.

Bureau of Labor Statistics. <https://www.bls.gov/emp/tables/educational-attainment.htm#>.

Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. <https://nces.ed.gov/ipeds/>.

"Labor Insight Real-Time Labor Market Information Tool." Burning Glass Technologies.

<http://www.burning-glass.com>.

Labor Market Information Division. California Employment Development Department.

<https://labormarketinfo.edd.ca.gov/>.

Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.

Occupational Employment Statistics (OES). Bureau of Labor Statistics.

<https://www.bls.gov/oes/home.htm>.

O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOL ETA).

<https://www.onetonline.org/>.

Self-Sufficiency Standard Tool for California. The University of Washington.

<http://www.selfsufficiencystandard.org/>

"Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About->

[Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx](https://www.coecc.net/Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx)

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. November 2015 Edition. <http://coecc.net/>

COVID-19 Statement: This report includes employment projection data by EMSI. EMSI's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

© 2021 California Community Colleges Chancellor's Office,
Centers of Excellence for Labor Market Research, Economic and
Workforce Development Program



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

FOR MORE INFORMATION,
PLEASE CONTACT:

Sara Phillips, Director

Far North Center of Excellence

sphillips@ShastaCollege.edu

LABOR MARKET ANALYSIS

FOR PROGRAM RECOMMENDATION



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

DENTAL ASSISTANTS IN THE FAR NORTH

Far North
Center of Excellence

OCTOBER 2022

TABLE OF CONTENTS

Table of Contents

Summary.....	3
Introduction.....	4
Occupational Demand.....	5
Wages.....	6
Job Postings.....	6
Occupations and Job Titles.....	6
Employers.....	7
Certifications, Skills, and Experience.....	7
Education and Training.....	9
Educational Supply.....	9
Community College Supply.....	10
Other Postsecondary Supply.....	11
Findings.....	12
Recommendations.....	13
Appendix A. Methodology and Sources.....	14
Appendix B. Glossary of Key Terms.....	15

If, for any reason, this document is not accessible or if you have specific needs for readability, please contact us, and we will do our utmost to accommodate you with a modified version. To make a request, contact Sara Phillips by phone at (530) 242-7635 or by email at sphillips@ShastaCollege.edu.

SUMMARY

The Far North Center of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled career pathways in the Far North subregion. This report aims to determine if demand in the local labor market is unmet by the supply from existing community college programs and other postsecondary training providers.

This report primarily focuses on training that leads to jobs in middle-skilled occupations - jobs that typically require education beyond a high school diploma but less than a bachelor's degree - but may include higher-skilled occupations for training pathways that lead to a bachelor's degree. Lowered skilled occupations are rarely considered in this analysis due to the lessened barriers for entry-level work, such as no formal education and on-the-job training requirements.

Key findings include:

- The Far North held 1,005 dental assistant jobs in 2021. Dental assistant jobs are projected to decrease by 4% over the next five years, losing 40 jobs in the subregion by 2026.
- Over the next five years, dental assistant jobs are projected to have 131 annual openings in the Far North subregion.
- Wage data shows that dental assistants earn \$3 to \$12 above the single adult living wage of \$12.74 per hour. Experienced dental assistants earn close to the family-level wage for the subregion.
- Awards data analysis shows that Far North training providers conferred an average of 42 awards (certificates and associate degrees) in related programs over the last three academic years.

Recommendations include:

- The Far North Center of Excellence recommends moving forward with the program.

INTRODUCTION

The Far North Center of Excellence (COE) was asked to provide labor market information for a proposed program at a regional community college. This report focuses on the following Standard Occupational Classification (SOC) occupations and codes:

- This middle-skill occupation requires more education and training beyond a high school diploma but less than a four-year degree:
 - Dental Assistants (31-9091)

A review of related programs revealed the following Taxonomy of Programs (TOP) title(s) and code(s) are appropriate for inclusion in this report:

- Dental Assistant (1240.10)

The corresponding Classification of Instructional Program (CIP) title(s) and code(s) are:

- Dental Assisting/Assistant (51.0601)

