

**Action Grant**  
*Columbus Public Schools Application*  
2021-2022

**reVISION**

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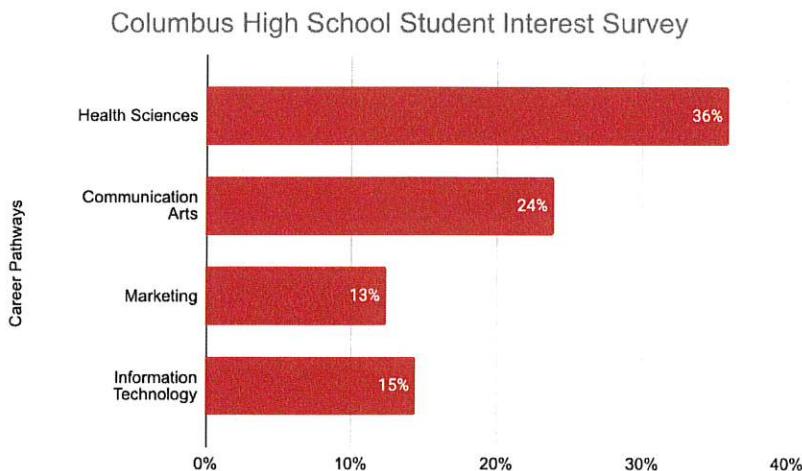
**OFFICE OF CAREER, TECHNICAL, AND ADULT EDUCATION**  
NEBRASKA DEPARTMENT OF EDUCATION  
301 Centennial Mall South, Lincoln, NE 68508



## Section 1: Application Overview

In 2014, Columbus voters approved a \$49.9M bond issue to build a new high school with an emphasis on STEM education. The new Columbus High School (CHS) and STEM Academy opened in March 2017. Through strategic planning, goals and action steps were accomplished to emphasize innovation and enhancement of current practices and programming in the STEM Academy. While the STEM Academy has been a priority, CHS has been developing other areas of focus to move forward for academic experiences and community partnerships.

In continuing to evaluate and grow our programming and partnerships, through student surveys and dialog with community partners, two areas of focus were evident, Media and Video Production and Health Sciences. In the evaluation process for the Media and Video Production pathway, it was determined through local partnerships with the Columbus Telegram and News Channel Nebraska, and conducting student surveys, there was a demand for a program at Columbus High School. According to the student body and chart shown below, 42% of the respondents indicated they were interested in the Communication Arts, Marketing, and Information Technology career fields. Additionally, in researching the program, comparable schools to CHS offered courses for students in the Media and Video Production pathway.



During the 2019-20 school year, a commitment to the Media and Video Production pathway was placed through Year 1 of the reVISION process. Funds were distributed from the building-level and through the Carl D. Perkins Grant to initially start the program, with five Mac computers for students, one teacher computer, and video equipment being purchased. To continue to start and build the program and grow class sizes, the amount of student computers initially planned for the implementation for the program was ten, plus an additional teacher device. For the current school year, a small number of students have been able to participate in the program, learning skills in video production such as, communicating through technical writing, interpersonal interviewing, presenting information to an audience, and technological skills in working with media and video equipment and software. The use of reVISION funds would be utilized to purchase and complete the final number of computers needed to start the program in alignment with the Year 1 action steps from the element of Size, Scope, and Quality and Implementing CTE Programs of Study.

According to O\*NET, by 2028, there will be a projected growth in the audio/visual field of 11%. With a growing number of jobs available, and an increase in student interest, purchasing additional computers for our Media and Video Production pathway are needed at CHS.

Along with Media and Video Production, a strong area of focus in the reVISION process is the Health Sciences pathway. In the chart referenced on page 2, in a survey conducted in 2019, 36% of CHS students stated interest in the Health Sciences field. Based upon the continued student interest, and the regional need for individuals working in the healthcare industry, Columbus Public Schools is looking to expand the health sciences programming.

For the Health Sciences pathway, a need has been determined due to a large demand from both students and community partners. The vision for the program is to provide a state-of-the-art experience for students at the high school level who want to explore healthcare careers. To carry out this vision, we want to provide our students with up-to-date materials, industry standard equipment, innovative technology, the opportunity to gain relevant workforce certifications, dual credit courses, and work-based learning experiences with individuals in the healthcare setting. Furthermore, it is our goal to better our community by retaining our students in the Columbus community and attract families and students to the area.

For local workplace needs, according to the H3 website for the northeast region, which includes the Columbus area, registered, licensed practical and licensed vocational nurses were listed in the top ten for occupations by demand rank. Additionally, registered nurses are the #2 high demand, wage, and skill jobs with approximately 1,600 positions available in the next 5 years. In the northeast region, approximately 137 annual positions are available for registered nurses along with a 14% increase in demand for licensed practical nurses. To add, aside from registered nurses, skilled nursing facilities have a high need for certified nursing, medication aides, and physical therapy assistants.

To begin the planning process for a Health Science pathway at Columbus High School, meetings and visits were carried out with Omaha Roncalli Catholic Schools, Grand Island Public Schools, Scottsbluff Public Schools, Ralston Public Schools, and Papillion La Vista Public Schools to form a vision of what the Columbus Public School's program would entail. From there, dialog, meetings and presentations with community partners have been and will be established with the Columbus Community Hospital (CCH), various skilled nursing facilities and Central Community College (CCC) to form an advisory group to determine the level of involvement with each entity.

## **Section 2: Key Objectives**

### **Project Goals**

The goals for the 2021-22 reVISION Action Grant of completing the Media and Video Production pathway and starting a Health Sciences pathway align with numerous CTE Perkins V strategic priorities. To start, to better prepare students for the constantly changing technological and transferable job skills, the Media and Video Production pathway teaches these skills for various and new occupations that is categorized under Strategic Priority #1: Aligned CTE Programs. This pathway will teach students the skills needed to transition to postsecondary institutions and careers such as Northeast Community College and their Video Production program, as well as the skills needed for careers with media outlets such as News Channel Nebraska.

In the Health Sciences pathway, this program will align with Strategic Priority #1 as well by providing students the opportunity to explore career options with in-demand jobs, help them identify their interests, and prepare them to transition to postsecondary education and entry-level careers. These pathways also match Strategic Priority #2: Systemic Career Development.

In each pathway, the students will explore the different careers and jobs associated with each field and have the opportunity to gain industry certifications to obtain careers right out of high school. Students will discover the necessary steps towards obtaining the correct licenses or undergraduate and postgraduate degrees.

Lastly, with the partnerships in place and planned for future development, these pathways align with Strategic Priority #5: Work-Based Learning. With the Media and Video Production and Health Sciences pathways, and through the already established Workplace Experiences course at the high school, students will have the opportunities to participate in job shadows and gain real world experience while still in high school. When students achieve the Certified Nursing Assistant certification, they will be able to work during the school day for high school credit. This not only benefits the students by giving them real world work experience, but also employers in our community that are struggling to fill positions and shifts. This will also aid students in special populations by having access to the industry certifications during the school day versus having to take a course during times in which they might be working or caring for family members. By having the programs at the high school level, this will benefit students that might not have reliable transportation or the means to get to Central Community College. Additionally, by providing the technology for the Media and Video Production pathway at school, this would eliminate a cost for students having to purchase the equipment on their own to gain the necessary skills. With the addition of the five computers to complete the Media and Video Production lab, we will be able to educate more students in the field with the potential to get more students to the capstone course. Also, with the startup equipment for the Health Sciences pathway, we will prepare students for the workforce at an earlier age and be able to better prepare the students, in conjunction with the local partners, for the needs of our community.

With all the new additions brought to our school with this grant, we are furthering our commitment to the local workforce community by preparing students for their next steps after high school. Whether a student's goal is to go straight into the workforce or onto a post-secondary option, these improvements into our Career and Technical Education programs will vastly improve our students' knowledge and preparedness for their next steps. The industry is ever changing and as a school we have made a commitment to keep up with the trends as they advance. It is imperative that we stay current on the trends and advances to meet the local demand. Columbus's current workforce needs are extensive as there are more available jobs than there are skilled workers in the area. At Columbus Public Schools, our goal is to prepare, partner, and help provide for our local community.

## **Section 3: Project Activities**

### **1. Complete the Video/Media Production Lab - Mac Computers and Equipment**

Narrative: In our Local Perkins Application, under Size, Scope, and Quality and Implementing CTE Programs of Study for Year 1, we set a goal to start a Media and Video Production pathway. After conducting a student survey to align our program offerings with the student needs, the results concluded the need for a Media and Video Production pathway. Additionally, in researching comparable school districts, Columbus High School was behind and lacked a program in the Communication and Arts/AV fields. In the action step under Size, Scope, and Quality of Programs, it included the purchase of computers, software, and equipment to start the program. In the 2020-21 Perkins Grant, funds were prioritized to purchase the equipment needed for startup of the program such as digital cameras, studio lighting, green screens, microphones, an iPad, and a teleprompter. In this program, students have partnered with Northeast Community College in Norfolk to produce a weekly newscast that is presented to the student body. Additionally, a goal of the program is to have the students build the necessary skills to record, broadcast, and live stream events for the public to view through the courses and a future Media and Video Production Club. To continue to grow, and allow for more students to enter the program, five additional Mac computers, with all the necessary computer equipment will be purchased utilizing grant funds.

Evaluation: After completing the startup phase of the computer lab by purchasing computers and equipment through the Perkins grant and the high school building budget, the evaluation process of analyzing the number of students taking the introductory, intermediate, and capstone courses will take place. We will evaluate the procedures for entrance to the pathway, completion of the capstone courses and placements into job shadows through the Workplace Experiences class. We will also measure the outcomes of this pathway by meeting with the classroom teacher to continue to grow the student participation rate, create diversified experiences for students of all backgrounds and demographics, and to provide relevant partnerships and job experiences. We will also evaluate the program by the number of students participating in a Media and Video Production Club for streaming extracurricular activities. The purchase of this equipment matches the overall goals of this grant and the Local Perkins Application by starting a Media and Video Production pathway under the element of Size, Scope and Quality and Implementing CTE Programs of Study in Year 1.

Sustainment: Once completed, the Media and Video Production pathway will be sustained and supported by Columbus Public Schools, Columbus Public Schools Foundation, and local industry partners. Moving forward with this activity, the equipment will be used to move the program forward through local partnerships, such as News Channel Nebraska, student clubs and organizations, and community involvement.

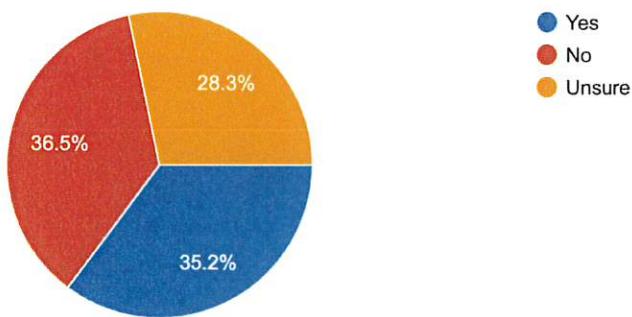
### **2. Health Sciences Pathway Startup - Anatomy Table and Equipment**

Narrative: In the fall of 2019, a comprehensive survey went out to all 9-12 students at Columbus High School and asked questions about students' educational and employment interests. A large portion of the students stated they had an interest in Health Sciences. Thirty-six percent of students in grades 9-12 reported that the Health Sciences pathway and an occupation in healthcare was of interest to them. To get more up to date information a survey was sent out in April of 2021 to current 9, 10, 11 grade students to gauge their interest in taking Health Sciences courses. A total of 466 students in grades 9-11 took the survey and it was determined that 35% of the students showed an interested in taking Health Sciences courses, with another 28% being unsure.

With this data compiled from two years ago and the current data, there is a large portion of the 9-11 student population interested in taking courses in Health Sciences. Together, with the student interest and local demand for healthcare workers, the justification for a Health Sciences pathway is prevalent.

I am interested in taking Health Science courses at CHS with an emphasis in careers in the medical field.

466 responses



With CHS being the largest school in the city of Columbus and Platte county, by starting a Health Sciences pathway, CHS can train a number of students and future employees to fulfill some of the need for community businesses. By purchasing an anatomy table and equipment needed to teach CPR and first aid skills to students, not only are we equipping them with skills for their future careers, but we are also equipping students with skills that may be able to save someone's life.

Furthermore, to start the pathway, partnerships with the Columbus Community Hospital (CCH) and Central Community College (CCC) have been established. Dialog and presentations are ongoing to determine each entity's commitment to the program. In the current partnership, CCH hosts students through the Workplace Experiences class for job shadows, and CCC offers dual credit courses for CHS students. To move forward with the plan for the Health Sciences pathway, a presentation is scheduled on May 3rd at 5:30pm to give to the CCH Board of Directors. Also, Central Community College is currently completing construction for a Center for Science and Technology building that will include nursing simulation labs.

In the CPS reVISION/Perkins 4-year plan, under Size, Scope, and Quality and Implementing CTE Programs of Study, and Local Workforce Alignment, exploring a Health Sciences pathway is in Year 2 of our goals and action steps. Currently, we are working with Columbus Community Hospital and Central Community College to offer Health Science I and II at the high school with an emphasis on getting students their Certified Nursing Assistant certificate, with the goal for students to gain a CNA license while completing the program of study.

Evaluation: After purchasing an anatomy table, instructional models, and equipment that will be used in Health Sciences I and II courses, students will have a greater understanding of human anatomy and real-life simulations. In conjunction with taking the Certified Nursing Assistant course through CCC and CCH, students will be able to obtain a job at a skilled nursing facility, assisted living or CCH. Students will also be able to receive high school credit by enrolling in Workplace Experiences while they are working in the community. By purchasing mannequins, CPR mannequins, and a Stop the Bleed kit, all students in Health Sciences will be equipped to handle various medical emergencies in the community. A goal for the Health Sciences pathway is to have 100% of the students be CPR, AED and Stop the Bleed

trained by the end of the Health Sciences I course. It is a continuous goal of CHS to track, monitor and explore opportunities for students to gain more certifications. Additionally, we will continue to monitor the number of students taking the introductory, intermediate, and capstone courses at the high school along with the number of students placed in the community for work-based learning experiences. We will also continually track the number of students gaining full-time employment within the community while in the Health Sciences pathway.

Sustainment: Once the anatomy table and other equipment is purchased, sustainment of the Health Sciences program will be supported by Columbus Public Schools, Columbus Community Hospital and Central Community College. Other various partners will be sought out when needed.

#### **Section 4: Commitment & Capacity**

##### **Leadership Team and Advisory Council Members**

Mr. David Hiebner, Principal, Columbus High School

Mr. Jason Schapmann, Assistant Principal, Columbus High School

Dr. Troy Loeffelholz, CPS Superintendent

Mrs. Nicole Anderson, CPS Foundation Director

Mrs. Amy Blaser, Vice President, Columbus Community Hospital

Dr. Kathy Fuchser, Central Community College Campus President

Expenditures at the high school level will be handled by Jason Schapmann and David Hiebner. They will be responsible for securing all the bids as well as purchasing the materials listed in the activities above.

Dave Hiebner and Jason Schapmann will serve as the implementation leaders for the two activities listed.

Once the Health Sciences pathway is created, an advisory board will be established with the leadership team above as well as other stakeholders from the community. To this point, the team has been instrumental in guiding Columbus Public Schools decisions and policies to best serve our student population as well as linking the school district to business and industry.

Once awarded, the team will continue to meet on an annual basis to discuss the proposed project timeline as well as any outstanding issues that may present itself during the duration of the grant.

Columbus Public Schools has obtained letters of support from local business and industry to support all the activities in the proposed project. They are attached as appendices to the grant application.

Activity Budget: Activity #1 – Video/Media Production Computer Lab		
Expenditure	Unit Cost	Total
<b>Salaries</b> – Specified by Position (Object Code 100)		
<i>Subtotal</i>		-
<b>Employee Benefits</b> – Specified by Position (Object Code 200)		
<i>Subtotal</i>		-
<b>Professional &amp; Technical Services</b> – (Object Code 300)		
<i>Subtotal</i>		-
<b>Other Purchased Professional Services</b> – (Object Code 400/500)		
<i>Subtotal</i>		-
<b>Supplies</b> — including Operational Equipment - (Object Code 600)		
Apple Mac Computers (5)	\$1,817	\$9,085
Mac Computer Mounts (5)	\$15	\$75
Apple Mouse (5)	\$99	\$495
Apple Keyboard (5)	\$149	\$745
USB C to HDMI Cables (5)	\$15	\$75
Samsung 27.5" Computer Monitor (5)	\$200	\$1,000
<i>Subtotal</i>		\$11,475
<b>Capital Assets</b> – (Object Code 700)		
		-
<i>Subtotal</i>		-
<b>ACTIVITY TOTAL</b>		<b>\$11,475</b>

Activity Budget: Activity #2 – Health Sciences Pathway Startup		
Expenditure	Unit Cost	Total
<b>Salaries</b> – Specified by Position (Object Code 100)		
	<i>Subtotal</i>	
<b>Employee Benefits</b> – Specified by Position (Object Code 200)		
	<i>Subtotal</i>	
<b>Professional &amp; Technical Services</b> – (Object Code 300)		
	<i>Subtotal</i>	
<b>Other Purchased Professional Services</b> – (Object Code 400/500)		
	<i>Subtotal</i>	
<b>Supplies</b> — including Operational Equipment - (Object Code 600)		
Adult Mannequins (4 pack)	\$1,500	\$1,500
Baby Mannequins (4 pack)	\$500	\$500
Stop the Bleed Training Kit (2)	\$1,000	\$2,000
AED Trainers (2)	\$500	\$1,000
Patient Care Simulator with Ostomy (2)	\$1,000	\$2,000
	<i>Subtotal</i>	\$7,000
<b>Capital Assets</b> – (Object Code 700)		
Anatomage Human Anatomy Convertible Table	\$81,525	\$81,525
	<i>Subtotal</i>	\$81,525
	<b>ACTIVITY TOTAL</b>	<b>\$88,525</b>

## Budget Summary

**Salaries**

*Subtotal* \$ \_\_\_\_ - \_\_\_\_

**Employee Benefits**

*Subtotal* \$ \_\_\_\_ - \_\_\_\_

**Professional & Technical Services**

*Subtotal* \$ \_\_\_\_ - \_\_\_\_

**Other Purchased Services**

*Subtotal* \$ \_\_\_\_ - \_\_\_\_

**Supplies & Materials/Operational Equipment**

Activity 1 \$11,475

Activity 2 \$7,000

*Subtotal* **\$18,475**

**Capital Assets**

Activity 2 \$81,525

*Subtotal* **\$81,525**

**Grand Total \$100,000**

**See appendices attached below**

April 23, 2021

To Whom It May Concern,

I am writing today in support of the video production and digital media lab project at Columbus senior high school. My contact with CHS began in the fall of 2020 when a CHS student who is interested in the broadcasting and media production field came to our campus for a tour and to spend some time with us during one of our productions. Since then, I have also been to Columbus to visit their class and discuss the many career opportunities that are available in this exciting field. I've also been working with CHS staff to offer insight and advice on equipment, projects, techniques, etc. I'm in support of this program because I feel that a great career in the media field should start at the high school level, introducing and exposing them to this pathway.

In the last few years, there has been a rapid increase in the number of high schools that are offering a broadcasting or media production-type of class, club or lab. Today, there are more schools who offer this type of skill-building than schools who do not. There are several things that can benefit the student who gains experience in or is exposed to this pathway while in high school. It helps to not only build their marketable skill, but it also boosts their confidence, engages their creativity, and offers them a real career path doing something they may not have thought of. I have found that students who have had some kind of media experience or exposure while in high school have a higher level of motivation, passion and desire than those who have had no experience. Students in this type of activity usually come to college with some video editing skills, camera composition skills, production situations, announcing skills and a higher level of creativity and work ethic. These are all characteristics that employers are looking for.

According to the Nebraska Broadcasters Association, it is estimated that in Nebraska alone, there are 1,500 jobs that exist in the radio and television industry. At any one time, there are hundreds of open vacancies at media companies all across the state. Job titles include announcer, camera operator, director, producer, technical director, editor, production assistant, audio operator and many more. This is an opportunity that will potentially lead them to living and working close to home.

Going forward, it would be our intention to continue the established partnership between Northeast Community College and Columbus High School. There are possibilities for dual-credit class, students sharing their content on our college media outlets, guest lecturing, facility tours and more.

