



Learning that works
for Nebraska

Preparing Nebraska's High School Healthcare Talent Pipeline

Sydney Kobza and Rachel Buss
The Nebraska Department of Education



Overview

State of Health Sciences in Nebraska CTE

Nebraska Workforce Data

Work-Based Learning

Opportunities in HOSA

Resources

Upcoming Events





Health Sciences

Nebraska Career & Technical Education





OUR MISSION

To lead and support the preparation of all Nebraskans for learning, earning, and living.



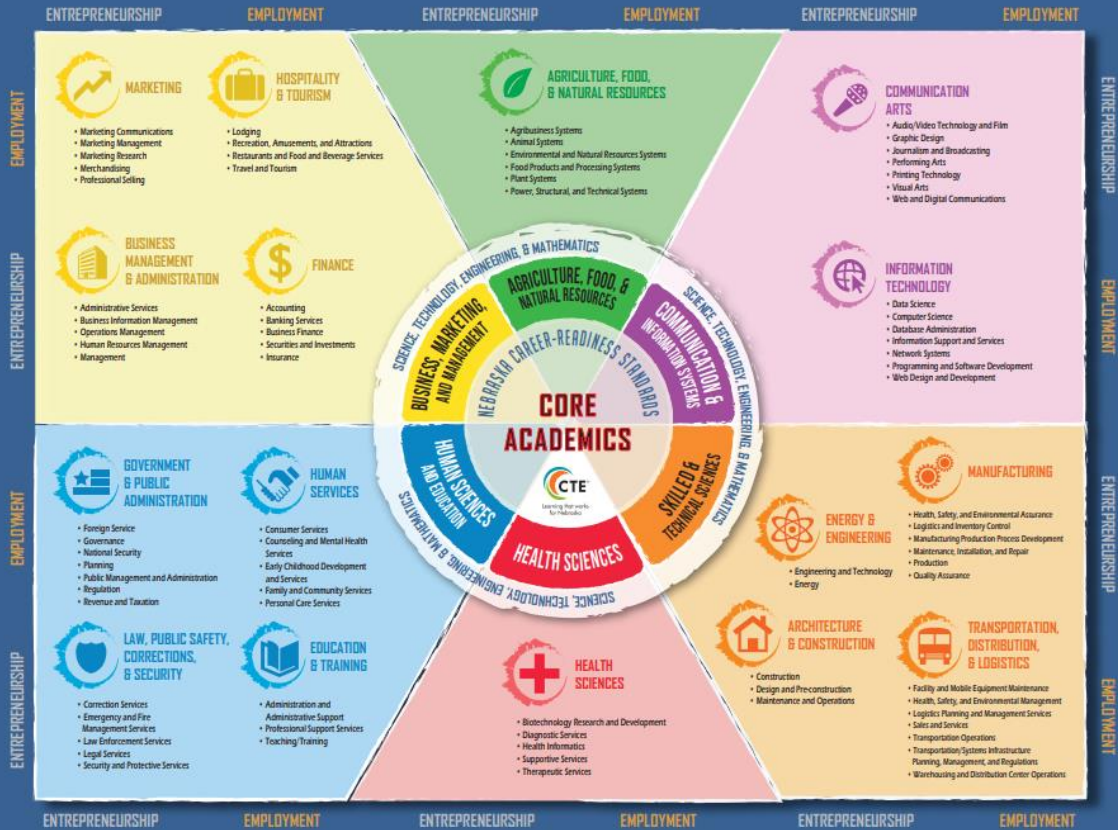
OUR VISION

Nebraska Career & Technical Education will deliver coordinated, relevant learning opportunities that engage each student in high-quality, rigorous education. These opportunities will be enhanced by partnerships with business and industry, workforce, and economic development leaders, allowing learners to turn their passion, talents, and strengths into successful careers and fulfilling lives.





NEBRASKA CAREER & TECHNICAL EDUCATION MODEL



It is the policy of the Nebraska Department of Education and its divisions to provide equal opportunity to all persons, regardless of race, color, religion, gender, sex, age or handicap, in the exercise of any educational, public, administrative or other agency program.