OCCUPATIONAL DEMAND

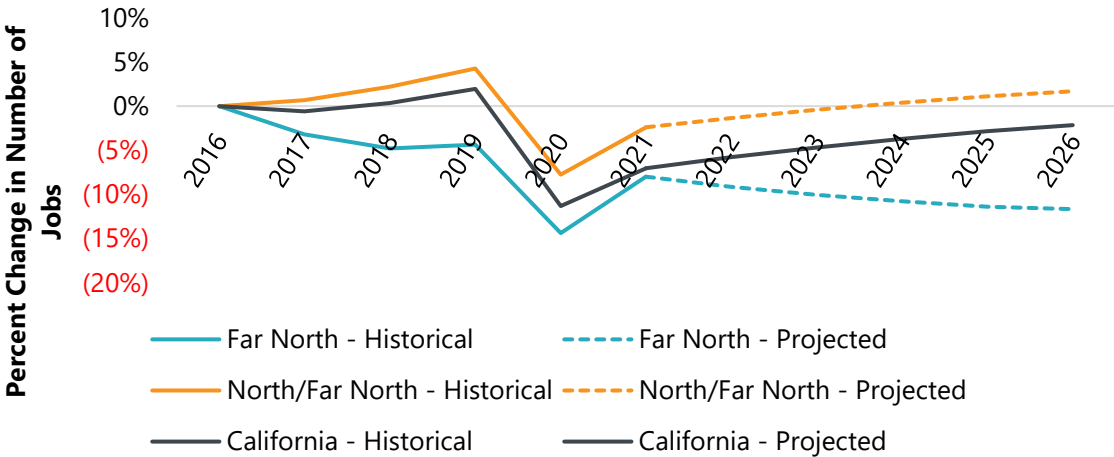
Exhibit 1 summarizes the five-year projected job growth for dental assistants in the Far North, North/Far North, and California.

Exhibit 1. Employment and projected demand, dental assistants, 2021-2026

Region	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	2021-2026 Annual Openings
Far North	1,005	965	(40)	(4%)	131
North/Far North	4,744	4,942	198	4%	653
California	49,996	52,622	2,625	5%	6,783

Exhibit 2 compares the percent change in number of jobs between 2016 through 2021 and the projected changes through 2026. The rate of change is indexed to the total number of jobs in 2016.

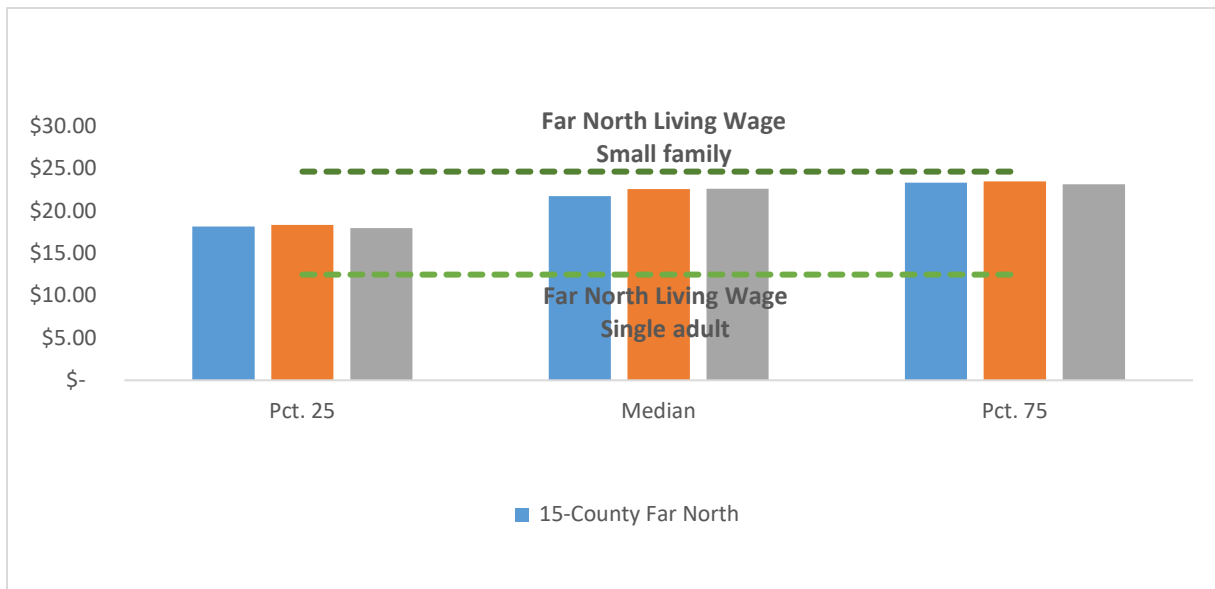
Exhibit 2. Changes in employment, 2016-2026



WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupation to the Far North living wage for a single adult (\$12.74 per hour) and a small family¹ (\$24.66 per hour).