If you have any other questions, or if I can be of further assistance in the process, please do not hesitate to reach out.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Anderson".

Brian Anderson

Broadcasting Instructor, Northeast Community College

Norfolk, NE

[briana@northeast.edu](mailto:briana@northeast.edu) / (402) 844-7359

April 20, 2021

Nebraska Department of Education  
ReVision Grant

To whom it may concern,

We are writing this letter in support of the Columbus Public School's (CPS) application to the NDE ReVision grant. CPS pursues strong partnerships within the community of Columbus, NE. Together, we actively seek solutions for our communities workforce needs and ensure we are preparing our students for careers which are in demand in our community.

We believe in the need for video production at CPS and that it will be an important asset to the Columbus community. This additional area of expertise will help to provide a baseline of career ready skills that have a wide variety of uses across all industries and businesses. As real estate continues to adopt the use of video and digital marketing to sell homes and attract new residents to communities, this career field in rural communities will continue to be in high demand.

kwELITE and VRLY are in support of this endeavor. If awarded, these funds will increase our pool of skilled talent, strengthen the income potential of our students, sustain our employers and attract young families to our city. This aligns with the goals of CPS to help students prepare children for the future, create a skilled workforce and support families.

We believe strongly in this project and am excited about this opportunity for our students, community and other stakeholders. Thank you for your consideration.



Renee Mueller, Broker/Owner



Shannon Raitt, Marketing Director

**kwELITE**  
KELLERWILLIAMS.

**vrly**



**Central**  
COMMUNITY  
COLLEGE

**Toll-free, all locations:**  
**1-877-CCC-0780**  
**www.cccneb.edu**

April 26, 2021

Nebraska Department of Education  
reVISION Grant

To whom it may concern,

I am writing this letter in support of the Columbus Public School's (CPS) application to the NDE reVISION grant. Central Community College (CCC) enjoys a strong partnership with Columbus Public Schools (CPS). Together, we actively seek solutions to workforce needs and ensure we are preparing our students for careers which are in demand in our community.

**Administrative Office**  
3134 West Highway 34  
Post Office Box 4903  
Grand Island, NE 68802-4903  
(308) 398-4222  
Fax: (308) 398-7399

**Columbus**  
4500 - 63rd Street  
Post Office Box 1027  
Columbus, NE 68602-1027  
(402) 564-7132  
Fax: (402) 562-1201

**Grand Island**  
3134 West Highway 34  
Post Office Box 4903  
Grand Island, NE 68802-4903  
(308) 398-4222  
Fax: (308) 398-7398

**Hastings**  
East Highway 6  
Post Office Box 1024  
Hastings, NE 68902-1024  
(402) 463-9811  
Fax: (402) 461-2454

**Holdrege**  
1308 - 2nd Street  
Post Office Box 856  
Holdrege, NE 68949-0856  
(308) 995-8133  
Fax: (308) 995-5695

**Kearney**  
3519 - 2nd Avenue  
Kearney, NE 68847-2911  
(308) 338-4000  
Fax: (308) 338-4022

**Lexington**  
608 North Lincoln  
Post Office Box 827  
Lexington, NE 68850-0827  
(308) 324-5936  
Fax: (308) 324-5885

We believe in the need for a Healthcare Pathway at CPS and that it will be an important asset to the Columbus community. This additional pathway will help to provide a long-term solution to certified nursing needs for the city of Columbus as well as expose students to other healthcare related employment opportunities.

CCC supports this endeavor. If awarded, these funds will increase the pool of skilled talent, strengthen the income potential of our students, sustain our employers and attract young families to our city. This aligns with the goals of CPS to help students prepare children for the future, create a skilled workforce and support families.

I believe strongly in this project and am excited about this opportunity for our students, community, and other stakeholders. Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Matthew Gotschall".

Dr. Matthew Gotschall  
College President



April 28, 2021

Nebraska Department of Education  
reVISION Action Grant Committee  
500 S. 84<sup>th</sup> St, 2<sup>nd</sup> floor  
Lincoln, NE 68510-2611

Dear reVISION Action Grant committee,

At Columbus Community Hospital, we have been very fortunate. We have been able to recruit and retain more than 800 employees, including an active medical staff of 53 physicians. However, we are not immune to the health care workforce shortage that is currently affecting rural America and rural Nebraska in particular.

A recent report from the University of Nebraska Medical Center found that access to care issues in rural communities continue to be an issue. For example, 13 of the state's 93 counties have no primary care physician and all Nebraskan counties other than Douglas and Lancaster have been designated as shortage areas for at least one kind of primary care.

One of the reasons for this workforce shortage is because few people from rural communities are pursuing careers in health care. A 2017 study found that less than 5% of all incoming medical students came from rural backgrounds though 17% of Americans are considered rural. This is particularly problematic because research has shown that the people who are the most likely to practice health care in a rural area are people who grew up and were educated there.

Knowing this, the solution to our rural health care workforce shortage is clear – we must provide additional opportunities for people to receive their education and then stay and work in our rural communities. Career and technical education programs at local high schools and community colleges are an effective way to do this. That's why we strongly support the creation of a health care pathway program at Columbus High School.

By providing students with an opportunity to receive health care training and certifications as part of their regular curriculum, a health care pathway program at Columbus High School would create an educated and qualified workforce who are ready to serve our community. In doing so, it would directly address the rural health care workforce shortage and ensure that our hospital is able to continue to offer high-quality health care. In that way, a health care pathway program would not only benefit Columbus High School students and Columbus Community Hospital, it also would benefit our entire community.

If you have additional questions about our strong support for this initiative, please feel free to contact us.

Sincerely,

A handwritten signature in black ink that appears to read "Michael Hansen".

Mike Hansen, FACHE  
President and CEO  
Columbus Community Hospital

A handwritten signature in black ink that appears to read "Amy Blaser".

Amy Blaser, MBA  
VP of Physician Relations/Business Development  
Columbus Community Hospital



COLUMBUS PUBLIC SCHOOLS

## Columbus Community Hospital Health Science Pathway

May 3, 2021

### Columbus High School Transition

- Programming growth and student opportunities

- Student needs
- Survey results
- Community needs



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy - The Need

Fall 2019-20

Columbus High School Student Interest Survey



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy - The Need

Spring 2020-21

I am interested in taking Health Science courses at CHS with an emphasis in careers in the medical field.  
456 responses





COLUMBUS PUBLIC SCHOOLS

## Health Science Academy - Local Workforce

- Local workforce needs
- NE Nebraska H3 Jobs
  - #2 Registered Nurses
  - #8 Licensed Practical and Vocational Nurses
- Statewide Health Academies



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy Vision

- Option #1: \*Additional Instructor
  - Phase 1:
  - 2020-21: Planning, partnerships and development
- Phase 2:
  - 2021-22: Beginning implementation, continuation of Phase 1
    - Semester 1: Health Sciences I courses
    - Semester 2: Health Sciences II courses
- Phase 3:
  - 2022-23: Full program implementation
    - Additional sections of Health Sciences I and II
    - Health Sciences III



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy - Why CPS?

- Nebraska Department of Education: school and teacher accreditation
- Nebraska Health Sciences State Standards
- Career pathways and course sequencing
- State reporting for students
- Curriculum
- School bell schedule
- Carl D. Perkins Career and Technical Education and reVISION Grants
- Rule 47 Career Academy



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy Vision

- Option #2: \*No New Instructor
  - Phase 1:
    - 2020-21: Planning, partnerships and development
  - Phase 2:
    - 2021-22: Beginning implementation, continuation of Phase 1
      - Semester 1: Health Sciences I
      - Semester 2: Health Sciences I or II
  - Phase 3: \*Pending new instructor
    - 2022-23: Full program implementation
      - Additional sections of Health Sciences I
      - Health Sciences II
      - \*Health Sciences III



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy Vision

### Course Sequences

Option #1

Therapeutic Health Sciences Course Pathway - (CCC and Hospital Capstone Courses)		
Course Level	Course Sequence (1 Semester Long)	State Standards
Introduction	• Health Sciences 1	• 077300 Health Sciences
(Choose either course)	• Health Sciences 2	• 077301 Health Sciences 2
Capstone	• Medical Terminology	• 077600 Medical Terminology
(Choose any course to complete pathway)	• Certified Nursing Assistant Emergency Medical Technician Medication Aide Phlebotomy Technician	• 077400 Certificated Nursing Assistant 077402 Emergency Medical Technician 077444 Pharmacy Technician 077401 Medication Aide 077446 Phlebotomy Technician



COLUMBUS PUBLIC SCHOOLS

## Health Science Academy Vision

### Course Sequences

Option #2

Health Sciences Course Pathway		
Course Level	Course Sequence (1 Semester Long)	State Standards
Introduction	• Health Sciences 1	• 077300 Health Sciences
Intermediate	• Health Sciences 2	• 077301 Health Sciences 2
Capstone	• Health Sciences 3	• 077302 Health Sciences 3



## Health Science Academy Vision

- Next steps...

- Health Science Advisory Committee: school, hospital, family practice, assisted living, long-term care, public health
- Instructor selection process
- Classroom location
- Student application selection process

# Anatomage

## Price Quotation

Anatomage Inc.  
3350 Scott Blvd Bldg 29  
Santa Clara, CA 95054  
[www.anatomage.com](http://www.anatomage.com)  
info@anatomage.com  
(408) 885-1474 Phone  
(408) 295-9786 Fax

Prepared By	Jonathan Perry	Created Date	4/16/2021
Email	jperry@anatomage.com	Expiration Date	7/15/2021
		Quote Number	2021-6586

Contact Name	Stephanie Carlson
Phone	(402) 276-0087
Email	carlsons@discoverers.org

Bill To Name	Columbus Public Schools	Ship To Name	Columbus Public Schools
Bill To	Columbus, Nebraska United States	Ship To	Columbus, Nebraska United States

Product	Line Item Description	Sales Price	Quantity	Total Price
Anatomage Table Convertible		\$78,000.00	1.00	\$78,000.00
Crate - MTD		\$800.00	1.00	\$800.00
Anatomage Table Convertible Hardcover		\$275.00	1.00	\$275.00
Medical Design Studio	Included w/ Table Convertible	\$0.00	1.00	\$0.00
1st Year Warranty, Software Upgrade, Tech Support	Included w/ Table Convertible	\$0.00	1.00	\$0.00
Training	Included w/ Table Convertible	\$0.00	1.00	\$0.00

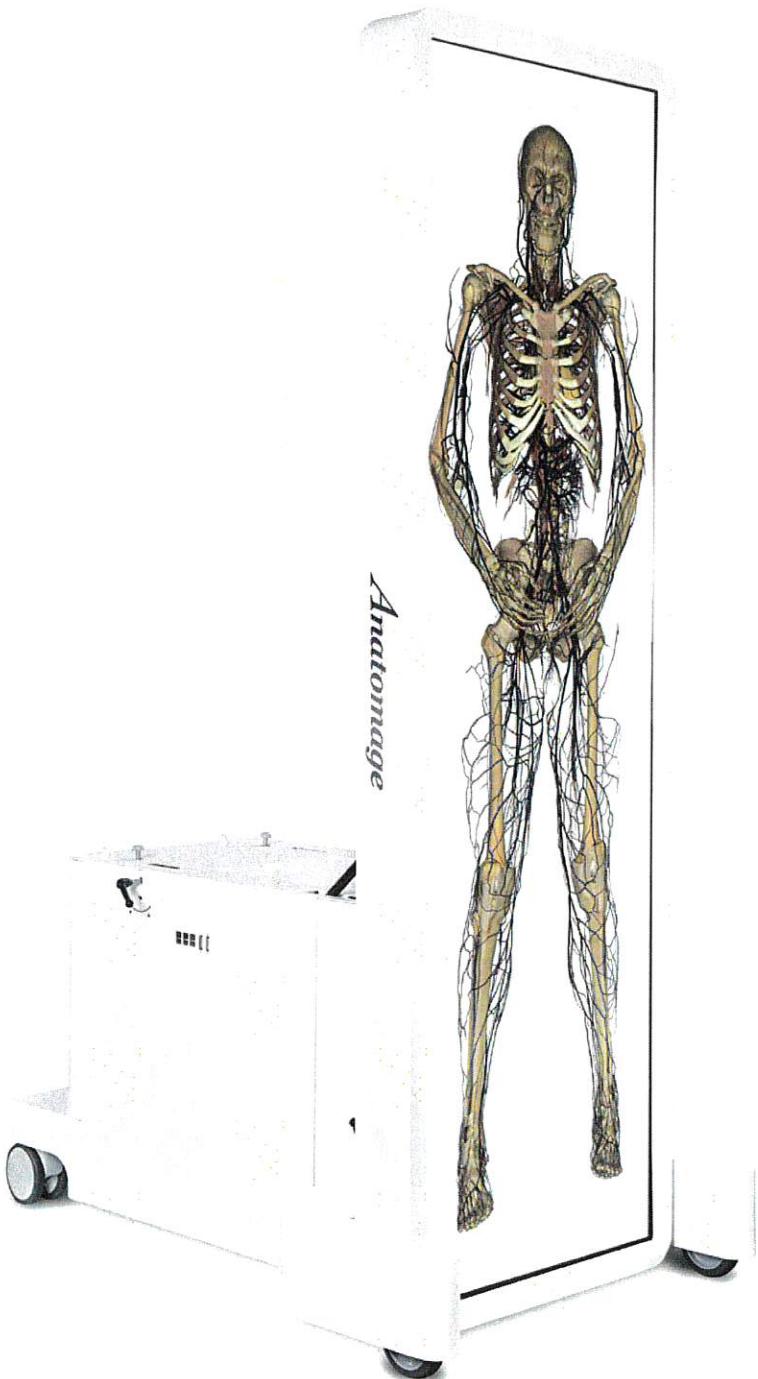
Total Price	\$79,075.00
Shipping and Handling	\$2,450.00
Grand Total	\$81,525.00

Country of Origin: United States  
Place of Manufacture: San Jose, CA  
Price does not include taxes and duties associated with importation of the product, which must be paid by Consignee  
Quote is only valid in USD

### Acceptance

Signature \_\_\_\_\_ Date \_\_\_\_\_

# *Anatomage* **TABLE**



Real Human Anatomy  
Digitally Restored.

## Why the Table?

The Anatomage Table is the most technologically advanced virtual dissection table for anatomy education. The Table's life-sized display, clinical content, and renowned imaging software separates the Table from any other anatomy education tool on the market.

### Advanced Educational Tool

The accuracy of real human anatomy and quantity of clinical cases are unique aspects of the Anatomage Table. The Table includes ultra-high quality (UHQ) visualization for students to view photorealistic anatomical structures. Research has proven that working with the Table improves student retention and test scores.

### Technical Showcase

The Anatomage Table features highly advanced technology that draws attention from visitors as well as students and faculty. The Table will quickly become the technological centerpiece at your institution that sets you apart from other institutes.

### Clinical Care Review

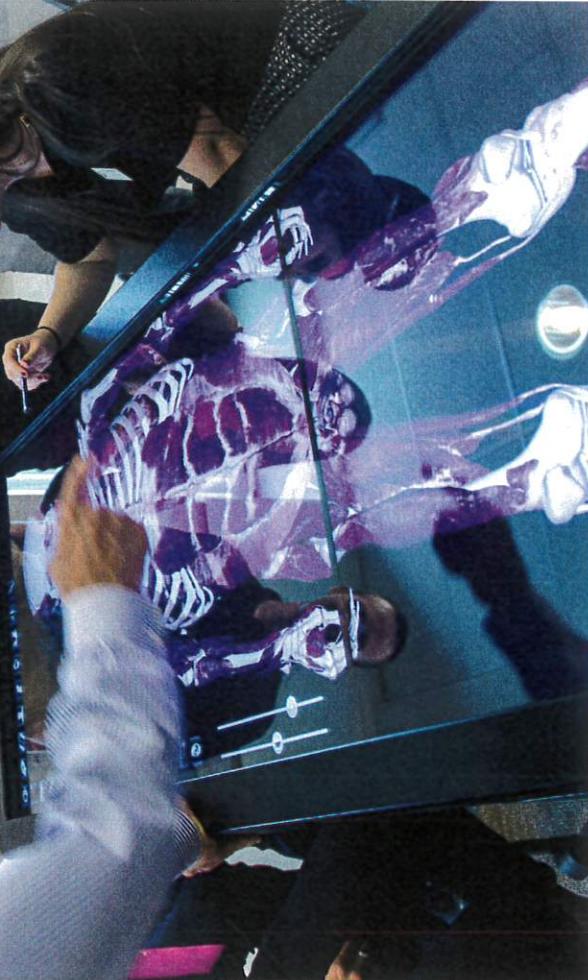
Beyond anatomy education, the Table's application extends to clinical planning and consultation. The Anatomage Table is FDA cleared for use in assisting medical diagnosis. It can be utilized as a powerful radiology workstation and as a valuable tool for surgical case review, patient consultation, and medical research.

### Cost Reduction

Unlike cadavers, the Anatomage Table does not require ventilation infrastructure, embalming equipment, personnel, or storage. The contents are reusable, so there are no recurring acquisition costs. The product will save significant costs over the long term.

### Clean & Safe

The Anatomage Table offers a high-quality lab experience without any chemicals. There are no possibilities of leaks, no environmental concerns, and no additional ventilation requirements. The product provides headache free lab sessions.



## How the Table Compares

<i>Anatomage</i> TABLE	Cadavers	Models
Chemical Free	✓	✓
No Special Facility	✓	✓
No Restrictions	✓	✓
Unlimited Cases	✓	✓
Minimal Recurring Costs		✓
Real Human Anatomy		✓
Unlimited Cutting		✓
Life Size		✓
Updates & Support		✓



## Applications: Classroom

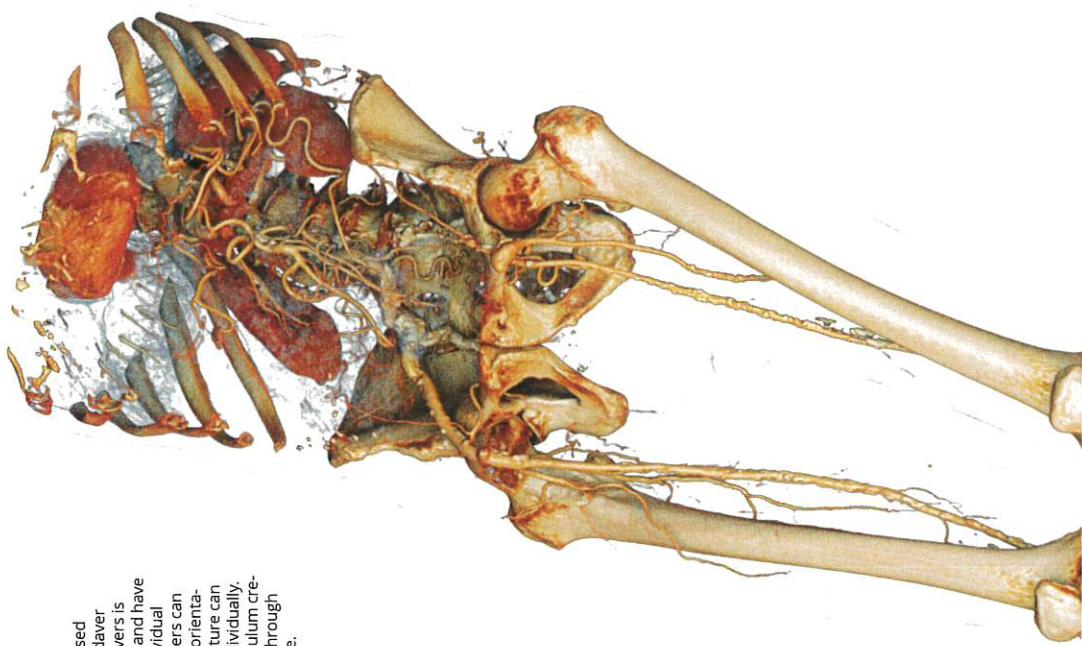
### Lecture

The Table can be used during lectures since it can connect to projectors. Instructors can create and demonstrate procedural material, making lectures more dynamic and engaging. Screen captures and video clips can be easily saved and shared with students as review material. Running a full lecture with the Table turns a traditional, difficult class into an exciting, highly interactive one.