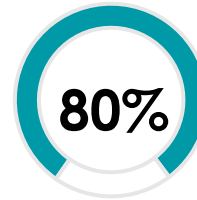
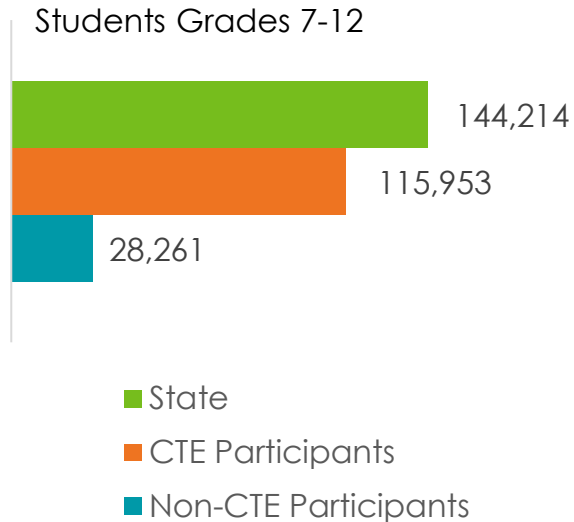
This project was funded through the Carl D. Perkins Career and Technical Education Act of 2006, administered through the Nebraska Department of Education. However, the contents do not necessarily represent the policy of the United States Department of Education, and any financial aid cannot be guaranteed by the Federal Government.

CTE in Nebraska

*Health Sciences
2019-2020*



Most learners in Nebraska participate in CTE!



of students
grades 7-12
participate* in
CTE.



of high school
students are CTE
concentrators*

*Secondary CTE concentrators have completed at least two courses in a single career cluster at the intermediate or capstone level. Postsecondary concentrators have completed at least 12 credits in a CTE program or completed a program that encompasses fewer than 12 credits.

CTE learners go on to succeed!

AFTER HIGH SCHOOL GRADUATION:



84%

44% four-year college
28% two-year college

of CTE concentrators were enrolled in some form of postsecondary education

Nebraska average, all learners 73%



13%

were employed



2%

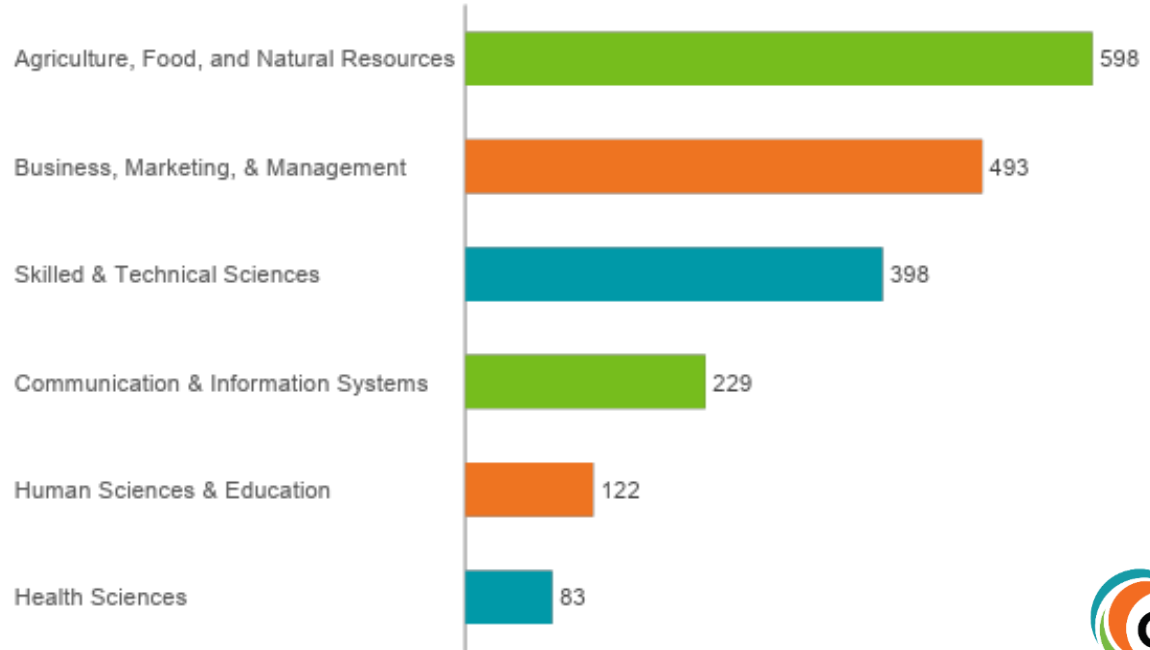
were in the military

Programs of Study Offered in Nebraska

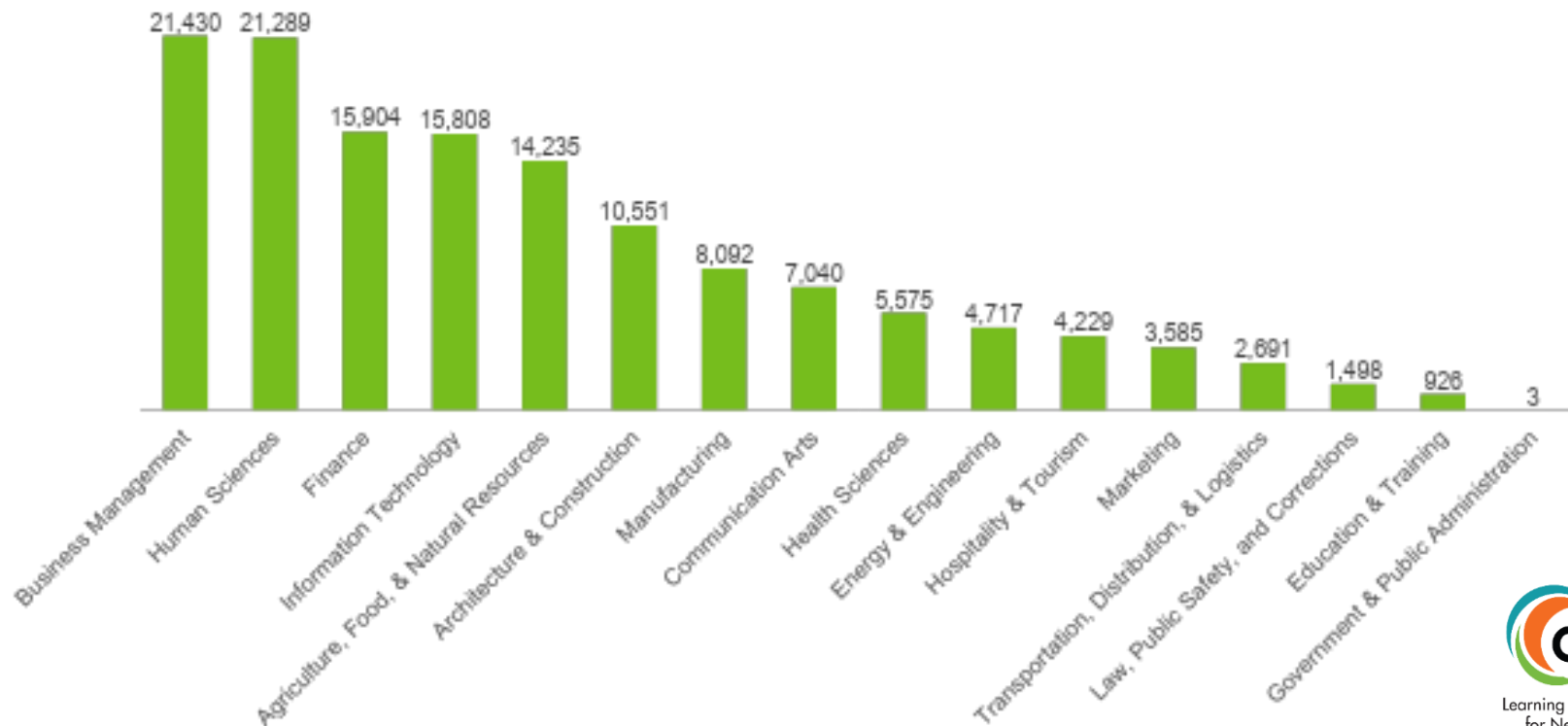


1,923

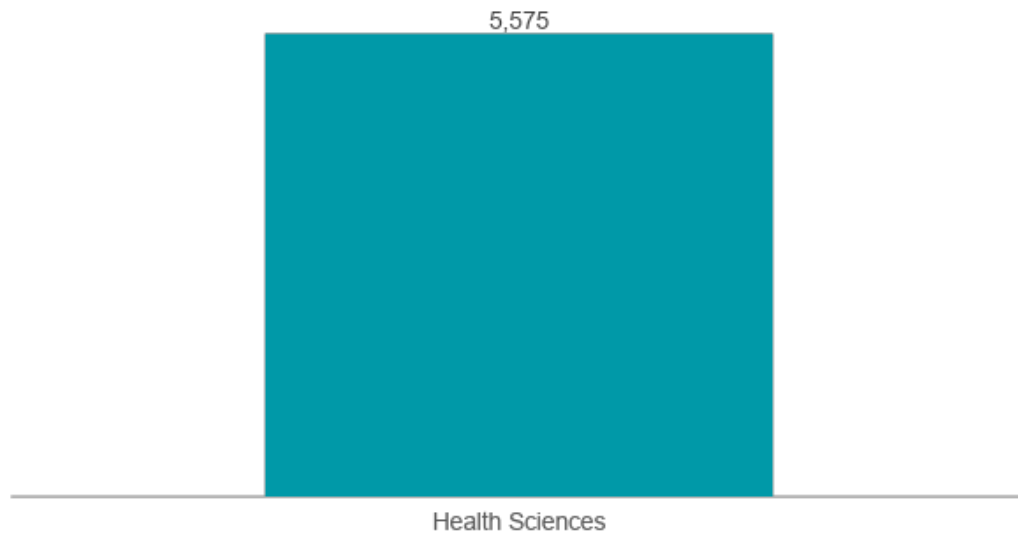
CTE programs of study are offered in 16 Career Clusters across Nebraska.



CTE Participants by Career Cluster



Health Sciences Participants





Workforce Data

Nebraska Career & Technical Education



H3 High Wage. High Demand. High Skill

What are H3 Occupations?

High Wage, High Skill and High Demand jobs are today's in-demand jobs.

- Occupations are high wage when at least half of their wage measures are at or above the regional average for all occupations.
- Occupations that require some college, no degree or a higher level of educational attainment are high skill, as well as occupations that require a high school diploma or equivalent plus long-term on-the-job training, an apprenticeship, or internship/residency.
- The number of annual openings, net change in employment, and growth rate determine whether an occupation is high demand. An occupation must be High Wage, High Skill and High Demand to be an H3 occupation.

http://h3.ne.gov/#_

H3 Reports

H3: HIGH WAGE, HIGH DEMAND, HIGH SKILL

Top Ten H3 Occupations by Demand Rank

An occupation's demand ranking is based on three factors: the number of annual openings, the net change in employment, and the growth rate. Wages from Occupational Employment Statistics, 4th Quarter 2017. Annual openings from 2016-2026 Long-term Occupational Projections. Produced by the Nebraska Department of Labor, Office of Labor Market Information.