Exhibit 3. Comparison of wages, 2021



JOB POSTINGS

This section analyzes recent data from online job postings (real-time LMI). Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends.

The Far North COE identified 204 online job postings for the selected occupation in the 15-county Far North subregion. Job posting data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from October 1, 2021, to September 30, 2022.

Occupations and Job Titles

Exhibit 4 details the number of online job postings for the selected occupation.

Exhibit 4. Number of job postings

¹ A small family is defined as a single adult and one school aged child (between the ages of 5 and 12 years).

Occupation	Job Postings	Share of Job Postings
Dental Assistants	204	100%
Total Job Postings	204	100%

Employers

Exhibit 5 shows the top 10 employers with the most job postings for the selected occupation. Fifty-five percent (n= 113) of job postings did not include an employer.

Exhibit 5. Employers with the most job postings

Employer	Job Postings	Share of Job Postings
Adventist Health	28	31%
Western Dental Services	14	15%
Western Dental/Brident	5	5%
Wellpath	5	5%
Aspen Dental	4	4%
Oroville Hospital	3	3%
Eastern Plumas Health Care	3	3%
Children's Choice And Premier Orthodontics	3	3%
Ampla Health	3	3%

Certifications, Skills, and Experience

Exhibit 6 shows the most relevant certifications requested by employers for the selected occupations. Sixty-seven percent (n= 137) of job postings did not include certification information.

Exhibit 6. Most in-demand certifications

Certification	Job Postings	Share of Job Postings
Basic Life Saving (BLS)	37	55%
First Aid Cpr Aed	15	22%
Radiation Safety Certification	13	19%
Certified Infection Control	8	12%
Basic Cardiac Life Support Certification	6	9%

Exhibit 7 shows the top 10 skills across three categories for the studied occupations: specialized, human-centered, and technical skills (8 technical skills were identified by employers).

Exhibit 7. Most in-demand specialized skills

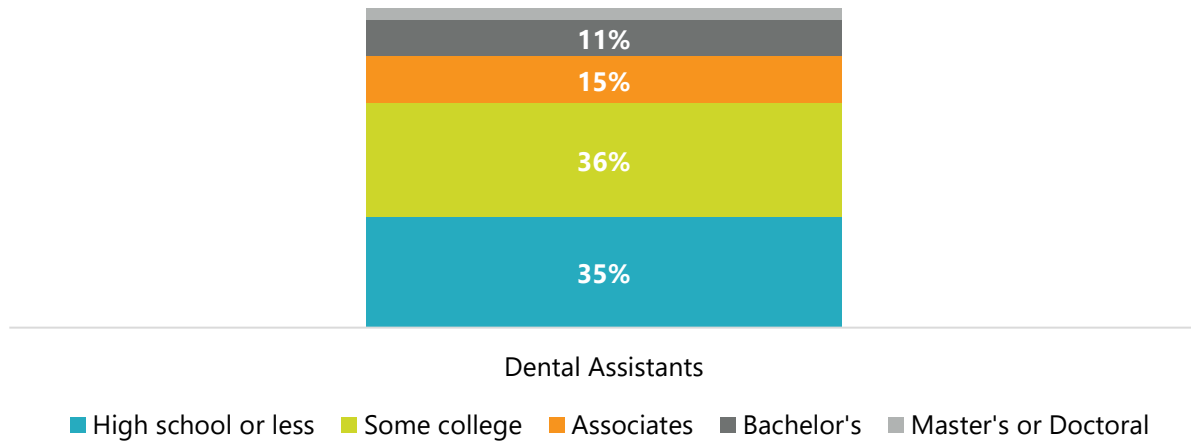
Top 10 Specialized Skills	Top 10 Human-Centered Skills	Top Technical Skills
X-Rays	Teamwork / Collaboration	Dentrix
Dentistry	Communication Skills	Microsoft Excel
Cardiopulmonary Resuscitation (CPR)	Self-Starter	Microsoft Office
Radiology	Detail-Oriented	Microsoft Word
Dental Assistance	Positive Disposition	Practice Management Software
Infection Control	Energetic	SoftDent
Oral Hygiene	Organizational Skills	Microsoft Operating Systems
Scheduling	Multi-Tasking	Microsoft Windows
Life Support	Computer Literacy	n/a
Patient Preparation	Bilingual	n/a

A majority of employers (74%) did not indicate preferred minimum education or experience levels.