### Virtual Medical Lab

The Anatomage Table can be used in conjunction with existing cadaver dissections. Each of the 4 cadavers is segmented with high accuracy and have been preserved with their individual pathological details. Our cadavers can be sliced multiple times in any orientation and each anatomical structure can be separated and reviewed individually. Student assessment and curriculum creation are easily accomplished through the use of the Anatomage Table.



### Full Lab Replacement

The Anatomage Table is sufficient to cover the full anatomy class. High accuracy and rich contents offer an excellent replacement to traditional cadaver-based dissection. The Table simplifies complex anatomical information to increase subject retention and ease the learning process. Since the data preserves the real-life patient color and shape, the Table is more effective than embalmed cadavers.



## Applications: Clinic

### Patient Consultation

Visualization and comprehension of clinical procedures is easier for patients when viewing their anatomy in 3D color as opposed to 2D black and white slices. With this technologically impressive visual consultation, the patient's visit will be much more effective.

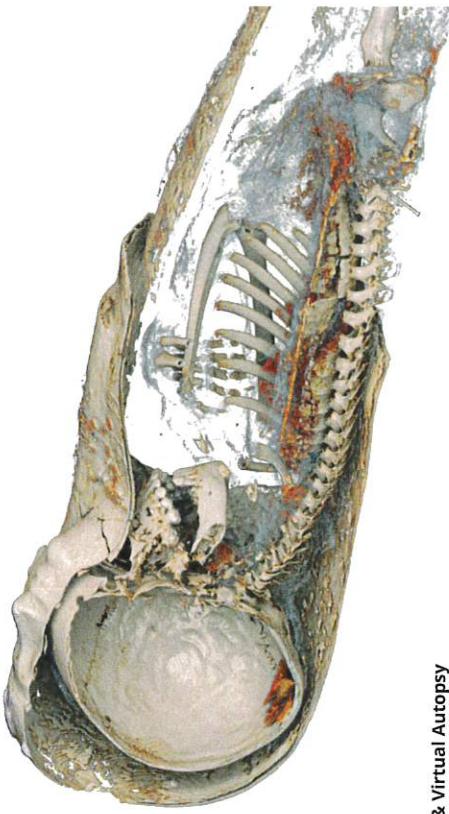
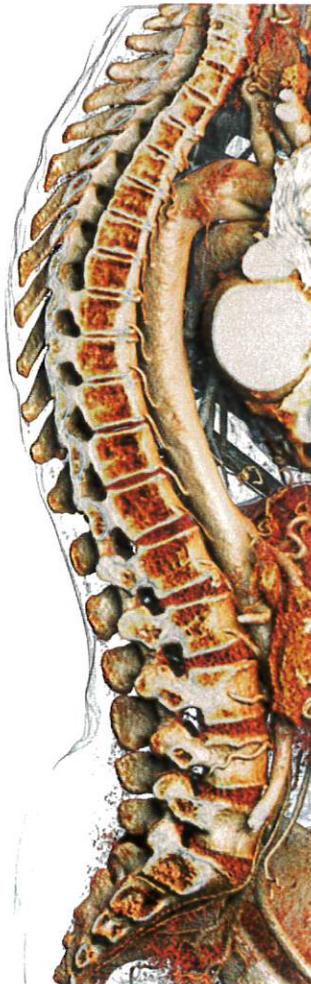


### Clinical Case Review

Utilizing the Anatomage Table, real patient clinical cases can be reviewed and rendered in full 3D and associated 2D slicing. Through the Table's clinical case library, users can compare healthy and unhealthy structures, view structural relationships, and visualize rare and unique pathologies. Students have the opportunity to dissect reconstructions and cross-sectional planes of clinical cases. Students can review in collaborative groups to perform dissections and answer questions.

### Pre-Surgical Planning Device

A strong pathological and procedural training tool, the Anatomage Table's features are derived from an FDA cleared surgical planning software that merges actual 3D devices onto a patient image. This allows for the simulation of the device interacting with the medical image. This feature also allows for a new kind of medical device training without relying on animals or physical specimens.



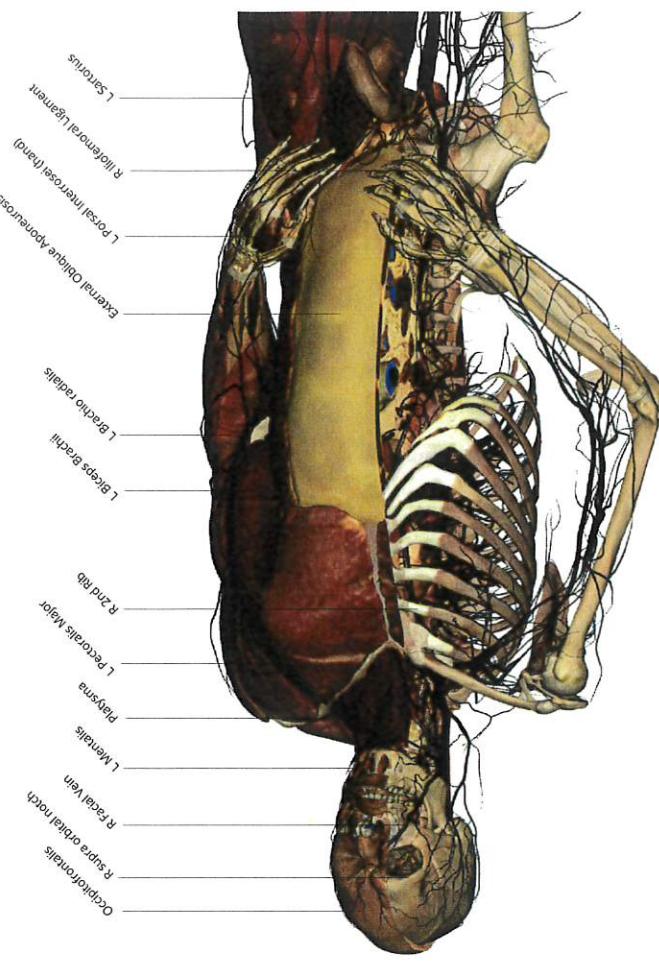
### Forensic & Virtual Autopsy

CT scanning is increasingly popular in the field of forensics and archaeology. The Anatomage Table had a crucial role in the historical investigation of Pharaoh Tutankhamun's cause of death, documented by Fuji TV and PBS in August 2012, and by STV and BBC in October 2014. The Table's forensic autopsy applications were also positively reviewed in a 2013 Scientific American article.

## Features & Contents

### Interaction Dissection

The Table offers unique interactive dissection tools with thousands of anatomical structures segmented and annotated for both male and female cadavers. With the touchscreen, users can rotate structures, make multiple cuts, and undo any cut instantly. Any anatomical structure or system can be easily identified.



### With Full Annotations

There are thousands of annotated structures for both male and female cadavers. Users can explore the body by selecting different anatomical structures or locate specific structures from a list of anatomical names. The Table's Craniotomy Tool allows for users to specifically dissect through the skull and view the internal tissues of the brain. Additionally, the Table vividly animates blood flow for any artery and vein in the cadavers.

With the ability to practice interactive dissection and see detailed annotations anytime, the Table becomes a very effective anatomy education tool.



## Features & Contents

### Exploration

The Table includes note-taking tools for interactive identification and exploration of virtual anatomy. Users can choose to highlight specific anatomical structures as well as create their own text and arrow marker notes.

### Group & Self Assessments

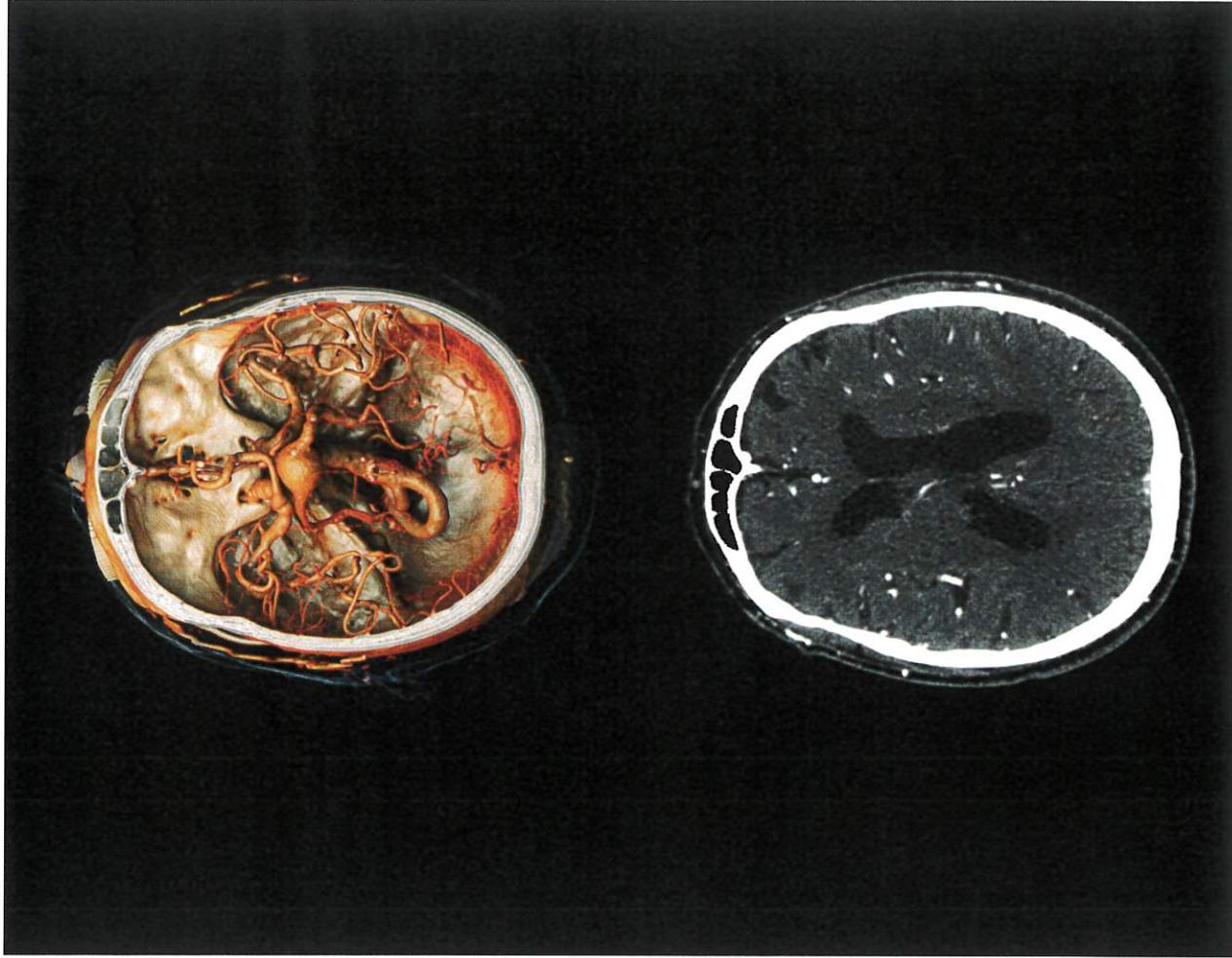
Instructors can create material for quizzes and practicals on the Table. The Table comes equipped with a Quiz Mode that enables teachers with an advanced tool for student assessments and collaboration through the use of flashcards or a more traditional anatomy identification exam. Instructors can export results directly from a student roster for analysis.

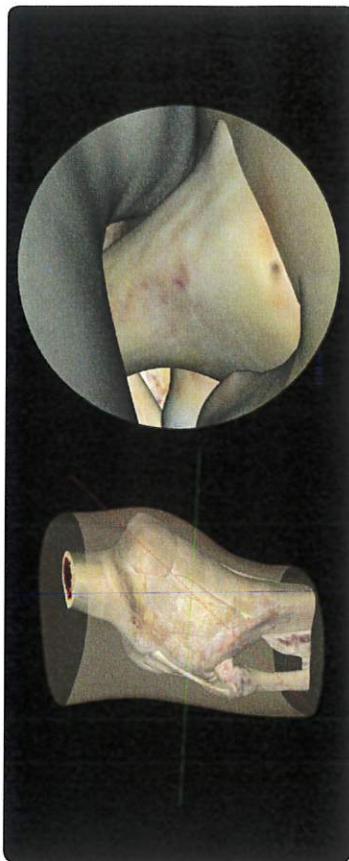
### DICOM Compatible

The Table's software can load any 3D DICOM medical imaging data such as computed tomography (CT) and magnetic resonance imaging (MRI) scans. The Table is able to integrate with PACS for clinicians to load medical images from hospital archives for immediate review as both 2D radiological slices and 3D reconstructions.

### Radiology Workstation

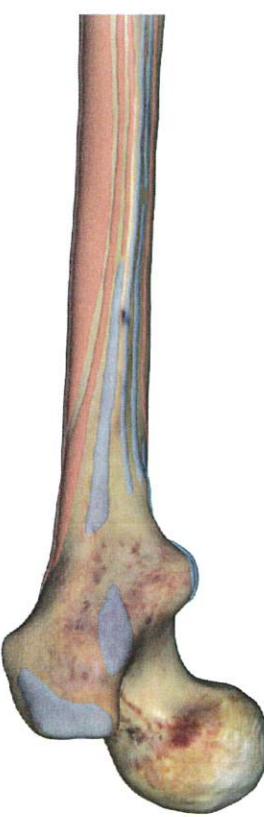
The Table functions as a complete radiology workstation and loads DICOM data such as CT and MRI scans. The Table integrates with PACS for clinicians to load images as 2D radiological slices and 3D reconstructions. Whether using the library images or your own medical scans, the Table delivers full 3D anatomy.





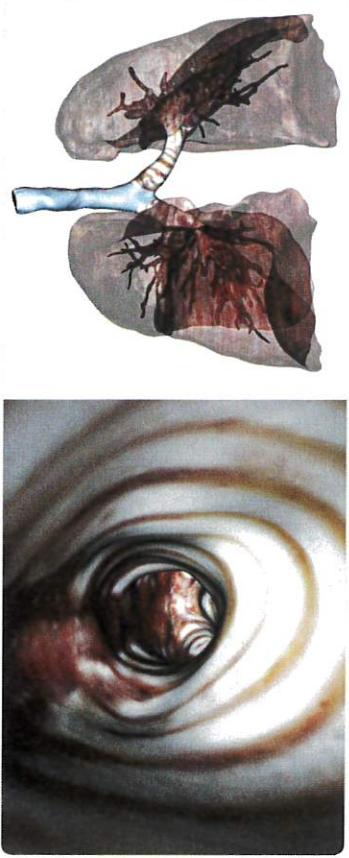
#### Virtual Arthroscopy

The Table simulates an arthroscopic procedure by visualizing anatomy within any joint of the cadaver. During this visualization, users can easily identify and further dissect any structure. The virtual arthroscopy reinforces 3D spatial relationships and is an effective tool for medical training.



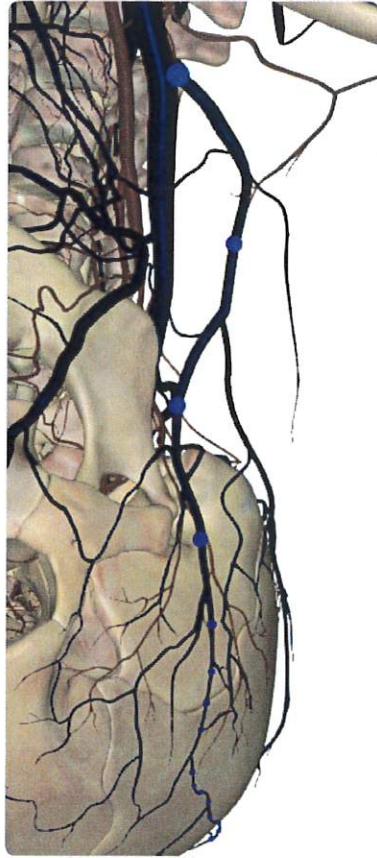
#### Origins & Insertions

The Table provides in-depth details for origin and insertion points on skeletal bones. Origin and insertion surfaces can be highlighted on every cadaver to represent the relationship between the skeletal and muscle systems. Bone landmarks can be annotated and identified.



#### Flythrough Simulation

The Table provides a unique tool to visualize internal cavities throughout a real cadaver. The Table links 3D gross anatomy to laparoscopic internal views within cavities of the body. With this tool, users can simulate procedures through the respiratory tract, gastrointestinal tract, and chambers of the heart.

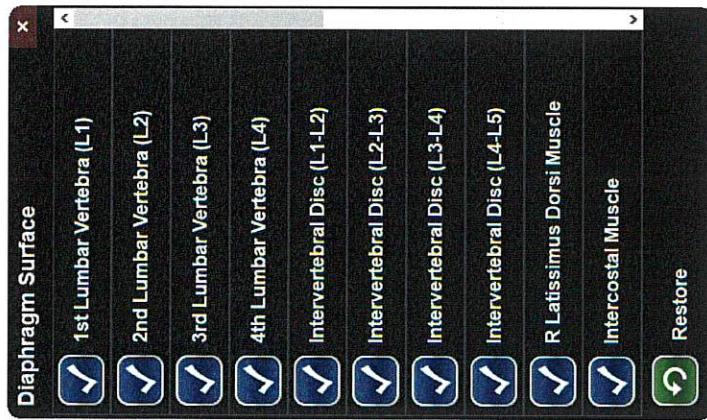
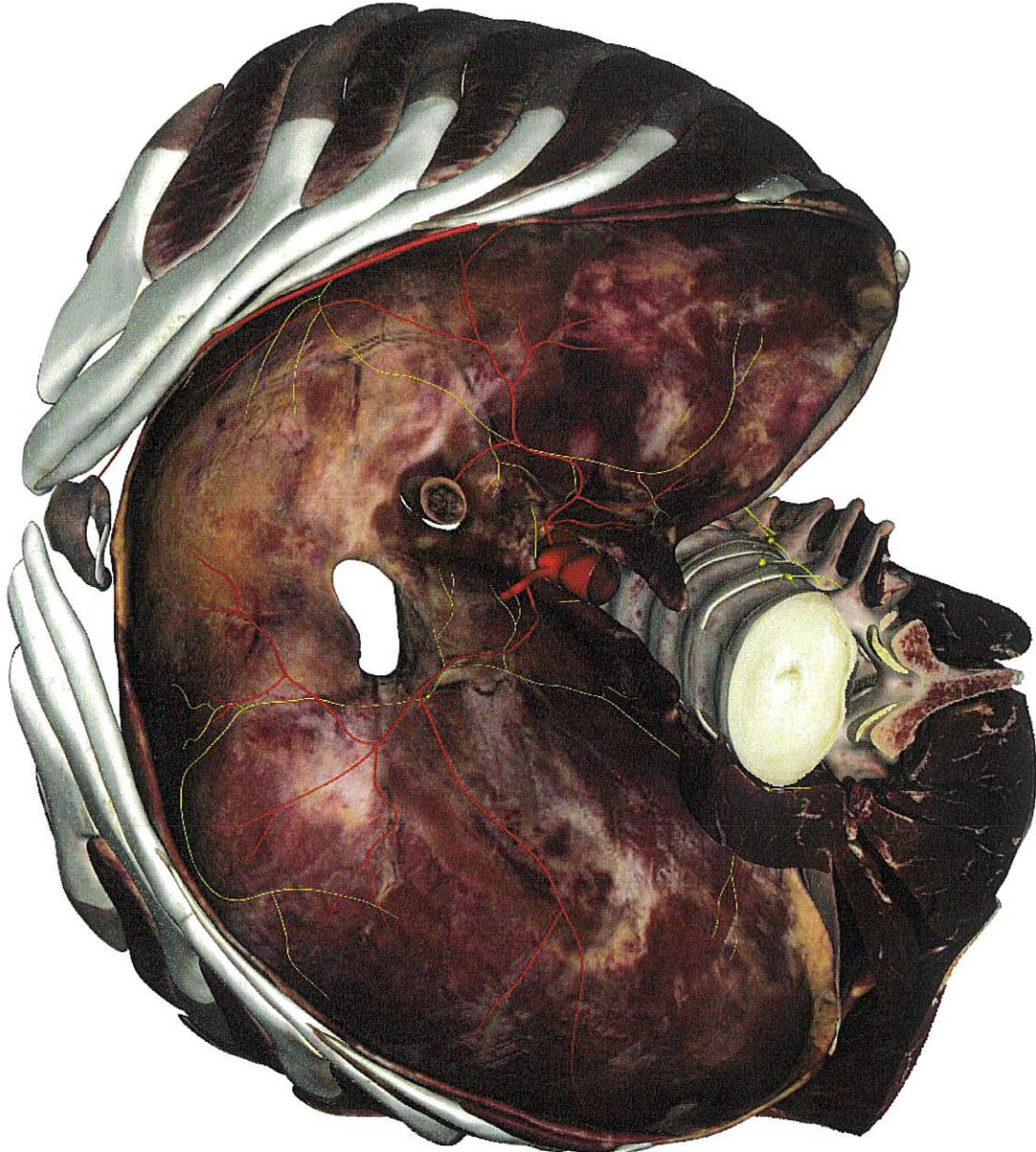