Nebraska							
Rank	Occupation	Avg. Hourly Wage	Avg. Annual Wage	Required Education	Required Work Experience	Job Training	Annual Openings
1	Heavy and Tractor-Trailer Truck Drivers	\$21.50	\$44,718	Postsecondary non-degree award	None	Short-term on-the-job training	3,438
2	Registered Nurses	\$29.85	\$62,086	Bachelor's degree	None	None	1,600
3	General and Operations Managers	\$50.86	\$105,793	Bachelor's degree	5 years or more	None	1,476
4	Carpenters	\$18.40	\$38,278	High school diploma or equivalent	None	Apprenticeship	1,288
5	Accountants and Auditors	\$33.34	\$69,348	Bachelor's degree	None	None	1,082
6	Software Developers, Applications	\$43.06	\$89,563	Bachelor's degree	None	None	534
7	Elementary School Teachers, Except Special Education	N/A	\$56,298	Bachelor's degree	None	None	865
8	Electricians	\$23.74	\$49,386	High school diploma or equivalent	None	Apprenticeship	703
9	Plumbers, Pipefitters, and Steamfitters	\$26.52	\$55,155	High school diploma or equivalent	None	Apprenticeship	658
10	Secondary School Teachers, Except Special and Career/Technical Education	N/A	\$56,267	Bachelor's degree	None	None	629

Health Science Cluster Report

H3: HIGH WAGE, HIGH DEMAND, HIGH SKILL

Wages from Occupational Employment Statistics, 4th Quarter 2017. Annual openings from 2016-2026 Long-term Occupational Projections. Career Cluster information from Nebraska Department of Education. Produced by the Nebraska Department of Labor, Office of Labor Market Information.