EDUCATION AND TRAINING

The U.S. Census Bureau collects data on education achieved by workers employed in occupations. Exhibit 8 shows the state-level educational attainment of the current workforce in the selected occupation.

Exhibit 8. California worker educational attainment for selected occupation, 2019



The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which the BLS publishes projections data. Exhibit 9 shows the selected occupation's entry-level job requirements.

Exhibit 9. Typical education, work experience, and on-the-job training requirements

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Dental Assistant	Postsecondary nondegree award	None	None

EDUCATIONAL SUPPLY

Educational supply for an occupation can be estimated by analyzing the number of awards issued in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. Exhibit 13 shows the TOP and CIP codes for educational programs related to the selected occupations.

Exhibit 13. TOP and CIP codes for training programs related to the selected occupations

TOP Programs and Codes	Aligned CIP Programs and Codes
Dental Assistant (1240.10)	Dental Assisting/Assistant (51.0601)

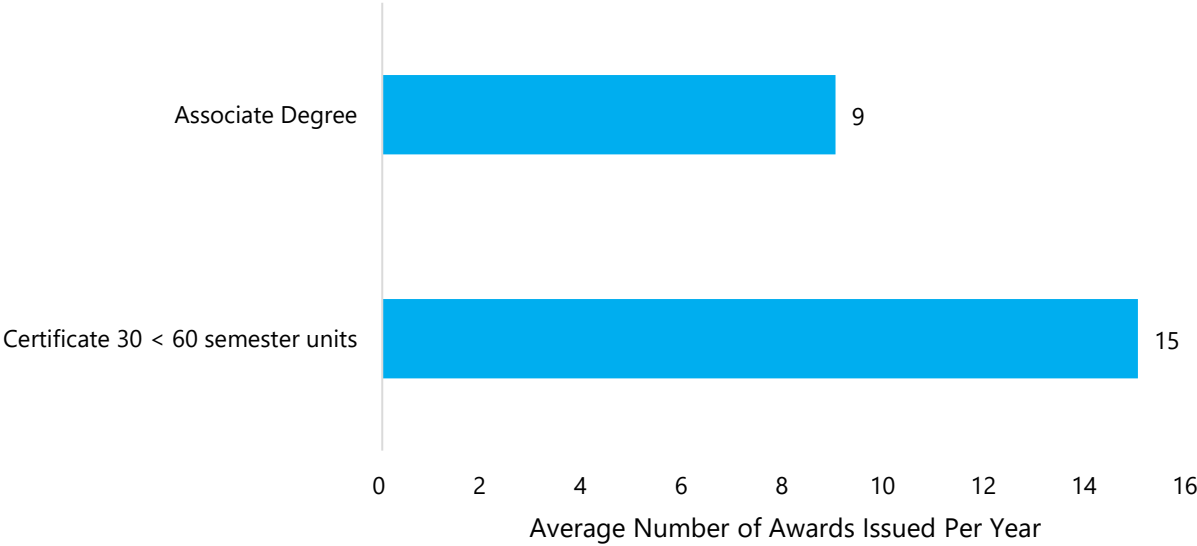
Community College Supply

Exhibits 14 and 15 display the average number of certificates and degrees from selected Far North community college programs over the last three academic years.

Exhibit 14. Annual average community college awards by program, 2018-19 through 2020-21

Program - TOP Code	College	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Yr Annual Awards Average
Dental Assistant (1240.10)	Redwoods	17	28	26	24
	Total	17	28	26	24

Exhibit 15. Annual average community college awards by type, 2018-19 through 2020-21



Other Postsecondary Supply

Exhibit 16 compares the average number of degrees that non-community college training providers conferred in the Far North over the last three academic years. Please note that non-community college data typically lags by one year.