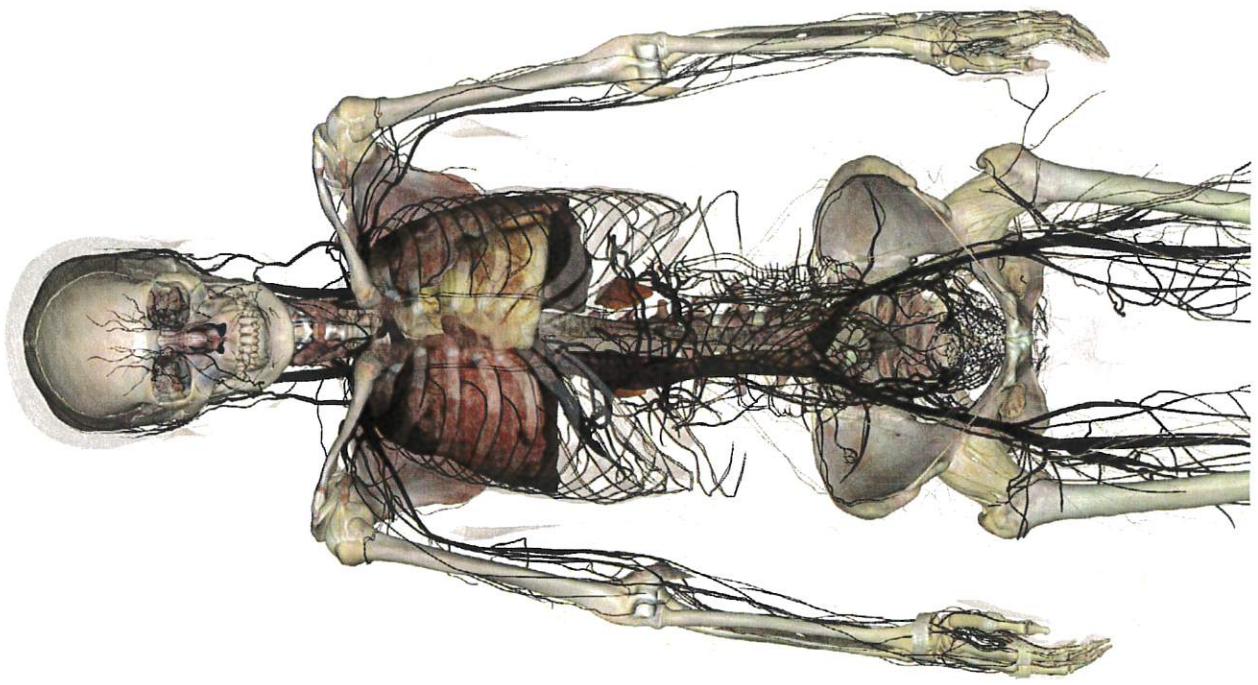
#### Bloodflow Simulation

The Table highlights the movement of blood throughout the human body. With the touchscreen, users can select any artery or vein and visualize blood flow toward or away from the heart. The selected pathway can be quickly annotated and colored to emphasize the anatomical structures involved.

## Medical Preset Collection

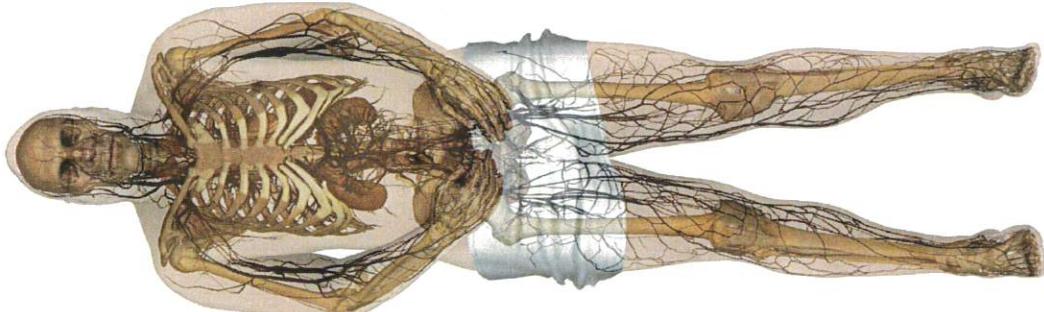
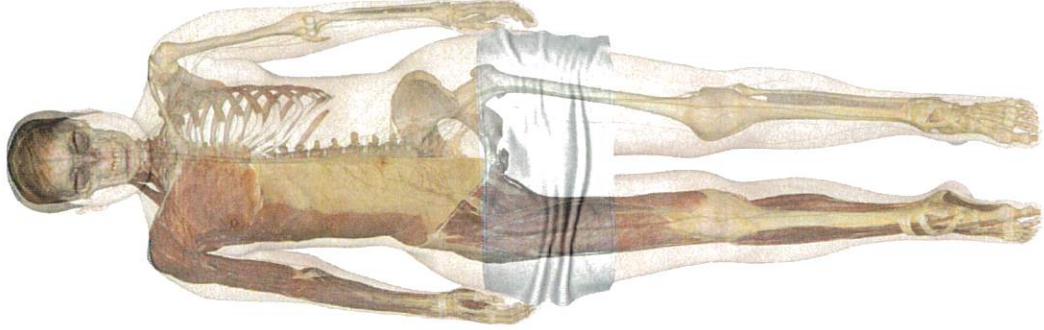
The latest version of the Table includes a comprehensive collection of pre-made anatomy material. This material was created to mirror textbook curriculum content directly on the Table's platform. Students can enhance their learning experience by easily referencing human anatomy course material on the Table. Students can bridge the gap between images they encounter in their textbooks with the Table's interactive 3D material.





The highly accurate anatomy available on the Anatomage Table is created by using real human cadavers. The cadavers are frozen without embalming chemicals, preserving the true color and visualization of the anatomy. Since the anatomy comes from a real cadaver, everything seen on the Anatomage Table is life-sized. The anatomy in the virtual cadavers are also fully annotated.

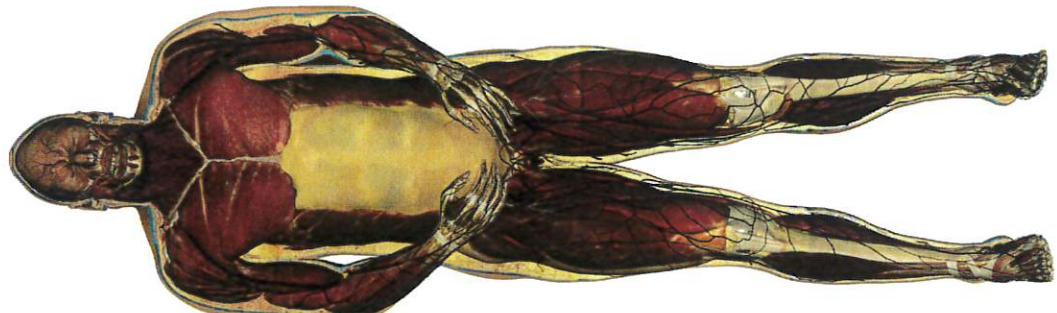
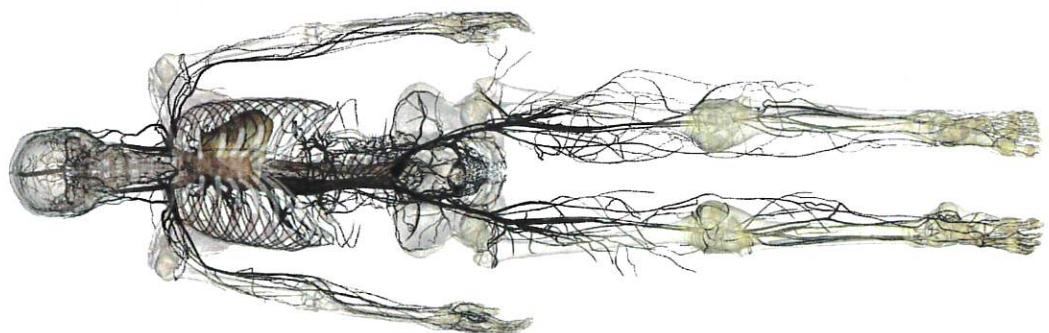
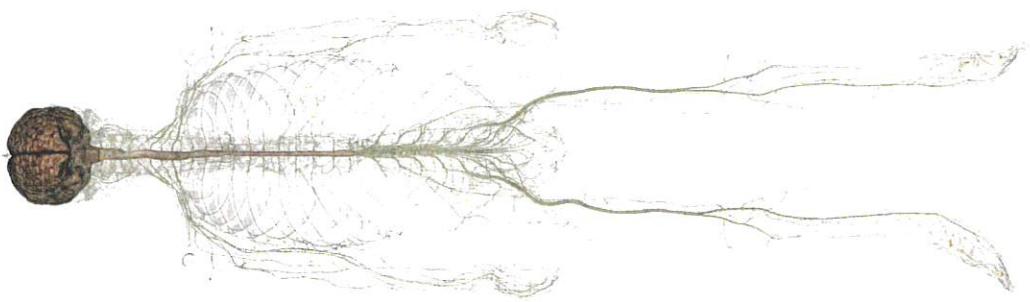
Real cadaver bodies are cut into 0.2mm slices. Anatomical structures, including blood vessels and nerves are then traced on each 2D slice. The slices are then stacked to recreate segmented 3D anatomy. Because over 2,500 anatomical structures are segmented, each structure can be viewed or virtually dissected individually or in context with each other.

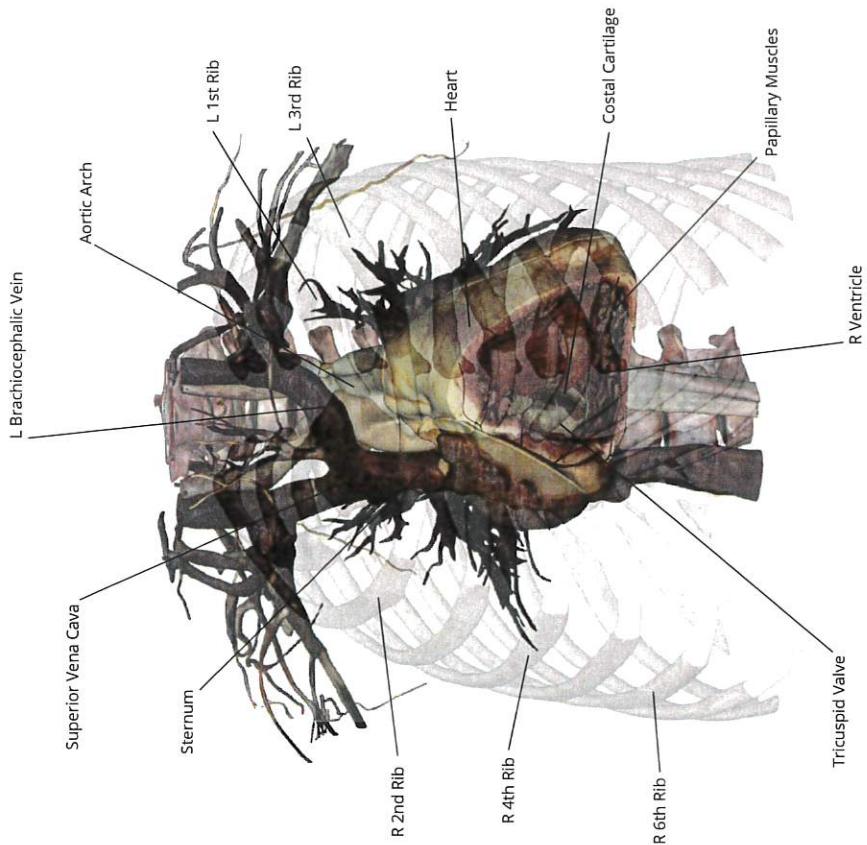


## Gross Anatomy

The Table contains both life-sized male and female gross anatomy. Including multiple full-body cadavers ensures that students are exposed to anatomical variations. External and internal anatomy is volumetrically displayed from head to toe and includes thousands of annotated structures. The images are created by digitally tracing real non-chemically treated cadavers. The color and shape of the cadavers are preserved to accurately depict real anatomy.

The virtual body can be cut layer-by-layer and users can make certain structures transparent to view surrounding anatomy. Students can clearly visualize cardiovascular, nervous, and muscular structures. Additionally, blood flow can be vividly animated for any artery or vein in the cadavers.





## Regional Anatomy

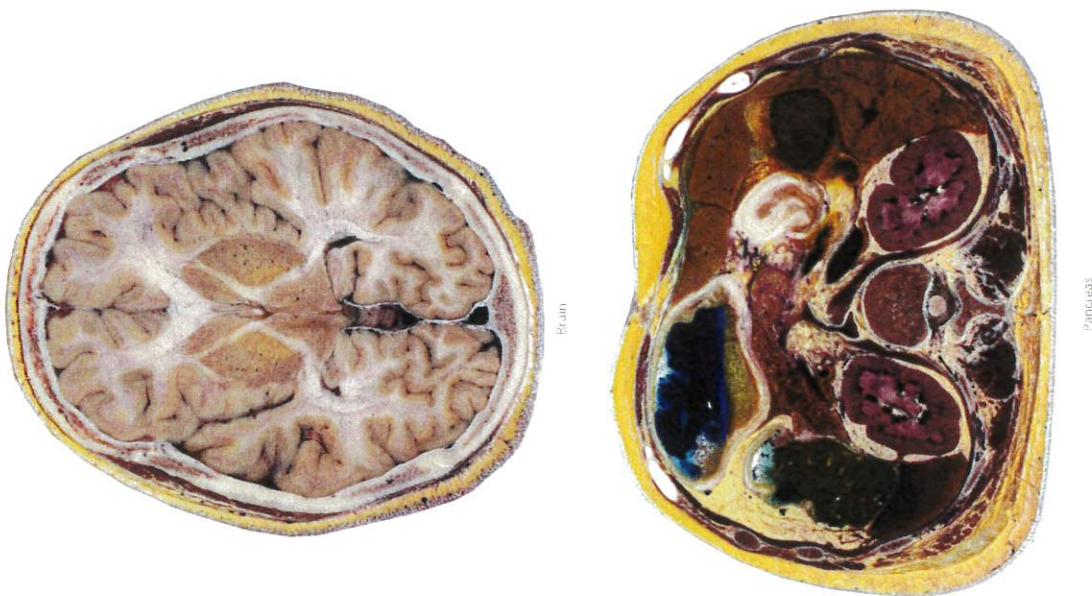
The Table includes high-resolution 3D regional anatomy up to 0.2mm. The regional scans cover the entire body and allow for students to visualize detailed structures such as nerves or blood vessels that are difficult to see by any other means.

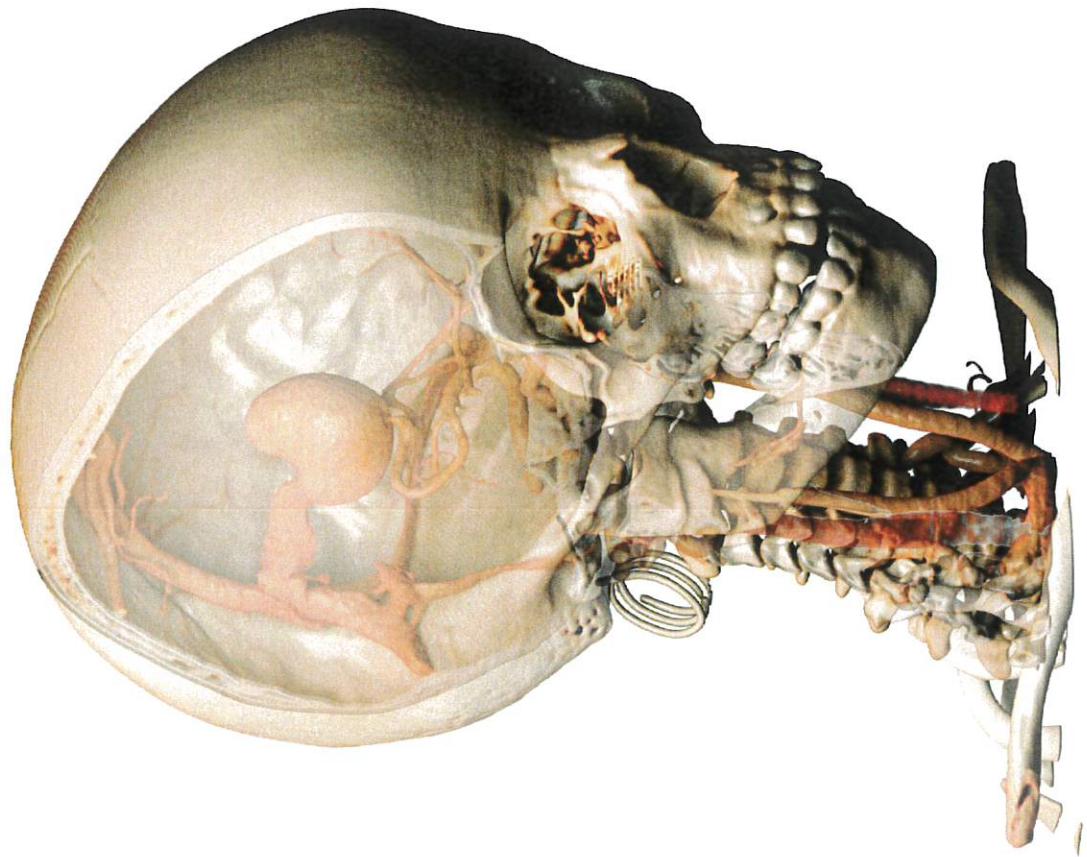
Users are provided with an in-depth view of major structures in the body such as the heart, lungs, abdomen, and pelvis that might be difficult to see on a full body cadaver. The Table's features allow user to easily toggle systems on and off to view specific anatomical structures. The structures can be rotated or zoomed in on for detailed 3D visualization of the body's regional anatomy.

## Regional Anatomy

The Table's features allow for users to easily toggle systems on and off to view specific anatomical structures in a three-dimensional context. The structures can be rotated or zoomed in on for detailed 3D visualization of the body's regional anatomy.

Regional content can be readily integrated into classroom material by creating and saving preset material. The regional scans cover the entire body from the head and neck to the pelvis, joints, legs, and feet.