Occupation	Health Science Cluster						
	Percent Change	Annual Openings	Avg. Hourly Wage	Avg. Annual Wage	Entry Wage	Experienced Wage	H3
Cardiovascular Technologists and Technicians	9.78%	45	\$25.52	\$53,081	\$32,289	\$63,476	☀
Dental Assistants	15.82%	292	\$17.75	\$36,936	\$28,586	\$41,111	☀
Dental Hygienists	16.20%	99	\$32.88	\$68,385	\$54,748	\$75,204	☀
Dentists, General	15.77%	34	\$78.50	\$163,284	\$95,343	\$197,253	☀
Diagnostic Medical Sonographers	14.77%	39	\$32.33	\$67,248	\$55,664	\$73,041	☀
Dietitians and Nutritionists	14.56%	54	\$26.71	\$55,562	\$41,897	\$62,395	☀
Family and General Practitioners	10.51%	59	\$112.00	\$232,963	\$147,336	\$275,777	☀
Licensed Practical and Licensed Vocational Nurses	14.77%	477	\$20.10	\$41,789	\$35,068	\$45,150	☀
Medical and Clinical Laboratory Technicians	14.26%	122	\$19.30	\$40,147	\$28,098	\$46,173	☀
Medical and Clinical Laboratory Technologists	10.31%	126	\$28.26	\$58,782	\$44,010	\$66,170	☀
Medical and Health Services Managers	17.60%	326	\$50.07	\$104,155	\$67,002	\$122,731	☀
Medical Records and Health Information Technicians	13.52%	137	\$19.33	\$40,226	\$29,807	\$45,436	☀
Medical Scientists, Except Epidemiologists	8.15%	50	\$25.63	\$53,305	\$37,713	\$61,101	☀
Nurse Practitioners	21.88%	90	\$46.54	\$96,805	\$75,186	\$107,613	☀
Occupational Therapists	22.55%	87	\$37.49	\$77,964	\$56,102	\$88,894	☀
Occupational Therapy Assistants	33.66%	36	\$27.88	\$57,980	\$40,971	\$66,484	☀
Pharmacists	5.63%	124	\$53.74	\$111,764	\$86,657	\$124,317	☀
Physical Therapist Assistants	30.47%	118	\$23.98	\$49,877	\$34,999	\$57,316	☀
Physical Therapists	25.26%	130	\$36.97	\$76,902	\$53,330	\$88,688	☀
Physician Assistants	28.67%	90	\$48.46	\$100,793	\$74,255	\$114,062	☀