Exhibit 16. Other postsecondary awards by program, 2017-18 through 2019-20

Program - CIP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
Dental Assisting/Assistant (51.0601)	Butte Regional Occupational Program	18	17	19	18
	Total	18	17	19	18

FINDINGS

- This report focuses on one occupation: dental assistant.
- The Far North subregion held 1,005 dental assistant jobs in 2021. These jobs are projected to decrease by 4% over the next five years, losing 40 jobs in the subregion by 2026.
- Jobs for dental assistants are projected to grow decline in the Far North subregion while 5% growth is projected for California over the next five years.
- Over the next five years, dental assistant jobs are projected to have 131 annual openings across the Far North subregion.
- Wage data shows that dental assistants earn \$3 to \$12 above the single adult living wage of \$12.74 per hour. Experienced dental assistants earn close to the family-level wage for the subregion.
- According to real-time labor market information, there were 204 online job postings for dental assistants in the Far North subregion between October 1, 2021, and September 30, 2022.
- Fifty-one percent of incumbent dental assistants have educational attainment levels consistent with community college offerings (some college or associate degrees). Another 11% of workers in this occupation hold a bachelor's degree.
- One Far North community college offers degrees and certificates in dental assisting. This program conferred an average of 24 awards (certificates and associate degrees) in dental assistant programs over the last three academic years (2018-19 through 2020-21).
- Local non-community college postsecondary training providers also offer training related to the studied occupations. Between 2018-19 and 2020-21, one non-community college training provider conferred an average of 18 awards in dental assisting/assistant over the last three years. Please note that non-community college awards data often lags by one year.

RECOMMENDATIONS

- Based on a three-year average of annual awards in the Far North, dental assistant programs and projected yearly openings, the supply gap analysis shows that the region seems to have room for additional training.
 - Community colleges and other postsecondary training providers issued an average of 42 awards over the last three years.
 - There are 131 projected annual openings for dental assistant jobs.
- The Far North Center of Excellence recommends moving forward with the program.

New Program Recommendation		
Move forward with the new program	Proceed with caution	A new program is not recommended
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX A. METHODOLOGY AND SOURCES

This report identified Occupations using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and O*Net OnLine. This report's findings were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

Lightcast (Formerly EMSI/Burning Glass) 2022.3; QCEW Employees, Non-QCEW Employees, and Self-Employed. <https://www.economicmodeling.com/>. *Note: EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors).*

Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. <https://nces.ed.gov/ipeds/>.

Labor Market Information Division. California Employment Development Department. <https://labormarketinfo.edd.ca.gov/>.

Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.

O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOL ETA). <https://www.onetonline.org/>.

Public Use Microdata Sample (PUMS). U.S. Census Bureau American Community Survey (ACS). <https://www.census.gov/programs-surveys/acs/microdata.html>

Self-Sufficiency Standard Tool for California. The University of Washington. <http://www.selfsufficiencystandard.org/>

"Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx>

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. June 2021 Edition. <http://coecc.net/>

APPENDIX B. GLOSSARY OF KEY TERMS

Key Terms	Definition
Occupation	Occupation refers to professions, or careers, in the workforce. Occupations differ from jobs in that jobs show the number of positions held in a given occupation.
Jobs	<p>A job is any position where a worker provides labor for monetary compensation.</p> <p>Job numbers include employees (those who work for businesses) and proprietors (those who work for themselves). Full- and part-time jobs are included and counted equally (i.e., not adjusted to full-time equivalents). Data for jobs, or employment, are annual averages.</p>
Job Change	Job change is the net increase or decrease of jobs over a given timeframe.
Job Openings	<p>Job openings are the projected number of positions available for workers entering an occupation.</p> <p>Openings include growth and replacement jobs. Growth jobs are the positive change in the total number of workers employed. Replacement jobs are the estimates of new workers needed to replace workers permanently leaving the occupation.</p>
Wages	Wages, or compensation, show workers' percentile and average earnings in a given occupation. The 25th-percentile and 75th-percentile hourly wages are used as a proxy for entry-level and experienced-level wages.
Living Wage	The living wage is the level of income a single adult with no children must earn to meet basic needs. The living wage is calculated using basic levels of allowances for food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs.
Educational Attainment	Educational attainment is the level of education achieved by workers in a given occupation. The data includes workers aged 25 years and older.
Typical Entry-level Education	The education level generally required for employment in an occupation. It may differ from the actual educational levels attained by workers in any given occupation.
Work Experience Required	The level of prior experience a worker needs to enter a job in a given occupation.
On-the-job Training Required	The level of on-the-job training a worker needs to obtain competency in a given occupation.
Awards	Awards are the number of certificates and degrees conferred for a specific course of study in a given year. Awards counts "papers" and, as a result, may be greater than the actual number of students who complete a program.