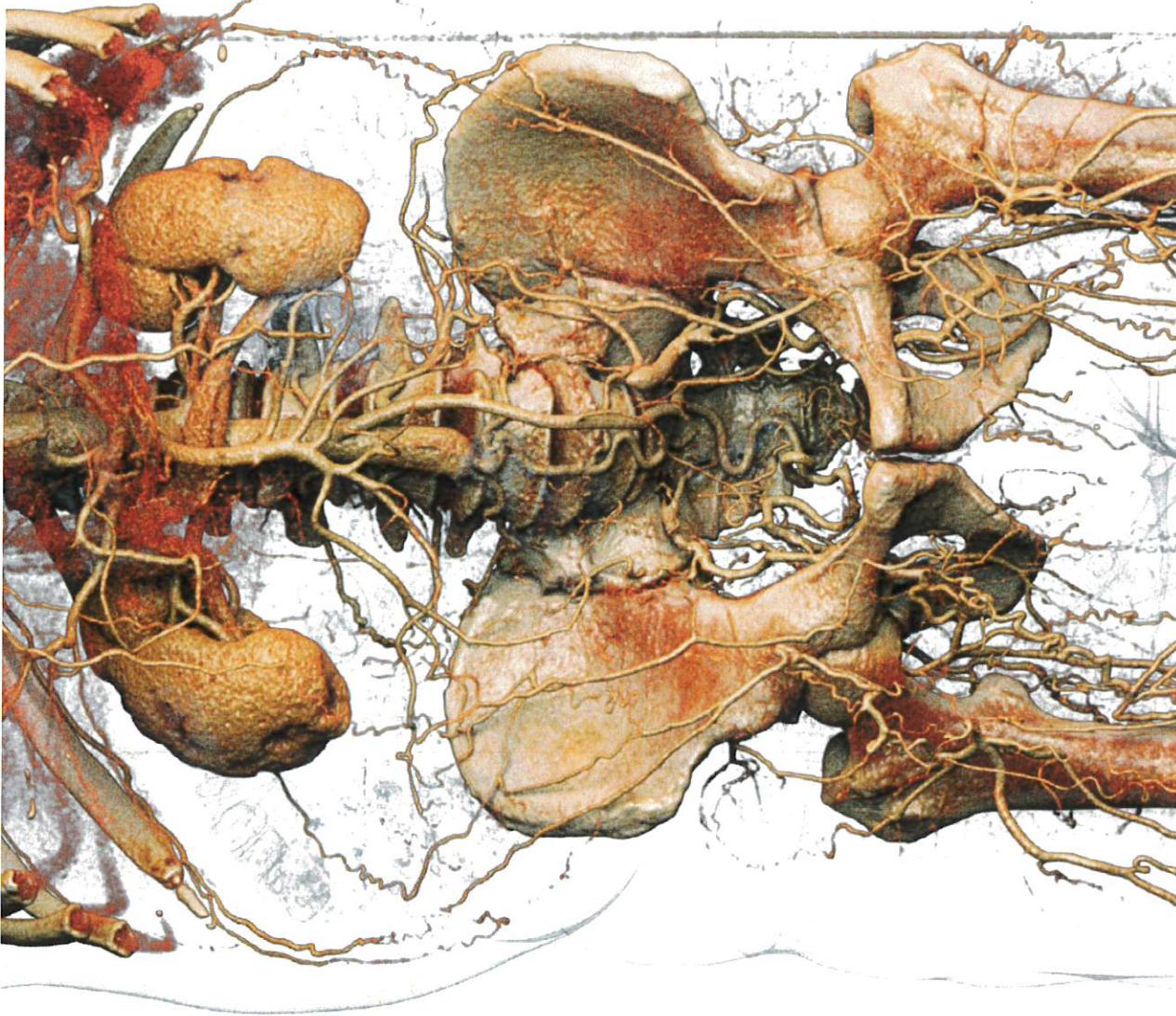




Arteriovenous Malformation (AVM)

## Digital Library

The Digital Anatomy Library offers over 1,200 clinical cases with a variety of visualization options and includes data from vertebrate anatomy and embryology. The Table includes scans of rare cases such as an abdominal ectopic pregnancy, a brain aneurysm, and conjoined twins. Students have the opportunity to view conditions that range from various bone fractures, medical implants, and gunshot wounds.



## Ultra-High Quality Rendering

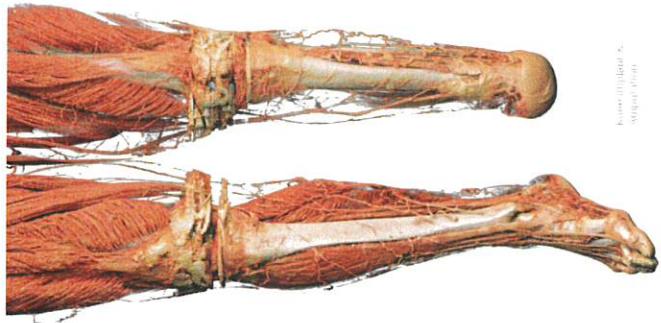
Ultra-high quality (UHQ) rendering on the Table is the latest and most photorealistic view of anatomy available anywhere on the market. The new 3D visualization filter brings medical scans to life by vividly representing body systems and structures.

Soft and hard tissues in the body are shown in extraordinary detail with realistic coloring. Even structures that are traditionally more difficult to see, such as vasculature and muscle fibers, can be viewed clearly. Visualizing anatomy on the Table in UHQ allows for users to view complex clinical cases clearly and realistically.

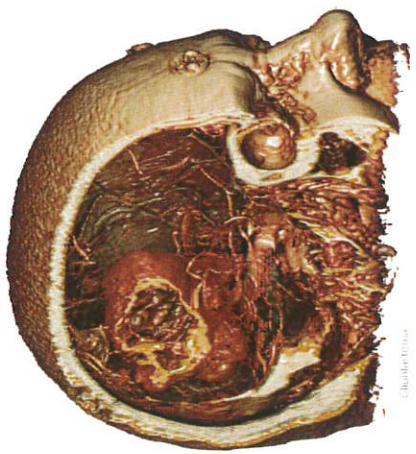
The innovative showcase allows for a complete and striking journey into the human body. Students are not only able to virtually dissect and study photorealistic human anatomy, but also learn anatomy with 3D spatial context. By seeing anatomy in UHQ, students will have a limitless view into the systems of the body and will gain a comprehensive clinical-level understanding of cases.

## Digital Library

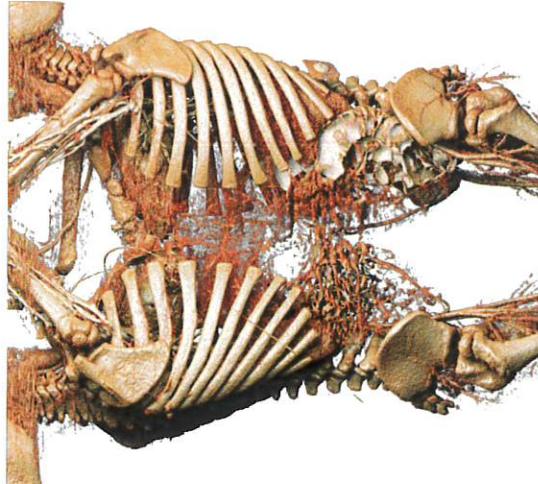
Users can access the original scan data, the resulting 3D image, and medical case notes. 4D scans have also been added to the latest Table offerings. Beating hearts and respiration can be visualized with full interactivity. The library allows students to make the connection between 2D cross-sectional scan data, 3D anatomy, and 4D visualization. The variety of cases ensures that students gain exposure to abnormal pathologies.



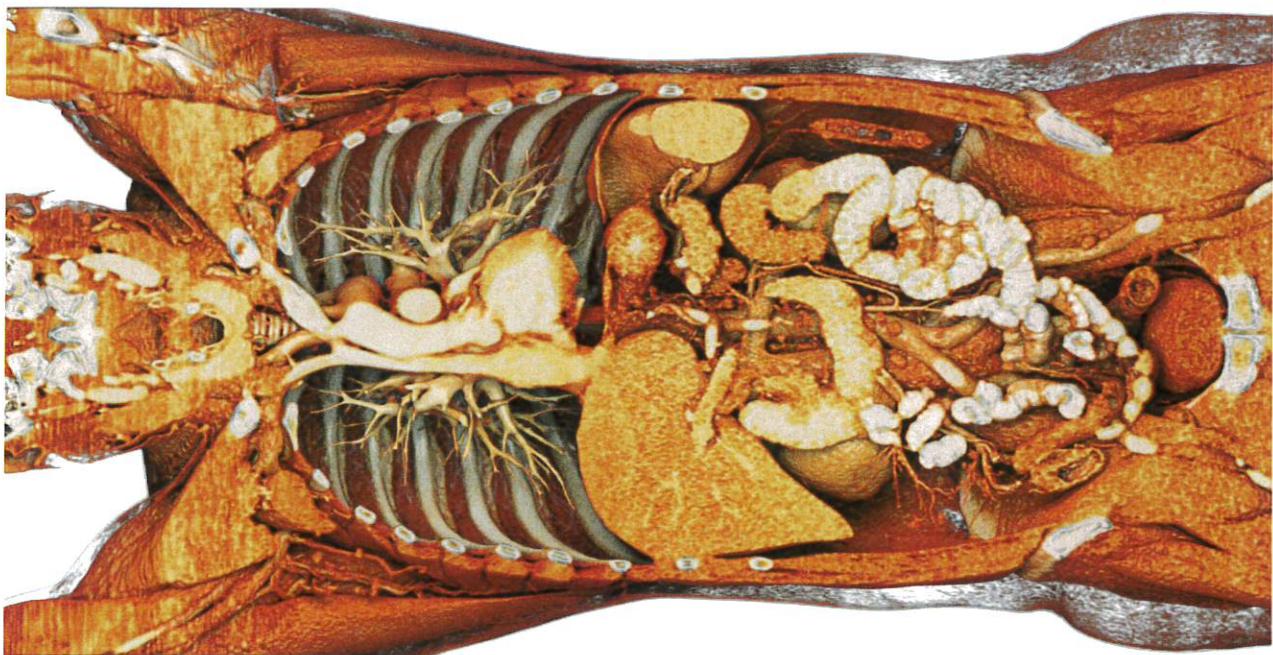
Kidney in place, S. original view



Cerebellum, Cerebrum



Unpaired ribs



CT scan of human torso

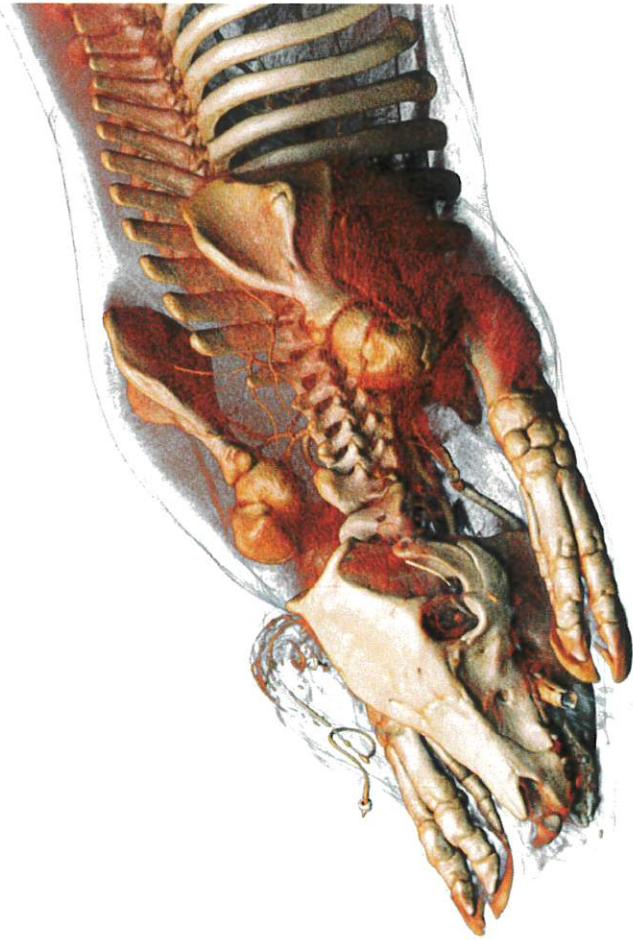
## Embryology

The clinical case library contains vivid embryology content in 3D and 4D for instructors to teach human embryology. Students can view 3D embryo scans to visualize stages of human development in extreme detail. The library includes scans spanning Carnegie stages 13-23 or 28-56 days. Additionally, there is a scan of a 26 week old fetus, along with cases of a fetal brain cyst, umbilical cord cyst, and Dandy Walker syndrome.



## Veterinary

Included in the Digital Library are full-body cat, dog, and mouse cadavers as well as over 150 other CT scans from various species and breeds. The full-body cat and dog have been fully segmented based on real tissue data so users can toggle individual structures on and off. Additionally, there are numerous CT scans of horses, gorillas, alligators, and even invertebrates such as earthworms and centipedes.



HISTOLOGY  
CAT STOMACH BIOPSY (4K)  
ID: 4016

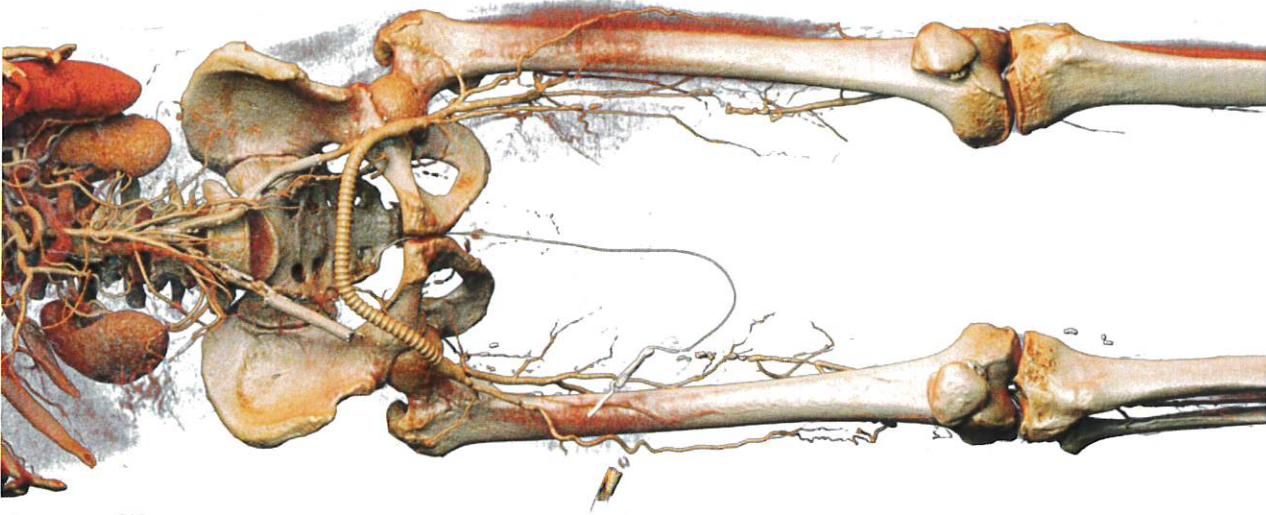
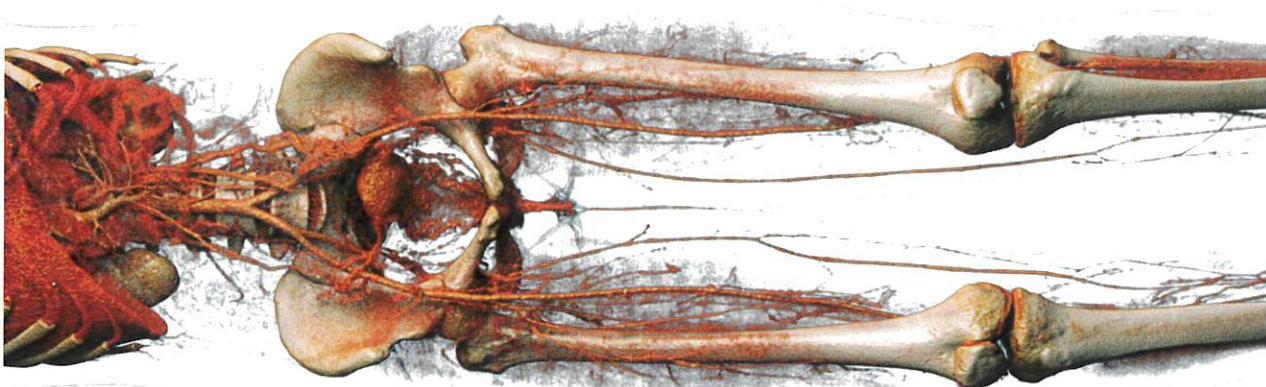
## Histology

The image library includes a variety of microscopic histology scans. Students can examine microscopic tissue structures and cell-specific biomarkers from a collection of accurately stained digital scans. The cell and tissue scans include healthy and abnormal clinical cases from across the body. Viewing histology cases offers students a well-rounded study of anatomy and pathology.

## Prosection

The Table provides medical school-level anatomy content with access to 60 photorealistic prosections. The Table contains a wide range of 3D cadaver prosections highlighting images from various regions of human anatomy and case examples for normal and pathological tissue.





## Comparative Cases

The digital library offers comparative study cases with synchronized dissections of multiple cases. Three related cases can be viewed by the user simultaneously. Users can also create their own cases to review pre- and post-surgical scans, congenital comparisons, and cross-species evaluations. Viewing side-by-side case comparisons gives students a comprehensive visualization tool to study and review comparative anatomy.

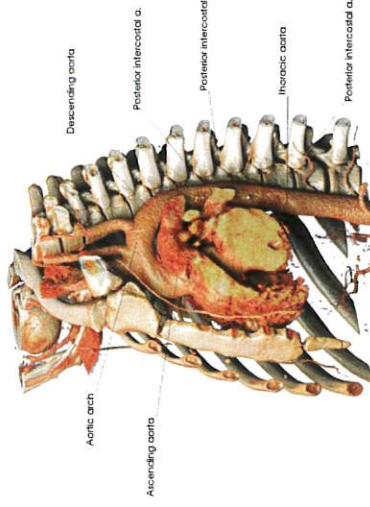
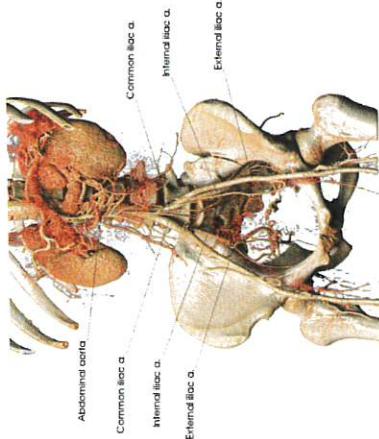
## Building Your Curriculum

### The Anatomage Curriculum

The Anatomage Curriculum features an intuitive interface for instructors to cover human anatomy by region and by system. A printed booklet and PDF file are included and can be used in conjunction with the Table for instructors to quickly and easily locate any anatomical region.

Teach comparative, clinical anatomy using real patient data in the form of annotated, relevantly displayed scans from the Tables library. Major body regions such as the thorax, upper limbs, abdomen and pelvis, lower limbs, and head and neck are outlined with full annotations by system and structure. The Curriculum includes guidelines for identifying structures in each region. Each section also includes suggested clinical correlates in that system. An instructor can present these cases to students when teaching about a specific anatomical region.

Anatomage has always ensured that using the Table is intuitive with a low learning curve. The Anatomage Curriculum has been designed to make the integration of the Table's content into your own classroom as efficient as possible.

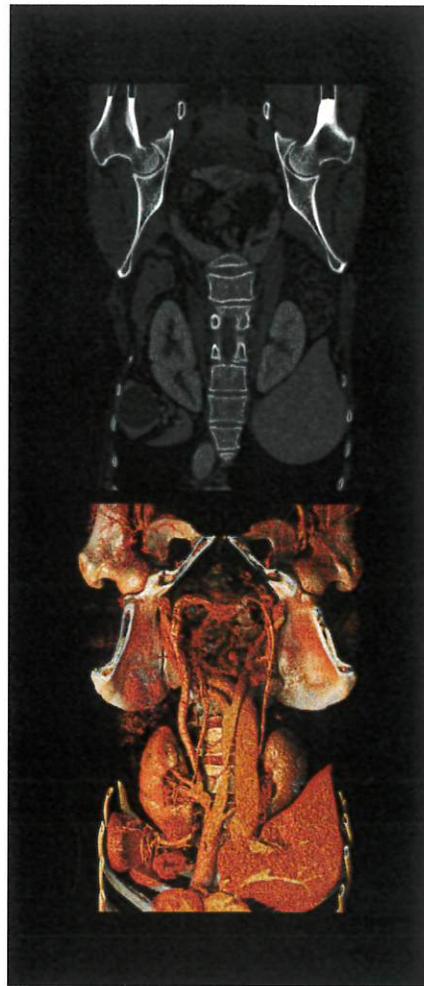


### Classroom Integration

#### Visualize & Identify Regions

When viewing a specific regional scan or clinical case, an instructor can use the Table's note-taking and labeling tools to clearly identify structures. Students benefit from these identifiers when viewing complex anatomical regions in the body and develop a better understanding of directional terminology, cutting planes, and relational anatomy.

With the Table's built-in quiz mode, instructors can drop pins and create testing material for lab practicals, assignments, and examinations. The Table's video out functions ensures that it can be utilized in lecture halls through the connection to projectors, or in small groups with multiple external monitors.



Present customized lectures with, or give students the opportunity to, explore and lead discussions. Students can form small groups to collaborate while answering questions and take quizzes using pre-loaded cases. They also have the opportunity to discuss comparisons between normal and abnormal pathologies side-by-side.