<http://h3.ne.gov/h3ByCluster.xhtml?param=8.0000>



Work-Based Learning in Nebraska

Nebraska Career & Technical Education



WBL- A Strategic Priority of Nebraska CTE



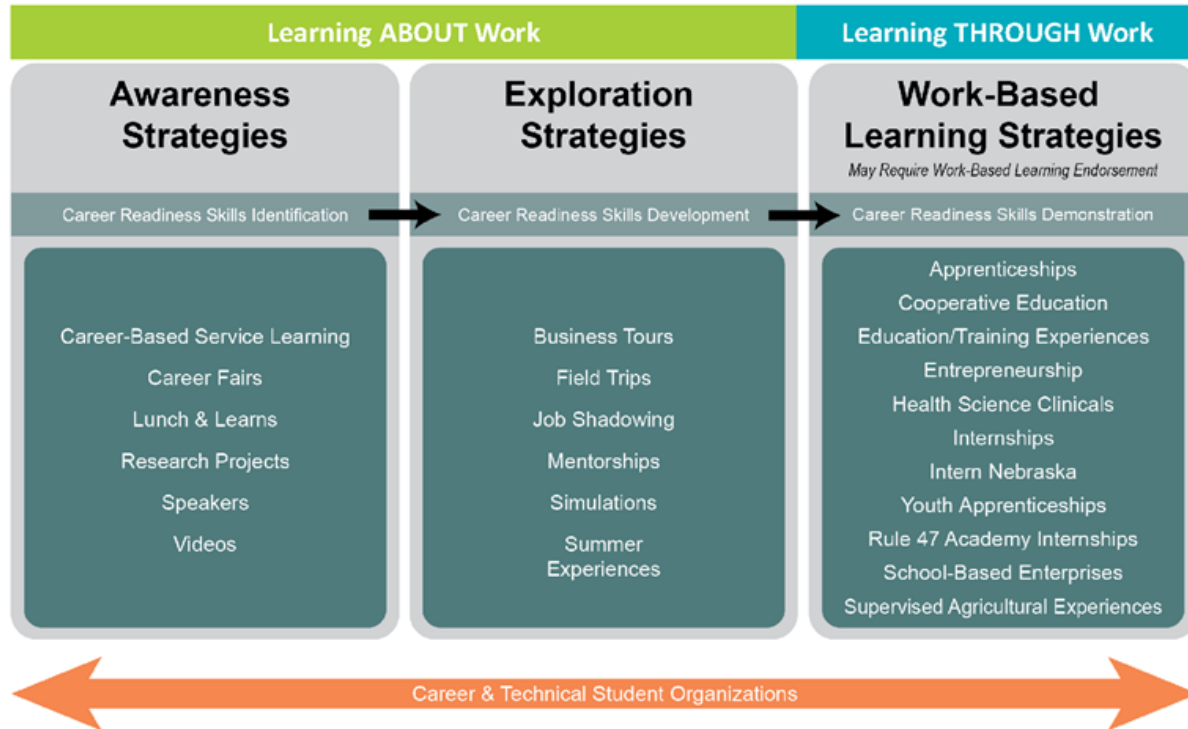
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WORK-BASED LEARNING

Work-based learning strategies connect learners with employers to prepare them for success in an ever-changing workplace. Work-based learning is a planned program of meaningful experiences related to the career interests of a learner that enable him or her to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. Work-based learning is learning through work, not simply learning about work.

Learning Through Work vs. Learning About Work

Nebraska Workplace Experiences Continuum



The Nebraska Workplace Experiences Continuum illustrates how Workplace Experiences become more focused as a student progresses through their education.



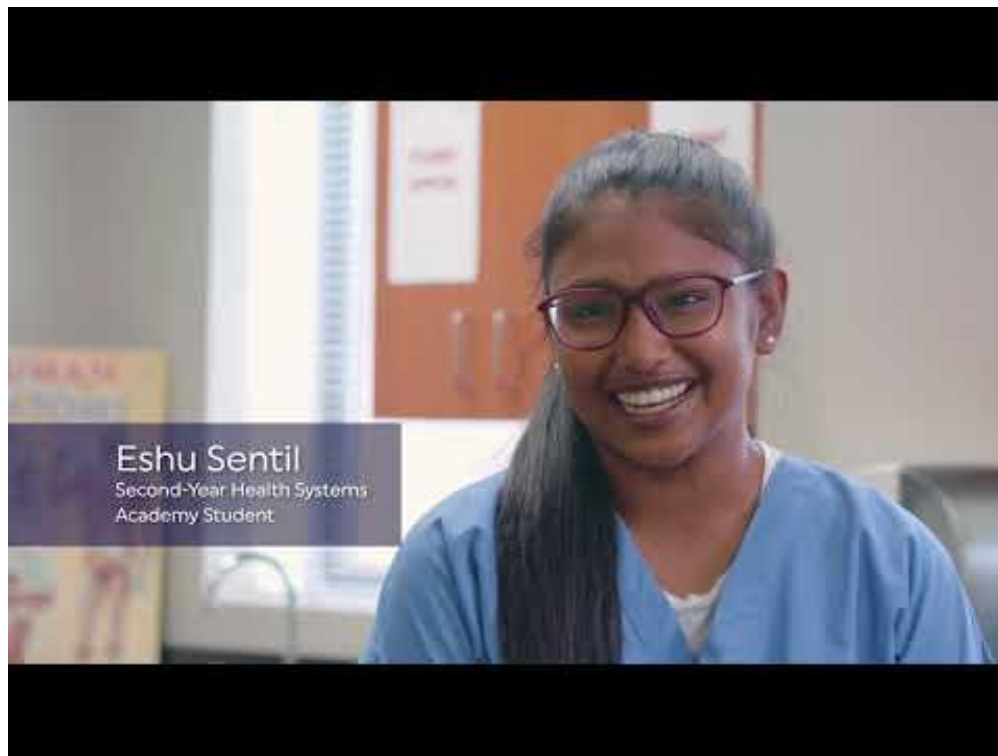
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for Nebraska

WBL-Part of the Career Development Process



Workplace Experiences help students develop and demonstrate these skills

NDE Workplace Experiences Health Sciences



Nebraska HOSA



What is HOSA?