COVID-19 Statement: This report includes employment projection data by EMSI. EMSI's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

© 2022 California Community Colleges Chancellor's Office,
Centers of Excellence for Labor Market Research, Economic and
Workforce Development Program



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

**FOR MORE INFORMATION,
PLEASE CONTACT:**

Sara Phillips, Director

Far North Center of Excellence

sphillips@ShastaCollege.edu

LABOR MARKET ANALYSIS

FOR PROGRAM EXPLORATION



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

DENTAL HYGIENISTS IN THE FAR NORTH

Far North
Center of Excellence

FEBRUARY 2022

TABLE OF CONTENTS

Contents

Summary.....	3
Introduction.....	4
Occupational Demand.....	5
Wages	6
Job Postings.....	6
Occupations and Job Titles	6
Employers.....	6
Certifications, Skills, and Experience	7
Education and Training	9
Educational Supply.....	9
Community College Supply	9
Other Postsecondary Supply	9
Findings.....	10
Recommendations	11
Appendix A. Methodology and Sources.....	12

If, for any reason, this document is not accessible or if you have specific needs for readability, please contact us, and we will do our utmost to accommodate you with a modified version. To make a request, contact Sara Phillips by phone at (530) 242-7635 or by email at sphillips@shastacollege.edu.

SUMMARY

The Far North Center of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled career pathways in the Far North subregion. This report aims to determine if demand in the local labor market is unmet by the supply from existing community college programs and other postsecondary training providers.

This report primarily focuses on training that leads to jobs in middle-skilled occupations - jobs that typically require education beyond a high school diploma but less than a Bachelor's degree - but may include higher-skilled occupations for training pathways that lead to a bachelor's degree. Lowered skilled occupations are rarely considered in this type of analysis due to the lessened barriers for entry-level work, such as no formal education and on-the-job training requirements.

Key findings include:

- The Far North subregion held 533 dental hygienist jobs in 2020. Dental hygienist jobs are projected to increase by 3% over the next five years, adding 18 new jobs to the subregion by 2025.
- Over the next five years, dental hygienist jobs are projected to have 43 annual openings in the Far North subregion.
- Wage data shows that dental hygienists earn \$29 to \$42 above the subregion's living wage of \$12.74 per hour.
- Awards data analysis shows that one Far North training provider conferred an average of 12 awards (Associate degrees) in a dental hygienist program over the last three academic years.

INTRODUCTION

The Far North Center of Excellence (COE) was asked to provide labor market information for a proposed program at a regional community college. This report focuses on the following Standard Occupational Classification (SOC) occupation and code:

- Dental Hygienist (29-1292)

A review of related programs revealed the following Taxonomy of Programs (TOP) title(s) and code(s) are appropriate for inclusion in this report:

- Dental Hygienist (1240.20)

The corresponding Classification of Instructional Program (CIP) title(s) and code(s) are:

- Dental Hygiene/Hygienist (51.0602)

OCCUPATIONAL DEMAND

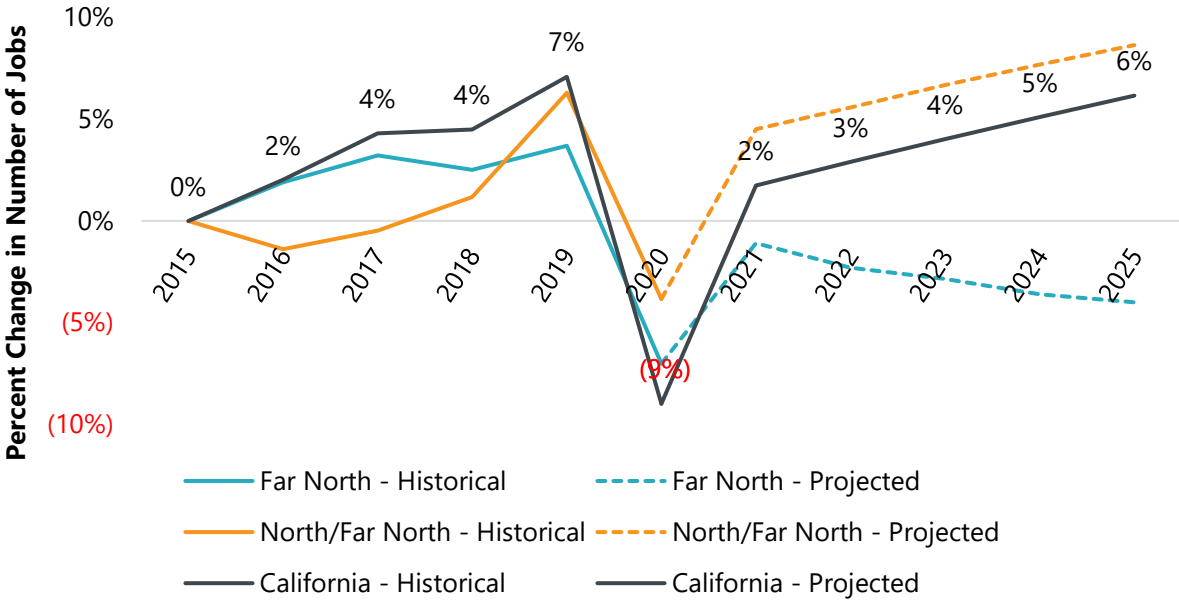
Exhibit 1 summarizes the five-year projected job growth for dental hygienists in the Far North, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2020-2025