Drive Student Collaboration

# Seamless Integration

## Award-Winning Volumetric Software

Every Table comes with copies of Anatomage's renowned medical imaging software, Invivo and Medical Design Studio, that can be installed on a separate workstation.

Invivo and Medical Design (MD) Studio are high-performance, volume-rendering software packages that provide additional tools for 3D content creation. Digital models of medical devices can be annotated, segmented, or overlaid directly onto patient scans. Invivo shares the same underlying software as the Anatomage Table and is FDA cleared for clinical applications. Open patient scans (MRI, CT, PET) for instant 2D slice viewing, or 3D reconstruction. Users can make measurements in 2D and 3D for clinical or research applications.

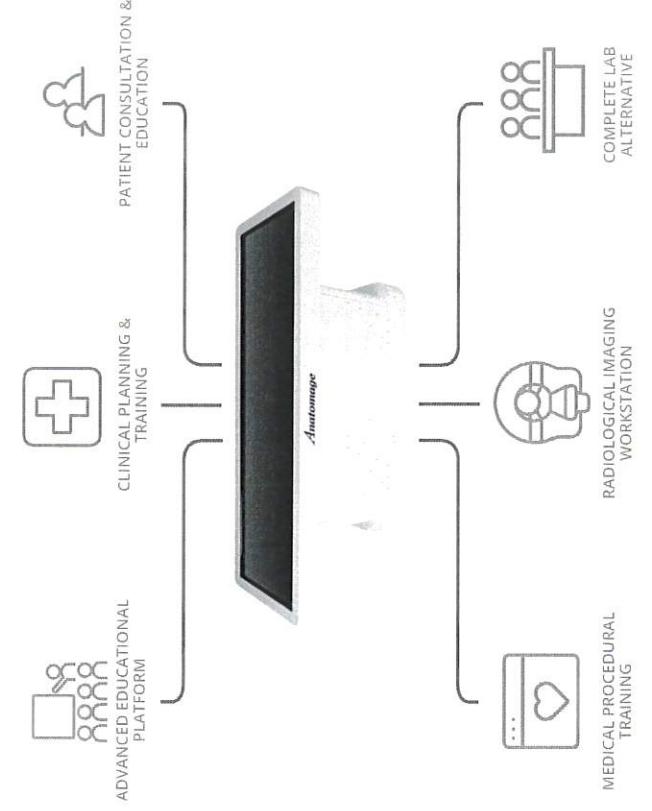
## Perform and Capture Simulations

Segment any patient scan data and create digital models. Invivo's built-in video tool easily captures and shares these simulated movements. Moreover the software can load in any 3D models and allow users to create customized simulations with these objects interacting with the scan. With the addition of 3D models added to patient scans, teaching physiology and surgical simulations is an easy possibility.

## Complete Educational Platform

Combining our powerful content creation tools with the easy-to-use demonstration capabilities of the Anatomage Table, users have access to a complete platform for advanced medical education. Numerous educational institutions such as medical universities, undergraduate programs, and school districts have adopted the Table as a complete lab alternative for science programs.

The Table serves as a valuable tool for clinical planning, medical diagnosis, and patient consultation.



## Hardware Specifications



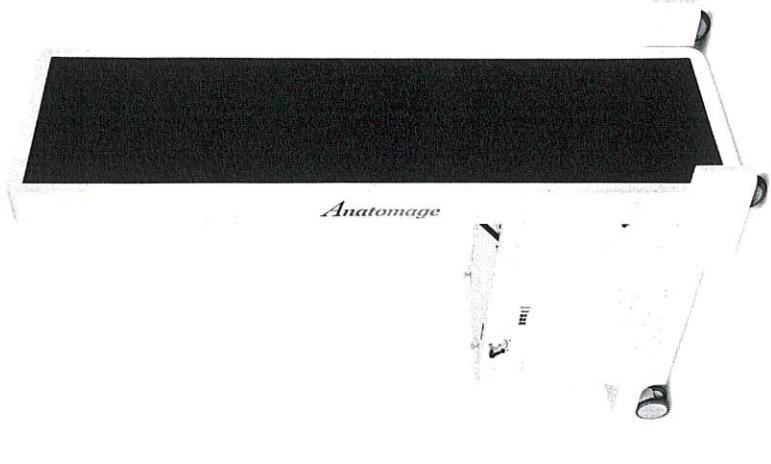
Anatomage

### Classic

Product Dimensions	Length: 87" (221 cm) Height: 33" (83 cm) Width: 28" (71 cm)
Weight	300 lbs (136 kg)
Display Size	84" (213 cm)
Power Supply	AC 100-220V, 50/60 Hz, 10A
Network	RJ45

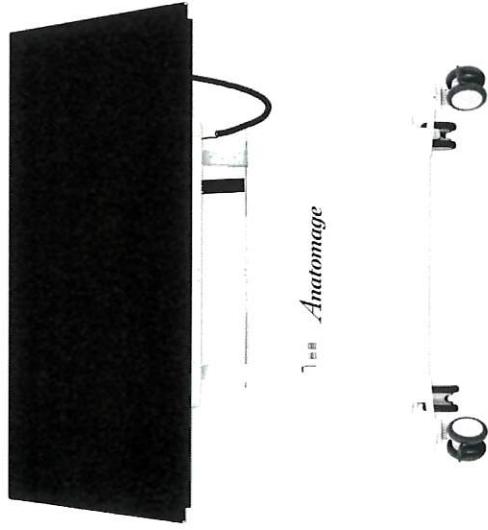
### Convertible

Product Dimensions	Length: 85" (216 cm) Height: 33.7" (85 cm) Width: 34" (87 cm)
Weight	400 lbs (182 kg)
Display Size	84" (213 cm)
Power Supply	AC 110-250V, 50/60 Hz, 10A
Network	RJ45



Anatomage

## Hardware Specifications



### Anatomage Table Product Family

The Anatomage Table family of products includes the most advanced anatomy visualization tools on the market. Powerful software and hardware makes our line of products the preferred solution for clinical and educational applications. We have expanded our Table line to include a variety of medical education products such as the Anatomage Table Alpha, Table Clinical, Wall, Navigator, and Concourse.



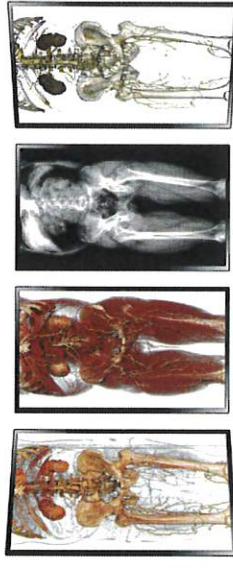
*Anatomage*

### Table Clinical

#### Concourse

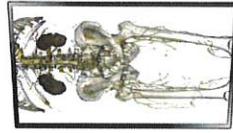
Concourse is an application-based teaching tool where students and instructors can visualize real patient anatomy on their personal workstation. With Concourse, the most advanced anatomy education tool is always at your fingertips.

The Anatomage Table family of products includes the most advanced anatomy visualization tools on the market. Powerful software and hardware makes our line of products the preferred solution for clinical and educational applications. We have expanded our Table line to include a variety of medical education products such as the Anatomage Table Alpha, Table Clinical, Wall, Navigator, and Concourse.



### Wall

With the Anatomage Wall, users can view 3D patient anatomy, system-by-system, side-by-side. Dissect anatomical systems of the patient using multiple visualization options and gain a comprehensive understanding of their condition. Multiple individuals can stand in front of the Wall for a collaborative anatomy-based instruction experience. The Anatomage Wall will be the premier technological showpiece for your institution.



The Anatomage Table family of products includes the most advanced anatomy visualization tools on the market. Powerful software and hardware makes our line of products the preferred solution for clinical and educational applications. We have expanded our Table line to include a variety of medical education products such as the Anatomage Table Alpha, Table Clinical, Wall, Navigator, and Concourse.

### Table Alpha

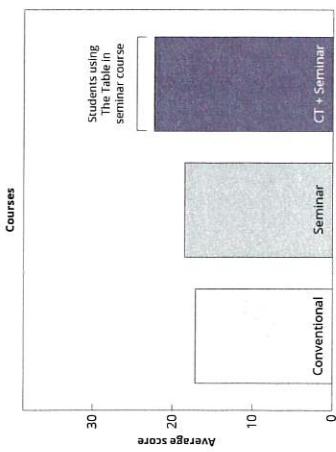
Table Alpha is for advanced high school anatomy education. Users can dissect full body cadavers and anatomical specimens. It gives teachers access to medical-level anatomy instruction without the need of a cadaver lab.

## Case Studies

### University of Heidelberg Medical School

#### CT-Based Virtual Dissection Performance In Anatomy Courses

Researchers partnered with the German Cancer Research Center and Karlsruhe Institute of Technology to quantify the benefits of 3D virtual dissection tables and cadaver CT scans on performance. Anatomy examination scores from three student cohorts were evaluated. Students trained with radiologic images and cadaver CT scans improved test scores respectively by 19.2% and 27.3% when compared to those in the radiologic imaging and conventional anatomy courses.



### Parkview Health Medical Center Advanced Simulation Lab

#### Clinical Education & Surgical Planning In Medical Simulation Labs

The Anatomage Table was implemented at the Simulation Lab to further clinical training, patient education, and student skill labs at Parkview. Providers participated in procedural training on the Table for endovascular, oncological, and other surgical procedures. Surgeons utilized the Table's imaging software to model 3D scans of their patients and develop a comprehensive understanding of the spatial region of the operation.



### University of Nebraska Medical Center

#### Investigating The Efficacy Of The Table In Medical Imaging Courses

Educators integrated the Anatomage Table into oncology, gynecology, gastroenterology, and ultrasound technology courses. Mean values of student scores from multiple gastroenterology (GI), course examinations and overall GPAs increased in the years after the Table was adopted. When comparing the 2013 and 2015 academic years, there was about a 8-9% improvement in the overall GI, normal anatomy, and pathology average scores.

### Tarrant County College

#### Table Usage Beneficial For Anatomy Courses In Community College Settings

The Radiologic Technology, Physical Therapy Assistant, Anatomy & Physiology, and Emergency Medical Technician programs benefited directly from the Table's image quality and interactive 3D content. Students found that the Table was advantageous for conceptualizing complex regions, structural relationships, and pathologies. Images from the Table were easily saved and utilized by students to prepare for in-class quizzes and tests.

Variable	2013 N=7	2014 N=8	2015 N=10
X-Ray GPA	3.74 ± 0.18	3.76 ± 0.30	3.79 ± 0.16
Prereq. GPA	3.57 ± 0.19	3.65 ± 0.19	3.48 ± 0.31
GI Exam 1	75.6 ± 9.7	81.7 ± 7.4	84.0 ± 7.4
GI Exam 2	77.3 ± 12.1	83.8 ± 5.6	84.0 ± 4.0
GI Exam 3	76.0 ± 10.1	82.6 ± 8.0	81.0 ± 6.8
GI Exam 4	82.5 ± 7.1	89.4 ± 3.7	89.5 ± 5.7
GI Exam 6	87.0 ± 7.1	94.1 ± 5.4	89.5 ± 5.8
Overall GI Exam	78.0 ± 7.4	84.0 ± 5.3	83.9 ± 4.3
Normal Anatomy Pathology	80.6 ± 7.1	87.3 ± 4.2	86.7 ± 3.5
	75.8 ± 8.3	81.1 ± 7.4	82.0 ± 6.4



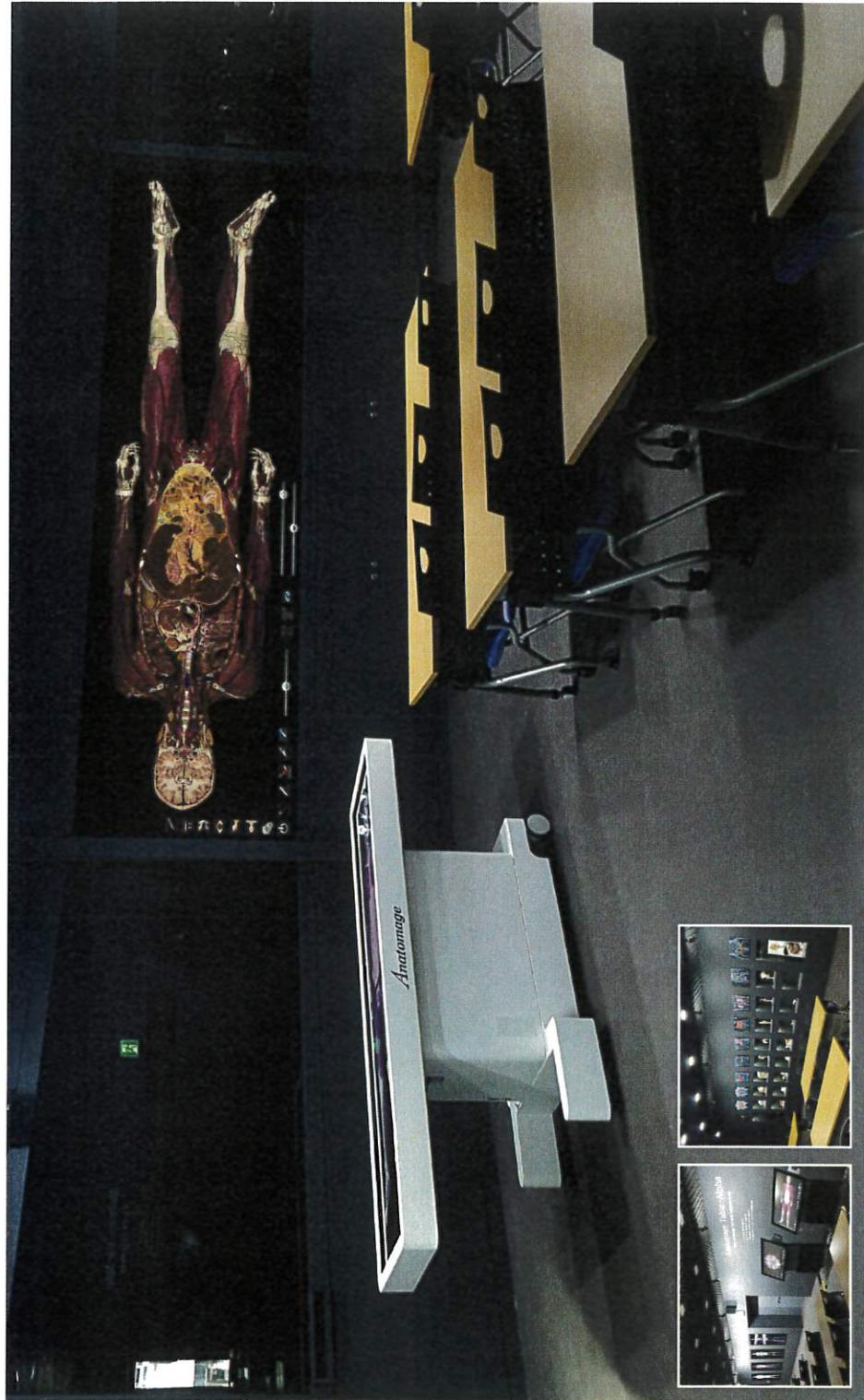
## Ansan University Virtual Anatomy Classroom

Ansan University in Korea incorporated Anatomage products into the design of an innovative anatomy education facility like no other. The virtual anatomy classroom was created to provide simulation-based training for their health students. The high-tech classroom features the Anatomage Wall, Table Convertible, and Table Alpha for visually inspired lectures. Development of the classroom was an interdepartmental collaboration between the nursing, physiotherapy, radiology, and clinical pathology departments.

The classroom was designed with the aim of teaching accurate 3D anatomy in an innovative and engaging environment. Professors can project lessons that cover dissections and clinical case reviews onto large monitors from either the Table Alpha or Table Convertible. Additionally, the exhibition classroom came equipped with an Anatomage Wall installation to comprehensively review 3D cases side-by-side. Students can view 3D structures dissected at any angle and detailed examples of clinical cases in an innovative classroom designed for advanced visualization of human anatomy.

*"We are proud to have the best facility in Korea that introduces an exhibition-type practice system that allows the students to experience and learn in person with interest."*

**Shin-Young Kim**  
Professor of Physiotherapy  
Ansan University



## Worldwide Innovation

### Anatomage Community

When you purchase an Anatomage Table you not only get all the high quality contents developed by Anatomage, but you are also part of a global community of educators and researchers who have already spent time developing their own content and ideas on how best to incorporate the Table into a wide range of curricula and disciplines.

With hundreds of Tables sold worldwide, Table users can enjoy informative annual user's group meetings and developmental programs on an international scale to help ensure that the Table meets their needs. Anatomage is committed to cutting-edge technology supported by an excellent team with the drive to ensure that the Table is not just a product, but rather a community of users.



### International Distribution

The Anatomage Table is used globally. Headquartered in California, Anatomage has two additional offices in Italy and Korea to better serve our customers abroad. We have an extensive network of international distributors, a list of which can be found on our website, that we trust to offer continuous timely service. Sales to countries where we have not found a representative that meets our standards are handled directly by us – we provide training, shipping, and support.

### Forum & Support

Members and prospective members of the Anatomage Table community can connect with each other and our internal team through the Anatomage Table Forum. The forum is a place for members of the community to discuss the Table and have questions answered by our team. The Medical Table team actively monitors the forum and provides support to all users. The forum is also updated with new content about the Table and the Table community. You can visit the forum at [anatomagetable.com](http://anatomagetable.com).

## About Anatomage

Anatomage is a leading medical device company driving innovation in the healthcare industry. Anatomage's advanced solutions are being used in tens of thousands of clinics, hospitals, and other institutions in the US and internationally. Our products include medical tables, image-guided surgical devices, surgical instruments, radiology software, and imaging equipment.

Anatomage products are developed, designed, and manufactured following strict FDA guidelines for medical devices. Anatomage continues to establish exclusive partnerships with renowned educational institutions and medical equipment companies. Our cutting-edge and unique products have been featured numerous times in journals, publications, and the media, including, TED Talks, BBC, CBC, Japanese Fuji TV, and PBS.

Located at the heart of Silicon Valley, Anatomage is a fast-growing company that continues to thrive in a place where technology is ingrained in the culture. The company encourages the building of a diverse and positive culture and recruits top talent. Anatomage's work environment is defined by our highly talented biologists, medical specialists, and engineers who strive to create high-tech products that continue to push industry standards. Anatomage maintains strong ties with world-leading instructors and researchers by building successful partnerships at prominent institutions.

With our revolutionary family of products, we aspire to advance medical education and improve patient care throughout the healthcare industry.

# PERKINS V



LOCAL PERKINS APPLICATION  
2020-2024

STAND-ALONE

OFFICE OF CAREER, TECHNICAL, AND ADULT EDUCATION  
NEBRASKA DEPARTMENT OF EDUCATION  
301 Centennial Mall South, Lincoln, NE



## General Information

Nebraska has a vibrant economy with an array of promising career opportunities for its citizens. To take full advantage of the region's workforce options, students must be aware of the occupations that exist and earn the requisite secondary and postsecondary credentials to secure employment. Career and Technical Education (CTE) in Nebraska helps prepare students for postsecondary education and careers, both options and not one or the other.

The federal Strengthening Career and Technical Education for the 21<sup>st</sup> Century Act (Perkins V) provides resources to support educators in developing the academic, technical, and employability knowledge and skills of secondary and postsecondary education students enrolling in CTE programming.

This **Local Perkins Application** must be completed by all secondary and postsecondary (stand-alone and consortia) CTE providers seeking federal funding through Perkins V. Staff from the Office of Career, Technical, and Adult Education at the Nebraska Department of Education (NDE) have created this document to assist you in developing a strong application for Perkins V funding, one based on information that surfaced as part of your revision process.

The Local Perkins Application asks you to describe how your district will use federal funds in strengthening CTE programming and expand student access to CTE programs. Under Perkins V, each state is required to submit a four-year plan to the U.S. Department of Education, Office of Career, Technical, and Adult Education (OCTAE) covering the 2020-2024 academic years. Local CTE providers (districts, consortia, and community colleges) receiving a Perkins V grant allocation are also required to submit plans with the same timeline committed. Submission of this Local Perkins Application will fulfill that eligibility requirement.

*The Local Perkins Application and Resources are available online at  
<https://www.education.ne.gov/nce/perkins-administration/>*



## **Eligible Recipients**

Under Perkins V, eligible recipients include local educational agencies, area career and technical education schools, educational service agencies, Indian Tribes, Tribal organizations, Tribal educational agencies, or a consortium eligible to receive assistance under section 131 of the Act, or, an eligible institution or consortium of eligible institutions eligible to receive assistance under section 132 of the Act.