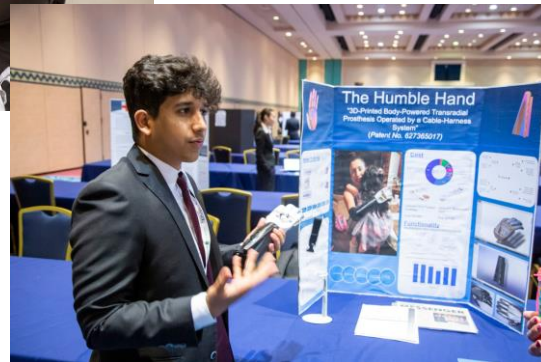
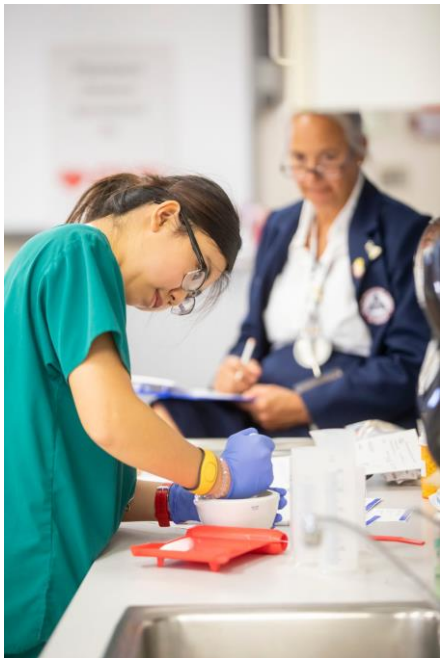
- HOSA, is the career and technical student organization (CTSO) specifically dedicated to preparing students for careers in the Health Science career cluster.



HOSA and Work Based Learning- HOSA Events

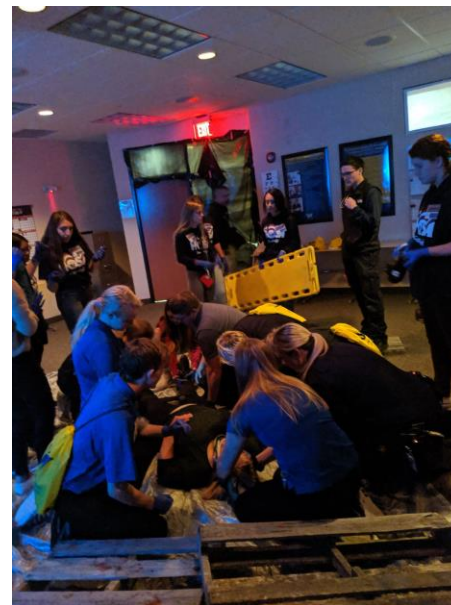


HOSA and Work Based Learning- Competitive Events



Learning that works
for Nebraska

HOSA and Work Based Learning- Chapters at Work



Work Based Learning from a Teacher Perspective

WBL is a Win-Win-Win-Win for all!

- Students gain the knowledge and skills needed in the workplace of tomorrow and transition smoothly from their education to their career.
- Schools gain students who are engaged, well rounded and high achieving.
- Employers gain a well educated, competent and competitive workforce that is very successful.
- Communities gain positive citizens who are highly evolved in the success of the community.

-Robyn Jernigan, Benson Health Sciences Academy Instructor

Resources

NDE Contacts

Career Field Specialist

Open Educational Resources

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

NDE Health Sciences Website

<https://www.education.ne.gov/nce/healthscience/health-science/>



UNO & UNMC Building Excellence in Academics Through STEM (uBEATS)

Educators are continually challenged to keep students engaged beyond the typical classroom experience. However, finding quality, supplemental resources that do so can be time consuming for already busy teachers.



 uBeats: Online Science Education Reso...  Watch later  Share

 **uBEATS**

MORE VIDEOS **Full screen (f)**

  0:01 / 0:48  **YouTube** 



65
online
modules



6th – 12th
grade students

See example modules online: <http://bit.ly/ubeats-examples>



Grades 6 – 8

Mendelian Genetics

This genetics module for grades 6-8 covers the approaches to science that made Gregor Mendel's genetic experiments successful and how Punnett squares can be used to predict and evaluate the results of a genetic cross.