Dental Hygienist	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	2020-2025 Annual Openings
Far North	533	551	18	3%	43
North/Far North	2,323	2,625	302	13%	219
California	19,498	22,742	3,244	17%	1,991

Exhibit 2 compares the percent change in jobs between 2015 through 2020 and the projected changes through 2025. The rate of change is indexed to the total number of jobs in 2015.

Exhibit 2. Changes in employment, 2015-2025



WAGES

Entry-level of wages of \$42.66 per hour are well-above the Far North living wage for a single adult - \$12.74 per hour.¹ Median hourly wages for dental hygienists in the region are \$48.11 and experienced wages are \$54.77 per hour.

JOB POSTINGS

This section of the report analyzes recent data from online job postings (real-time LMI). Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends.

The Far North COE identified 99 online job postings for dental hygienists in the Far North subregion. Job postings data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from February 1, 2021 to January 31, 2022.

Occupations and Job Titles

All of the 99 job titles related to dental hygienists specified some iteration of “dental hygienist” in the job posting. Examples include, “registered dental hygienist”, “dental hygienist”, or “RDH”.

Employers

Exhibit 3 lists the twelve employers from postings where the employer was specified. Seventy-four percent (n= 73) of job postings did not include an employer. As a result, these figures may not be representative of the full sample.

Exhibit 3. Employers with the most job postings

Employer	Job Postings	Share of Job Postings
Adventist Health	8	31%
Western Dental Services	3	12%
Oroville Gentle Dentistry	3	12%
Aspen Dental	3	12%
Columbia Healthcare	2	8%

¹ Living wage is defined as the level of income a single adult with no children must earn to meet basic needs, including food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs. The 25th-percentile and 75th-percentile hourly wages are used as proxy for entry-level and experienced-level wages.

Employer	Job Postings	Share of Job Postings
Western Dental	1	4%
Prodental	1	4%
Pacific Dental Services Incorporated	1	4%
Oroville Hospital	1	4%
Eastern Plumas Health Care	1	4%
Anderson Valley Health Center	1	4%
Advantage Dental Oral Health Center	1	4%

Certifications, Skills, and Experience

Exhibit 4 shows the most relevant certifications requested by employers for the selected occupation. Fifteen percent (n = 15) of job postings did not include certification information.

Exhibit 4. Most in-demand certifications

Certification	Job Postings	Share of Job Postings
Dental Hygienist Certification	72	86%
First Aid Cpr Aed	15	18%
Basic Life Saving (BLS)	9	11%
Radiation Safety Certification	2	2%
Dental Radiology License	2	2%
Certified Infection Control	1	1%

Exhibit 5 shows the specialized skills most requested by employers for the selected occupation.

Exhibit 5. Most in-demand specialized skills

Specialized Skill	Skill Postings	Share of Skill Postings
Dental Hygiene	93	100%
Dentistry	39	71%
X-rays	25	46%
Cardiopulmonary Resuscitation (CPR)	25	46%
Oral Hygiene	20	36%
Patient Care	13	24%
Patient/Family Education and Instruction	12	22%
Cancer Knowledge	12	22%
Oral Cancer Knowledge	11	20%
Sealants	10	18%

90 percent (n = 90) of job postings did not include preferred education levels or preferred experience levels and are excluded from this analysis.