Eligibility is contingent upon recipients' completion of the NDE's reVISION process, submission and approval of this Local Perkins Application and annual budgets, and the annual confirmation that CTE Essential Components are in place, which indicate CTE programs of are of sufficient size, scope, and quality to be effective and meet the needs of all learners.

A secondary school district must qualify for a minimum allocation of \$15,000 or join/form a consortium with other eligible recipients. A postsecondary institution must qualify for an allocation of \$50,000 or join/form a consortium with other eligible recipients.

School districts and community colleges will continue to use the NDE's web-based tool that indicates their intent to participate in Perkins funding each year and certify their Essential Components are in place. The implementation of the Essential Components will be verified through multiple means to ensure high-quality CTE programming (i.e. monitoring visits, risk analysis, annual reports).

## **Use of Funds**

Under Perkins V, the allocation of resources must now be aligned with the results of the reVISION process. Specifically, funds must be spent "to develop, coordinate, implement, or improve career and technical education programs to meet the needs identified in [reVISION]."

In addition to the overall requirement that local funds be used to support CTE programs of sufficient size, scope and quality to be effective and meet the needs of all learners, the law requires the following uses of funds (throughout the duration of the four-year plan):

1. Provide career development activities through an organized, systematic framework;
2. Provide professional development for a wide variety of CTE professionals;
3. Provide within CTE the skills necessary to pursue high-skill, high-wage and high-demand industry sectors or occupations;
4. Support the integration of academic skills into CTE programs;
5. Plan and carry out elements that support the implementation of CTE programs and programs of study and that result in increased student achievement\*; and
6. Develop and implement evaluations of the activities funded by Perkins.

\*Key activities such as purchasing industry-grade equipment and supporting CTSOs, work-based learning, and dual-enrollment, among numerous others, are included under the elements that support the implementation of programs and programs of study.

Visit the [Perkins Management Guide](#) for additional information about allowable uses of Perkins funds.

### Timeline and Deadlines

- Annual Intent to Participate Due: March
- Local Perkins Applications Due (2020-2024): **May 22, 2020 (tentative)**
- Grant Award Notification for  $\frac{1}{4}$  of annual allocation: July 1
- Grant Award for full annual allocation: October 1
- Annual Final Claims Due: September 1

\*Dates are subject to change. Please visit <https://www.education.gov/hope/perkins-administration/> for updated information.

## **Submission Information**

Completed applications should be submitted and uploaded within the NDE's Grants Management System by May 22, 2020.

## **Application Elements**

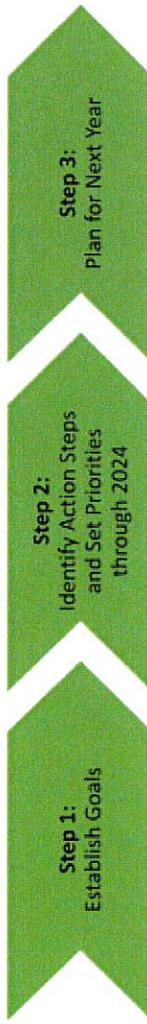
The following outline is provided to support eligible recipients as they develop their four-year Local Perkins Application.

- Section 1: reVISION Summary
- Section 2: Narrative Responses
- Section 3: Annual Budget Worksheet

This four-year Local Perkins Application only needs to be submitted once. For the remaining program years (2021- 2024), only progress, update, and annual budget information will be submitted to the NDE.

## **Going from reVISION to the Local Perkins Application**

Creating and enhancing opportunities for all students requires foresight, careful planning, and targeted investment. To help your district determine where to begin and which action steps to approach first, it will be necessary to review the actions steps identified by your district and economic development region through the reVISION process (see Local and Regional CTE Assessments) and establish a set of high-priority, overarching goals. Multiple sources of information and other data from the reVISION process may need to be reviewed to accomplish this effectively.



### **Step 1: Establish Goals**

Through active participation in the revision process, your district, along with education partners, reviewed a number of different data elements (e.g. school faculty demographics, non-traditional student participation rates, CTE student performance data, etc.). Given these data, desired states and potential action steps were identified for each of the six required elements (at both the Local and Regional levels). Taking all of these desired states and action steps into consideration, identify a goal or set of goals your district might pursue to ensure high-quality CTE programming for your students.



### **Step 2: Identify Action Steps & Set Priorities**

After careful review of the action steps already identified through revision, consider the following questions in relation to your overarching goals as identified above:

1. Which of the action steps identified are of highest priority?
2. Are all action steps equally likely to be achieved?
3. Which action steps might you seek to address in each of the application's four years, especially the first grant year (2020-2021)?

Based on all reflections throughout revision and in preparing this Local Perkins Application, prioritize the actions steps to be addressed under Perkins V that will help achieve the goals established for your district. Your district will be held accountable for working towards accomplishing these goals over the next four years to move the entire CTE system forward. You will have the opportunity to update and refine your goals and action steps throughout the four years of the plan.

### **Step 3: Plan for Next Year**

After identifying the prioritized action steps your district will take to achieve your overarching goals, you will need to detail the related expenditures you seek Perkins funds to support for the upcoming academic year. Carefully review the required uses of Perkins funds along with the non-allowable uses of Perkins funds – both found on the Perkins Grants Management website: <https://www.education.ne.gov/nce/perkins-administration/>. A budget template is provided to help gather and prepare the necessary information to enable quick and easy entry into the NDE's Grants Management Systems (GMS) Perkins Budget.

**Helpful Tip**  
Ideally, the changes your district makes early on will form a foundation for subsequent work. You are encouraged to identify between 2-3 high priority action steps that your district will be held accountable for over the next four years which will produce measurable results.

## Section 1: reVISION Summary

The Strengthening Career and Technical Education for the 21<sup>st</sup> Century Act (Perkins V) requires each eligible Perkins recipient to complete a comprehensive local needs assessment. In Nebraska, this requirement will be met by participating in the reVISION process – Nebraska’s opportunity for schools and community colleges to analyze and transform their current CTE systems in order to improve their ability to educate a qualified workforce that meets industry needs within an ever-changing economy. Outcomes from reVISION will drive the development of this Local Perkins Application and all future spending decisions.

**reVISION Summary.** Considering your district’s Local CTE Assessment and the Regional CTE Assessment summary, briefly summarize the current state of each element and the overarching goals your district might pursue in strengthening the CTE programming for your students. These summaries will form the rationale for the action steps needed and use of Perkins funds in the next sections.

Element	Current State	Overarching Goal(s)
<b>SAMPLE:</b> <b>Size, Scope, and Quality and Implementing CTE Programs of Study</b>	Most programs have the minimum SSQ components in place, though the following programs require updating of equipment to meet changing industry standards (program 1, program 2) in communication arts. While we are confident in our local planning and selection of programs of study offered (validated through reVISION), the identification of new and emerging technologies and occupational projections necessitates a comprehensive and thorough review of programs and how each are being implemented throughout the district.	<i>Within the next four years, CTE programs that are aligned with H3 occupations will be reviewed to ensure all equipment and resources are up-to-date and meet industry standards and expectations.</i> <i>Within the next four years, strategies will be developed to expand CTE program offering across the district, which includes professional development on program of study standards and the NDEs Standards Implementation Framework.</i>

Element	Summary of Current State	Overarching Goal(s)
	<p>At Columbus Public Schools, we work to provide students with numerous career and college readiness opportunities. Our Career and Technical Education programs, at both the middle and high school levels, are staffed with knowledgeable instructors who are always incorporating the latest industry standards into their curriculum. Along with the high-quality instructors, they are able to offer numerous industry recognized certifications such as Microsoft Office Suite, NC3 SnapOn Precision Measurement, various automotive certifications, Safe With You for early childhood education, and OSHA certifications. Furthermore, in the introductory courses within each pathway , students will be introduced to career fields, the career readiness standards, as well as personal and professional skills and knowledge to create well rounded individuals. Students will also be required to enroll in the Personal Finance course as a requirement for graduation starting with the class of 2023. Additionally, a survey was conducted with the grades 9-12 student body to better understand the students' career interests, and to guide the current and future programs of study planning. Lastly, with students entering into the high school setting from middle school, they meet with their grade-level counselor to fill out a four-year plan and identify courses that would best fit their interests and future career plans.</p> <p><b>Career Development</b></p> <p>Each year Columbus High School hosts a Perkins Advisory Committee meeting to collaborate with business and industry to share and gain insight on the local needs and share data of our current programs of study and student population.</p>	<p>At Columbus High School, we want to ensure that every student is college and career ready. To start, this includes that every student has a four-year plan that guides students into a postsecondary career path that best suits them. Additionally, students enrolled in CTE introductory courses will learn academic, behavioral, and career skills. Students will also be exposed to postsecondary opportunities in each of the courses listed in the different clusters. Additionally, to have students be college and career ready, we want to provide them the opportunities such as:</p> <ul style="list-style-type: none"> <li>● job shadows either in person or virtually</li> <li>● mock interviews</li> <li>● register for college at the high school</li> <li>● make AP, dual credit, and college classes for accessible and affordable</li> <li>● obtain industry recognized certifications</li> <li>● military enrollment</li> <li>● involvement in CTSOs, activities, clubs, and activities</li> </ul> <p>Lastly, we want to match our course offerings with the students' interests and local employment needs. To do this, we will survey our students to find their interests and match</p>

	<p>them with our local needs assessment and the H3 data. We strive to continue to expand our current programs to fit the needs of local industry and stay up to date on best practices.</p>	<p>To align Columbus High School with the local workforce, we have established a number of areas to address in the next four years. These include:</p> <ul style="list-style-type: none"> <li>● Teach employability skills in the introductory courses</li> <li>● Continue to grow enrollment numbers in CTSOs as well as start a FCCLA chapter</li> <li>● Enhance industry experiences for students through job shadows and apprenticeships, industry tours, guest speakers, and providing industry certifications in the classroom</li> <li>● Continue business and industry partnerships through ongoing communication and collaboration as well as participation in advisory board meetings</li> <li>○ Throughout these meetings, study workforce needs and align course offerings to the needs</li> <li>● Provide unique opportunities for special student populations such as:</li> </ul>
	<p>At Columbus High School, for the 2019-20 school year, we reevaluated our programs of study and surveyed our students to better match their interests with the demand from the H3 website and local industry. With this survey, the students indicated CHS lacks in the healthcare, education, and digital media pathways in alignment with their interests. These pathways also align to the regional needs with the need for more nurses, teachers, and potentially the marketing field. To better fill these areas, we hired an additional digital media teacher and also are partnering more closely with the Educators Rising CTSO as well as researching post-secondary opportunities in the education field for students to participate in high school. Within the nursing field, CHS has students participate in the HOSA CTSO as well as participate in the job shadowing P.A.T.H. program at the Columbus Community Hospital.</p> <p>In alignment with the regional needs, there are areas in which we thrive and some that are not applicable at the high school level. To start, within the areas of most need in the northeast region, CHS offers programs of study, a CTSO, or a community partnership to help students gain knowledge and experience in a certain career area. For example, in our manufacturing pathway, our students are exposed to industry tours, guest speakers, apprenticeships, and certifications to align with machining and fabrication. A gap that exists at CHS is the need for a program of study for nursing and teaching. Additionally, a gap exists with students moving from introductory courses through the capstone course. To close this gap, CHS has hired an additional STEM teacher to get more students into introductory courses as well to offer more sections of capstone courses.</p> <p><b>Local Workforce Alignment</b></p>	<p>An additional gap that CHS is confronting is employability skills. Within our 9th Grade Seminar course being offered in 2020-21, students will be taught, in depth, specific employability skills to gain a job, and keep a job. Another gap that could be addressed is incorporating specific career interests into the Information Technology pathway. Currently students have the ability to gain the Microsoft Office Certification, but the courses could be more industry driven.</p>

<p>Within our CTE programs, students are able to be exposed to specific career areas. Students that enter the workforce from our programs are able to leave with either industry certifications or experience with industry standards in the workplace. For example, students in the automotive program are able to gain precision measurement certifications through the SNAP ON program. Additionally, students in the construction program can achieve not only the precision measurement certification, but experience on the job site with building a house. Lastly, students in STS courses are able to gain certification in OSHA.</p> <p>At CHS, we attempt to align our programs with regional needs, post-secondary opportunities, and industry certifications and standards. We understand where our gaps exist and have researched opportunities to close these gaps. With the rating, we are in the process of formalizing these opportunities and giving students better experiences to prepare them for life after high school.</p>	<ul style="list-style-type: none"> <li>○ School to work transition programs</li> <li>○ Provide counselors with the resources to best help students</li> <li>○ Continuous partnership with VR staff to serve students with disabilities</li> <li>● Research and implement the expansion of teaching and nursing programs at the high school level</li> </ul>
	<p>To provide the best experiences for our students and to sustain a program to stay at the forefront of STEM education, certain measures need to be taken. Goals to achieve this status include:</p> <ul style="list-style-type: none"> <li>● Continually updating, upgrading and purchasing industrial grade equipment</li> <li>● Work with school counselors to help students complete introductory courses through capstone courses</li> <li>● Research and expand workplace experiences for students through virtual job shadowing, field trips, industry experiences and apprenticeships</li> <li>● Research the latest industry certifications and grow our programming to deliver to students</li> </ul> <p><b>Size, Scope, &amp; Quality and Implementing CTE Programs of Study</b></p>

		<ul style="list-style-type: none"> <li>● Continue to grow and adapt our advisory board to meet local workforce needs</li> </ul>	
	<p><b>Student Performance Data</b></p> <p>As a school, it is our priority to "Engage All Learners to Achieve Success". With the current data, there are significant gaps that need to be addressed. First, as a CTE program, we need to promote and keep students enrolled in courses up to and through the capstone courses. Next, specific strategies should be implemented to incorporate technical reading, writing and math skills into each unit of study. Furthermore, there should be interdisciplinary collaboration to achieve the technical reading and math skills attainment in more than just the CTE programs. Lastly, there should be an emphasis on concentrator completion for non-traditional and special populations.</p>	<p>To consistently evaluate and improve programs, we should consistently examine the data to address our strengths and areas for improvement. With our trend data, the areas to address are as follows:</p> <ul style="list-style-type: none"> <li>● Increase enrollment in capstone courses <ul style="list-style-type: none"> <li>○ Focus on non-traditional and special populations</li> </ul> </li> <li>● Incorporate reading, writing, and math strategies into units with interdisciplinary collaboration</li> <li>● Ensure all marketing materials and district publications represent a diverse range of students</li> </ul>	<p>The greatest indicator of student performance is the quality of the teacher in the classroom. To ensure the quality of the CTE staff put in front of our students, certain areas of focus will be taken. Recruitment, and most importantly, retention of our staff is key to a stable and quality program.</p> <ul style="list-style-type: none"> <li>● Partner with the Chamber of Commerce to promote CTE positions at career fairs, research teacher education career fairs, partner with college method classes to bring</li> </ul>
	<p><b>Recruitment, Retention, and Training of Faculty and Staff</b></p> <p>At Columbus High School, our current staff has a teaching tenure of a combined 149 years of teaching in Columbus Public Schools. Instructors are master's in their fields, holding current industry standard certifications, respective to their content area. While obtaining new instructors is difficult throughout the state, Columbus has made a commitment to hiring the best instructors available. We believe this could be an area of growth to better promote the CTE teaching field as well as to grow our own. We are constantly looking at different ways to hire new staff members.</p>		

	<ul style="list-style-type: none"> <li>• Utilize marketing materials for CTE during recruitment opportunities</li> <li>• Provide travel accommodations for CHS staff to attend teacher education job fairs</li> <li>• Continue to offer relevant professional development for current staff</li> </ul>	<p>Providing meaningful and unique experiences to our students will continue to grow and expand our CTE programs. To do this, we will concentrate on specific areas to grow and others to explore.</p> <ul style="list-style-type: none"> <li>• Continue to grow and enhance our advisory board to meet local workforce needs</li> <li>• Continue to partner with the Chamber of Commerce and the PATH program to develop and foster relationships with local business and industry to provide job shadowing opportunities for students</li> <li>• Provide ongoing industry field trips, virtual job shadowing, guest speakers, and other student networking opportunities with local business leaders</li> </ul>
	<p>CHS currently has staff working to provide work-based learning opportunities for students. These experiences range from a one-time job shadowing experience to a full apprenticeship opportunity. Experiences generally sought out by students are in education, healthcare and general business areas including finance and HR. There are also apprenticeship programs put in place at Behlen Manufacturing, Ernst Auto and Gene Steffy Ford. CHS will work to identify ways to reach out to a broader number of students that is still manageable for the available CHS resources.</p>	<p><b>Work-Based Learning</b></p>

## Section 2: Narrative Descriptions

### Helpful Tip

When developing goals, make sure they are SMART: Specific, Measurable, Attainable, Relevant, and Time Bound. This way, there will be sufficient detail related to how you will go about making change and use your federal Perkins V funds to improve CTE programming. More information about setting SMART goals can be found at: <http://bit.ly/SmartCTEGoals>.

**Instructions:** For all six elements, answer each of the following questions based on the outcomes of the revision process and the district's overall goals. You'll be asked to prioritize the action steps developed for each year of the Local Perkins Application. Utilize the findings of both the local and regional CTE assessments.

## Element 1: Career Development

**Context:** Each Nebraska learner deserves the opportunity to discover how their own skills fit into workplaces, to explore and learn about career options, and receive guidance in how to plan for successful transitions to their career. Students receive these opportunities through learning skills in a Career Development program which includes: 1. Self-Awareness, 2. Career Exploration, and 3. Career Planning. Students should have access to a career development program throughout their education to prepare for enrollment in CTE and while participating in CTE programs.

1. **Describe how, in collaboration with education and workforce partners (i.e. local workforce development boards, one-stop delivery systems, local workforce agencies, etc.) your district will ensure each student is provided with:**
  - a) **Self-awareness: self-knowledge of one's own attainment of NE career readiness standards, academic standards, and technical skills;**
  - b) **Career exploration: understanding and skills to find valid information about occupations, CTE options for middle school, high school, and postsecondary education and training for career goals; labor market information for high-wage, high-skill, and high-demand (H3) occupations as determined through the revISION process, and opportunities for work-based learning to demonstrate skills;**
  - c) **Career planning: understanding and skills to choose, apply, and finance relevant postsecondary options for career goals, and develop job search skills such as interviewing, application and resume writing, portfolio development, professional networking, etc.; and**
  - d) **An organized system of delivery to implement career development content with career and academic advising to students on an on-going basis (before enrolling and while participating in CTE programs).**

### RESPONSE:

- a) *At Columbus High School (CHS), we value the importance of teaching students career readiness skills throughout their high school experience. In our time of reflection during the 2019-20 school year, we placed a heavy importance of these*

*Skills by approving a new position to teach a Career Seminar course. In this course, as well as introductory courses, it has been created and structured around the NE career readiness standards. Students will be taught, in depth, these standards as well as academic and behavioral expectations, opportunities for virtual job shadowing for enhanced career readiness covering every career field.*

- b) Additionally in the Career Seminar class and other introductory courses, students will explore different career opportunities, both in and out of the classroom, through virtual job shadows, industry field trips, guest speakers, and on-the-job shadowing in a variety of fields. Furthermore, in the CTE classes at both the middle and high school levels, students explore the opportunities for different postsecondary experiences with the different career paths. At the middle school level, this includes a college visit to the University of Nebraska at Lincoln at the 8<sup>th</sup> grade, multiple exposures to Central Community College both on and off campus, Reality 101 simulation through the Columbus Chamber of Commerce, STEM 101 curriculum in grades 5 through 8, and counseling lessons taught in classrooms about the different postsecondary options. In the past at the high school, the importance of H3 jobs was covered substantially in the graduation required, Career Education course. This teaching and learning will continue as a part of the Career Seminar class and introductory courses moving forward. Lastly, in the past 4 years, our Workplace Experiences class has provided more opportunities for students to explore careers. Students have gained a more in-depth knowledge of job shadowing and apprenticeships through the emerging partnerships with local businesses, industry, and local chamber of commerce.*
- c) At the middle school, students are exposed to multiple experiences relating to different postsecondary options as well as career fields. Students participate in a Reality 101 simulation provided by the local chamber of commerce and are taught the different postsecondary options through advisory lessons taught by the middle school counselors. At the high school, current CHS students have taken a Career Education course that covered the job application process, including interviewing, and application and resume writing. In the Workplace Experiences class, students had the opportunity to participate in mock interviews, in conjunction with the local chamber of commerce, and to also increase their professional networking throughout their job shadowing placements. Additionally, in the newly created Career Seminar course, students will be required to create a professional portfolio throughout the entirety of the class to prepare them for their postsecondary options.*

d) At Columbus High School, each student completes a four-year plan to guide their class schedule to prepare them for their postsecondary path. Students meet with their counselor yearly to collaborate on their career interests, review likes/dislikes in current and previous courses, and explore opportunities for the future and beyond. This four-year plan is a working document that helps place students into courses that best fit their career interests.