Grades 9 – 10

Gene Expression

This genetics module for grades 9-10 explains why offspring cannot have the same genes as one of their parents, why some genes get expressed in the phenotype and others don't, and how environmental factors can influence the expression of genes.



Grades 11 – 12

Blood Components & Cells

This pathology and microbiology module for grades 11-12 discusses the four main components of blood and their functions, as well as the medical conditions involving abnormalities with blood components.



Grades 11 – 12

Pharmacology

This pharmacology module for grades 11-12 provides an overview of pharmacology, the four main processes involved with drug interactions within the body, and the different forms of drug administration.

uBEATS Topics

- Cancer
- Pathology & Microbiology
- Careers
- Pharmacology
- Genetics
- Public Health coming soon



Health Science Careers

CAREERS INCLUDE:

- Genetics
- Pathology & Microbiology
- Pharmacy
- Medical Imaging & Therapeutic Science
- Public Health
- Dentistry
- Nursing coming soon

The screenshot shows an interactive educational module titled "Careers in Pathology and Microbiology". On the left is a red sidebar with a white logo and a "Menu" section containing the following items: "Careers in Pathology and Microbiology", "About this Module", "Funding", "Introduction", "Course Objectives", "Choose a Career", "Phlebotomist", "Medical Laboratory Scientist" (highlighted), "Job Description" (highlighted), "Job Outlook", "Review Question", "Pathologist", "Application", and "Summative Assessment". The main content area features a cartoon illustration of a female scientist in a red lab coat using a microscope. To her right is a teal virus icon, a framed anatomical diagram of human lungs, and a cartoon male character coughing. The interface includes a "Transcript Exit" link in the top right, a play button and progress bar at the bottom, and "PREV" and "NEXT" navigation buttons in the bottom right corner.



Ready-to-use, supplemental materials

- Content **vett**ed by UNMC experts
- Teachers **save time** and energy
- **Teacher guides** make integration into curriculum seamless
- Modules **available anytime**, anywhere



uBEATS is a resource for NHA members to promote in their community schools to encourage early student interest in health sciences and STEM



Introducing Careers in Mental Health to Students

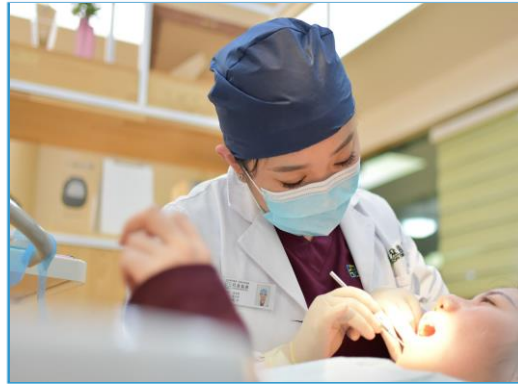
- BHECN (Behavioral Health Education Center of Nebraska) and UNMC (University Nebraska Medical Center) provided sponsorship for the 2021 Virtual Mind-Bending Careers Conference for 450 Nebraska HOSA and Nebraska FCCLA (Family, Career and Community Leaders of America) students and teachers in 30 Chapters
- Students were introduced to programs and careers in mental and behavioral health with sessions featuring:
 - Pre-professional behavioral health and mental student panel with Creighton University, UNMC, UNO and UNK
 - Developing resiliency skills from 2020
 - Meth and alcohol addictions and the life-altering consequences
 - RHOP, KHOP and UHOP programs were shared



**MIND
BENDING
CAREERS**

Upcoming Events

- NCE, June 7-9
- HOSA Events
- Fall PD Information Coming Soon





Questions?

Sydney Kobza

Assistant CTE Director

sydney.kobza@nebraska.gov

Rachel Buss

HOSA State Adviser

rachel.buss@nebraska.gov