EDUCATION AND TRAINING

The U.S. Census Bureau and Bureau of Labor Statistics collects data on education achieved by workers employed in occupations. In 2019, 9% of dental hygienists had some college education, 51% held an Associate's degree, and 40% held a Bachelor's or higher.

The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which the BLS publishes projections data. Exhibit 6 shows the skill level and entry-level job requirements for the dental hygienists.

Exhibit 6. Typical education, work experience, and on-the-job training requirements

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Dental Hygienist	Associate's degree	None	None

EDUCATIONAL SUPPLY

Educational supply for an occupation can be estimated by analyzing the number of awards issued in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. Exhibit 7 shows the TOP and CIP codes for educational programs related to the selected occupation.

Exhibit 7. TOP and CIP codes for training programs related to the selected occupation

TOP Programs and Codes	Aligned CIP Programs and Codes
Dental Hygienist (1240.20)	Dental Hygiene/Hygienist (51.0602)

Community College Supply

Over the last three academic years (2018-19 and 2020-21), one community in the Far North (Shasta) conferred an average of 12 Associate of Science degrees in the related TOP code.

Other Postsecondary Supply

No other postsecondary training providers conferred awards in the related CIP code over the past three academic years. Please note that non-community college data lags by one year.

FINDINGS

- This report focuses on one occupation, dental hygienists.
- The Far North subregion held 533 dental hygienist jobs in 2020.
- Far North dental hygienist jobs are projected to increase by 3% over the next five years, adding 18 new jobs to the subregion by 2025. Jobs for dental hygienists are projected to grow slower in the Far North subregion than in California.
- Over the next five years, dental hygienist jobs are projected to have 43 annual openings in the Far North subregion.
- Wage data shows that dental hygienists earn \$29 to \$42 above the subregion's living wage of \$12.74 per hour.
- According to real-time labor market information, there were 99 online job postings for dental hygienists between February 1, 2021, and January 31, 2022. All postings listed some iteration of "dental hygienist" in job title.
- Between 9% and 51% of incumbent dental hygienists have educational attainment levels consistent with community college offerings (some college or associate degrees). Another 40% of workers in this occupation hold a bachelor's degree or higher.
- One Far North community colleges offer degrees in the program related to dental hygienists. This program conferred an average of 12 Associate degrees over the last three academic years (2018-19 through 2020-21).

RECOMMENDATIONS

- Based on a three-year average of annual awards in the Far North region and projected yearly openings, the supply gap analysis shows that the region seems to have room for additional training.
 - Together, community colleges and other postsecondary training providers issued an average of 12 awards over the last three years.
 - There are 43 projected annual openings for dental hygienist jobs.
- The North/Far North Center of Excellence recommends moving forward with exploration of the program.

COE Recommendation		
Move forward with the program	Proceed with caution	Program is not recommended
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX A. METHODOLOGY AND SOURCES

Occupations in this report were identified using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and O*Net OnLine. This report's findings were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

Cal-PASS Plus LaunchBoard. California Community Colleges Chancellor's Office.

<https://www.calpassplus.org/LaunchBoard/Home.aspx>.

Emsi 2022.1; QCEW Employees, Non-QCEW Employees, and Self-Employed.

<https://www.economicmodeling.com/>. EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors).

Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-2017.

Bureau of Labor Statistics. <https://www.bls.gov/emp/tables/educational-attainment.htm#>.

Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. <https://nces.ed.gov/ipeds/>.

"Labor Insight Real-Time Labor Market Information Tool." Burning Glass Technologies.

<http://www.burning-glass.com>.

Labor Market Information Division. California Employment Development Department.

<https://labormarketinfo.edd.ca.gov/>.

Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.

Occupational Employment Statistics (OES). Bureau of Labor Statistics.

<https://www.bls.gov/oes/home.htm>.

O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOL ETA).

<https://www.onetonline.org/>.

Self-Sufficiency Standard Tool for California. The University of Washington.

<http://www.selfsufficiencystandard.org/>

"Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About->

[Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.aspx](https://www.coecc.net/Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.aspx)

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. November 2015 Edition. <http://coecc.net/>

COVID-19 Statement: This report includes employment projection data by EMSI. EMSI's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

© 2021 California Community Colleges Chancellor's Office,
Centers of Excellence for Labor Market Research, Economic and
Workforce Development Program



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

FOR MORE INFORMATION,
PLEASE CONTACT:

Sara Phillips, Director

Far North Center of Excellence

sphillips@ShastaCollege.edu