2. In your district's Local and Regional CTE Assessments, action steps were identified that might be used to improve student understanding of career pathways. First, write the district's overarching goal(s) for this element in the space provided. Then list, in priority order, the action steps identified related to Career Development your district will address over the next four years. These activities should directly relate to the annual budget application for Perkins funds submitted to the NDE.

**District's Goal(s) for Career Development:**  
*(Copy and paste from the revision Summary)*

At Columbus High School, we want to ensure that every student is college and career ready. To start, this includes that every student has a four-year academic plan that guides students into a postsecondary career path that best suits them. Additionally, students will be required to take the Career Seminar class that educates students on academic, behavioral, and career skills as well as instructs according the NE career readiness standards. Moreover, these skills and standards will be taught in introductory courses. Students will also be exposed to postsecondary opportunities in each of the courses listed in the different clusters. Additionally, to have students be college and career ready, we want to provide them the opportunities such as:

- job shadows either in person or virtually
- mock interviews
- register for college at the high school
- make AP, dual credit, and college classes for accessible and affordable
- obtain industry recognized certifications

- align courses with up-to-date industry-standard equipment
- military enrollment
- involvement in CTSOs, activities, clubs, and activities

Lastly, we want to match our course offerings with the students' interests and local employment needs. To do this, we will survey our students to find their interests and match them with our local needs assessment and the H3 data. We strive to continue to expand our current programs to fit the needs of local industry and stay up to date on best practices.

<b>Prioritized Action Steps for Career Development:</b>	
<b>Program Year</b>	<b>Action Steps</b> <i>(What are you going to do to achieve your goal?)</i>
<b>Year 1: 2020-2021</b>	<p>1. Purchase a license to provide virtual job shadows to students in introductory courses, Career Seminar course, as well as the Workplace Experiences course through STRIV&gt;ENMEDIA at <a href="http://virtualjobshadow.com">virtualjobshadow.com</a></p> <p>2. Research and attend workshops and conferences specifically for career and industry knowledge attainment to present to students in the classroom</p> <ol style="list-style-type: none"> <li>a. Nebraska Career Education conference</li> <li>b. Tire Pressure Monitoring System training</li> <li>c. Festo</li> <li>d. NDE curriculum workshops</li> <li>e. NSCA Conference for counselors</li> </ol> <p>3. Continue to host local industry representatives in classrooms and participate in industry tours</p> <p>4. Grow opportunities for Workplace Experiences course through job shadows, apprenticeships, and internships</p> <p>5. Host at minimum, one Perkins Advisory Committee Meeting</p>

<p><b>Year 2: 2021-2022</b></p> <ul style="list-style-type: none"> <li>1. Expand construction pathway with industry grade equipment for construction, electrical, plumbing, and/or masonry in correlation with local contractors</li> <li>2. Explore options on how to grow an education pathway</li> <li>3. Provide opportunities for college and career visits for students in CTE courses</li> <li>4. Explore opportunities to supplement middle level courses for career education implementation</li> <li>5. Prioritize expanded learning opportunities for students in special populations</li> </ul>	<p><b>Year 3: 2022-2023</b></p> <ul style="list-style-type: none"> <li>1. Begin the first stages to start a program of study for healthcare pathway           <ul style="list-style-type: none"> <li>a. Professional development for current instructors</li> <li>b. Explore CNA certification to be taught at the high school</li> <li>c. Research opportunities to teach CPR at the high school and purchase manikins</li> </ul> </li> <li>2. Expand robotics and drone technology in classrooms for robotics, construction and agricultural integration with an emphasis on career opportunities in these areas</li> <li>3. Provide opportunities for college and career visits for students in CTE courses</li> <li>4. Provide opportunities in CTSOs to expand employability skills, business/industry partnerships, and exploring H3 careers</li> <li>5. Conduct local needs assessment for employability trends</li> </ul>	<p><b>Year 4: 2023-2024</b></p> <ul style="list-style-type: none"> <li>1. Provide opportunities for college and career visits for students in CTE courses</li> <li>2. Attend national conference for professional development</li> <li>3. Explore opportunities in industry and for special populations</li> <li>4. Evaluate program/pathway options through stakeholder input           <ul style="list-style-type: none"> <li>a. i.e. impact of Career Seminar course</li> </ul> </li> </ul>
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## **Element 2: Local Workforce Alignment**

**Context:** Each Nebraska student participating in a CTE program should graduate with the skills and credentials necessary to continue their education and find employment in high-skill, high-wage, and high-demand (H3) occupations. In this section of the application, you will use the results of your local and regional CTE assessments to improve the alignment between educational programming and labor market needs.

### **3. How did the Local and Regional CTE Assessment results inform the selection of specific CTE programs and activities to be funded?**

**RESPONSE:** In the local and regional CTE Assessment results, there were a number of items that prioritized the spending of Perkins/reVISION funds. To start, in the assessments, there was a need for career development for students. To address this need, we will teach, in depth, these skills through the Career Seminar course being offered to freshmen with a major emphasis to expose students to a variety of careers. Additionally, with feedback from our advisory board and student and staff surveys, it is a priority to keep our programs up-to-date with industry grade equipment, technology, and computers as well as to start new programs in the video production field as well as explore the opportunities for health sciences and education pathways.

To better retain and hire CTE teachers, in both the local and regional assessments, it was stated that a focus should be put on professional development for teachers. At Columbus High School, the need will be to continually attend state level workshops and conferences as well as be open to opportunities that are presented for the teachers in their fields.

Lastly, with a major focus of Perkins/reVISION being work-based learning, funding will be prioritized towards providing both in-person and virtual job shadows in both the Career Seminar course as well as Workplace Experiences.

**4. Describe any new programs of study that will be explored and developed and submitted for approval based on the results of the Local and Regional CTE Assessment results.**

**RESPONSE:** From the Local and Regional CTE Assessment results, we established the need to explore more opportunities in the education and medical fields as well as develop and implement a Career Seminar course for the 2020-21 school year. During the 2019-20 school year, we explored the opportunity to participate in the S.T.E.P. program for students exploring the education field in high school through Wayne State College. Additionally, through surveying our students and analyzing the regional H3 data, it was determined there was a need for more exploration on how to incorporate these programs into the high school setting. Lastly, in the 2020-21 school year, CHS will be offering the Career Seminar course to all freshmen to focus on career development and employability skills.

**5. How will students, including those from special populations, learn about their school's CTE course offerings and whether each course is part of a CTE program of study? Be specific in regards to serving special populations based on the outcomes of the revision process.**

**RESPONSE:** When analyzing Perkins student performance data, moving students in special populations from the intermediate level to the capstone courses was an area of weakness not only in the number of students in the programs, to the students that become concentrators. To combat this gap, we will work with counselors and teachers to better align the students' 4-year plans to their areas of interest as well as attempt to eliminate barriers to the classes through individualized plans. Additionally, all freshmen students, including students in special populations, will learn about the different career opportunities and how they align to our programs of study being offered in the Career Seminar course.

- 6. In your district's Local and Regional CTE Assessments, action steps were identified that might be used to improve program alignment to local workforce development efforts and labor market information. First, write the district's overarching goal(s) for this element in the space provided. Then list, in priority order, the action steps identified related to Local Workforce Alignment your district will address over the next four years. These activities should directly relate to the annual budget application for Perkins funds submitted to the NDE.**

<p><b>District's Goal(s) for Local Workforce Alignment:</b> <i>(Copy and paste from the revised Summary)</i></p>	
<p>To provide the best experiences for our students and to sustain a program to stay at the forefront of STEM education, certain measures need to be taken. Goals to achieve this status include:</p> <ul style="list-style-type: none"> <li>• Continually updating, upgrading and purchasing industrial grade equipment</li> <li>• Work with school counselors to help students complete introductory courses through capstone courses</li> <li>• Research and expand workplace experiences for students through virtual job shadowing, field trips, industry experiences and apprenticeships</li> <li>• Research the latest industry certifications and grow our programming to deliver to students</li> <li>• Continue to grow and adapt our advisory board to meet local workforce needs</li> </ul>	
<p><b>Prioritized Action Steps for Local Workforce Alignment:</b></p>	<p><b>Action Steps</b> <i>(What are you going to do to achieve your goal?)</i></p>
<p><b>Program Year</b></p> <p><b>Year 1: 2020-2021</b></p>	<ol style="list-style-type: none"> <li>1. Student experiences to industry-related field trips (i.e. Manufacturing Day)             <ol style="list-style-type: none"> <li>a. Explore experiences for students in special populations</li> </ol> </li> <li>2. Student experiences and travel for training and college readiness</li> <li>3. Host at minimum, one Perkins Advisory Committee Meeting</li> <li>4. Provide specialized opportunities for college visits for students in CTE courses</li> </ol>

	<ul style="list-style-type: none"> <li>5. Upgrade industry standard equipment as necessary</li> <li>6. Purchase a TV to use as a display to market companies and available jobs in the local area</li> </ul>
<b>Year 2: 2021-2022</b>	<ul style="list-style-type: none"> <li>1. Continue to host local industry representatives in classrooms and participate in industry tours</li> <li>2. Student experiences and travel for training and college readiness</li> <li>3. Increase industry representation at the Perkins Advisory Committee Meeting</li> <li>4. Increase community partnership with CTSOs</li> <li>5. Participate in community coalition meetings to stay current on local workforce needs</li> <li>6. Provide professional development for expanded opportunities new and existing pathways</li> </ul>
<b>Year 3: 2022-2023</b>	<ul style="list-style-type: none"> <li>1. Recruit new members to the Perkins Advisory Committee Meeting</li> <li>2. Provide opportunities for college and career visits for students in CTE courses with a priority on students in special populations and non-traditional fields</li> <li>3. Provide professional development for expanded opportunities new and existing pathways</li> <li>4. Explore the options to start a healthcare pathway <ul style="list-style-type: none"> <li>a. CNA certification</li> <li>b. CPR manikins</li> </ul> </li> </ul>
<b>Year 4: 2023-2024</b>	<ul style="list-style-type: none"> <li>1. Explore experiences in H3 careers for students in special populations</li> <li>2. Research and potentially purchase a welding simulator for classes targeting special populations such as English Language learners and females</li> <li>3. Provide professional development for expanded opportunities new and existing pathways</li> <li>4. Align course offerings with local workforce needs</li> </ul>

### **Element 3: Size, Scope, & Quality and Implementing CTE Programs of Study**

**Context:** Nebraska is committed to ensuring each student has access to high-quality CTE programming. Nebraska's state model programs of study are high-quality programs if implemented with fidelity (i.e. teaching at least 90% of each course's standards). They are based on labor market information, offer non-duplicative, sequential coursework, incorporate industry-validated and NDE approved standards, provide work-based learning experiences when applicable, include dual enrollment or early college programs, and lead to recognized postsecondary and industry credentials. Local programs of study may be developed and submitted for approval if determined necessary by the Local and Regional CTE Assessment results.

**7. Describe the CTE course and program offerings that will be provided with Perkins funds, including not less than one state-approved program of study. Justify these offerings with the local and regional CTE assessment results.**

**RESPONSE:** At Columbus Public Schools, we offer numerous courses and programs of study at different levels that are supported by Perkins funds at different capacities. At the middle school level, there are courses such as Foods, Finance, Digital Media, and STEM that utilize Perkins funds through providing professional development opportunities as well as most recently, purchasing of a CNC router for STEM classes. At the middle school level, these courses are a necessity to get students into the CTE fields at the high school level. Within these courses, the students are exposed to a variety of disciplines from coding, architecture, finance, and foods to learning skills such as working with power tools, basic accounting, and food preparation. These courses align with our high school goal of making students college and career ready with exposure to multiple fields.

At the high school, there are numerous courses and programs of studies offered such as:

- Architecture and Construction
- Business Management and Administration
- Energy and Engineering
- Finance
- Health Sciences
- Information Technology
- Manufacturing

- Marketing
- Transportation, Distribution, and Logistics

These programs align with our local and regional CTE assessment results with the inclusion of workplace, business and industry partnerships through job shadowing, apprenticeships, and the local advisory board; providing industry tours, collaboration, and certifications; and providing access to a wide variety of career fields to participate and explore. The majority of our CTE programs directly correlate with the local and regional needs of providing work-based learning throughout the program of study and analyzing the H3 careers.

- 8. How will your district improve the academic and technical skills of students participating in CTE programs? This may include strengthening the academic and CTE components of such programs through the integration of coherent and rigorous content aligned with challenging academic standards and relevant CTE programs to ensure learning in the subjects that constitute a well-rounded education.**

**RESPONSE:** To ensure that our students have access to relevant CTE programs, it starts with providing the opportunities for staff members to stay up to date on current practices and certifications in industry and academic standards set by the state as well as a focus on math and reading within the classroom in preparation for postsecondary options. Additionally, to improve the classroom experience and technical skills for students, there is a constant need to stay current on industry grade equipment. Our district will continue to do our best to provide these resources to our students and staff for success in our programs. Lastly, at the district level, we will continue to explore and broaden the different offerings for new programs of study for students to participate and concentrate.

**9. Describe how your district will provide CTE students with the opportunity to gain postsecondary credit while still attending high school, such as through dual or concurrent enrollment programs or early college high school, as applicable.**

**RESPONSE:** At Columbus High School, students have multiple opportunities to gain postsecondary credit through Central Community College in construction, manufacturing, automotive, and mechatronics. We continually are open to new ideas and avenues to provide these options to students while in high school.

**10. In your district's Local and Regional CTE Assessments, action steps were identified related to CTE program implementation (including size, scope, and quality) your district hopes to address over the next four years. First, write the district's overarching goal(s) for this element in the space provided. Then list, in priority order, the action steps identified related to Size, Scope, and Quality and Implementing CTE Programs and Programs of Study your district will address over the next four years. These activities should directly relate to the annual budget application for Perkins funds submitted to the NDE.**

**District's Goal(s) for  
Size, Scope, and Quality and Implementing CTE Programs of Study**  
*(Copy and paste from the REVISION Summary)*

To provide the best experiences for our students and to sustain a program to stay at the forefront of STEM education, certain measures need to be taken. Goals to achieve this status include:

- Continually updating, upgrading and purchasing industrial grade equipment
- Work with school counselors to help students complete introductory courses through capstone courses
- Research and expand workplace experiences for students through virtual job shadowing, field trips, industry experiences and apprenticeships
- Research the latest industry certifications and grow our programming to deliver to students
- Continue to grow and adapt our advisory board to meet local workforce needs

**Prioritized Action Steps for**

<b>Size, Scope, and Quality and Implementing CTE Programs of Study:</b>	
<b>Program Year</b>	<b>Action Steps</b> <i>(What are you going to do to achieve your goal?)</i>
<b>Year 1: 2020-2021</b>	<ol style="list-style-type: none"> <li>1. Purchase Festo mechatronics equipment to upgrade the current mechatronics lab setting</li> <li>2. Purchase Tire Pressure Monitoring System kits and training for TPMS certifications through Snap-On in alignment with CCC-Hastings for dual credit</li> <li>3. Start Video Production pathway             <ol style="list-style-type: none"> <li>1. Purchase computers, software, and accessories</li> <li>4. Purchase of computers for coding for the middle school STEM program</li> </ol> </li> <li>5. Support business department by providing GMETRIX software to practice for Microsoft Office certifications</li> <li>6. Purchase industry grade knife sets for the FCS classroom and one industry grade food dehydrator</li> <li>7. Upgrade industry standard equipment in CTE courses</li> </ol>
<b>Year 2: 2021-2022</b>	<ol style="list-style-type: none"> <li>1. Tools purchase for Principles of Construction class</li> <li>2. Tools purchase for expansion of Advanced Construction to continue partnership with local contractor</li> <li>3. Expand learning opportunities for students in the Food Sciences pathway</li> <li>4. Explore drone for implementation for construction mapping and land surveying - potential for ag implementation</li> <li>5. Purchase tools for underwater drone from year 1</li> <li>6. Expand mechatronics pathway with upgraded equipment in correlation with local industry needs</li> <li>7. Explore a Health Sciences pathway             <ol style="list-style-type: none"> <li>a. Potential partnership with Columbus Community Hospital</li> <li>b. Explore opportunities to hold CNA courses at the high school</li> <li>c. Explore CPR training at the high school</li> </ol> </li> <li>8. Explore coding opportunities in partnership with Central Community College</li> <li>9. Upgrade industrial grade equipment upgrade in CTE courses</li> </ol>

	10. Align, upgrade, and expand middle school programs to with the high school programs of study and the local workforce alignment	
<b>Year 3: 2022-2023</b>	<ul style="list-style-type: none"> <li>1. Research expansion of Education Pathway with Wayne State College partnership</li> <li>2. Expand learning opportunities for students in the Food Sciences pathway</li> <li>3. Virtual reality simulator for automotive, construction, and engineering</li> <li>4. Expand CTSO participation and programming through development of CTSO options and investing in current CTSO experiences</li> </ul>	
<b>Year 4: 2023-2024</b>	<ul style="list-style-type: none"> <li>1. Purchase laptops and cart for the business department to upgrade their current equipment</li> <li>2. Industrial grade equipment upgrade in CTE courses</li> <li>3. Collaborate with stakeholders to review current and potential pathways</li> </ul>	
<b>Element 4: Student Performance Data</b>		

**Context:** All students participating in CTE programs should attain academic, technical, and career readiness skill proficiency and transition into advanced education and training and employment. Throughout the Local and Regional CTE Assessments, your district reviewed student performance data on a set of federal performance indicators, identified root causes for programs and student populations that are substantially underperforming, and identified a set of action steps that might be adopted to improve performance. To ensure and promote equitable access to CTE programs, recruitment materials, school counseling activities, and educational services offered to special populations should also be considered. In this section, you will review the high priority action steps identified at the program and student population levels to guide improvement.

**The term "special populations" means-**

- Individuals with disabilities;
- Individuals from economically disadvantaged families, including low income youth and adults;
- Individuals preparing for non-traditional fields;
- Single parents, including single pregnant women;
- Out-of-work-individuals;
- English learners;
- Individuals experiencing homelessness
- Youth who are in, or have aged out of, the foster care system;
- Youth with a parent who is a member of the armed services
- or is on active duty status

- 11. Describe how the district will provide support to teachers so they will:**
- a. Provide activities to prepare special populations for H3 sectors or occupations that will lead to self-sufficiency
  - b. Prepare CTE participants for non-traditional fields

- c. Provide equal access for special populations to CTE courses, programs, and POS; and
- d. Ensure that members of special populations will not be discriminated against on the basis of their status as members of special populations

**RESPONSE:** At Columbus Public Schools, we help support and educate teachers to better provide accessibility to CTE programs for all students. One activity that has helped expose teachers to the current workplace trends is summer industry tours that are open to all teachers. Teachers from all levels have been able to take information back to their students to prepare them for life after high school. Additionally, at the middle school level, all students have to take exploratory classes in different programs such as fashion, foods, and STEM as well as host a Reality 101 simulation for all 8th grade students.

At the high school level, different measures are being taken to ensure teachers are provided the resources necessary for students in special populations. Support has been provided to take students on field trips, specifically for students in special education and females in STEM; provide paid apprenticeship and internship opportunities for students through the Workplace Experiences class; teach students employability skills through a Job Site class as well as through Project Search with the local hospital.

- 12. How will the district address disparities or gaps in performance? If no meaningful progress has been achieved prior to the third program year, describe the additional actions that will be taken to develop strategies to eliminate those disparities or gaps.**

**RESPONSE:** In CTE courses, a focus has been put on student preparation for the ACT by implementing specific vocabulary and supplemental, online academic skill attainment resources with EdReady. These methods provide extra support to students in the CTE classes to close the reading and math gaps that exist. Additionally, in the classroom, teachers will continually make accommodations and modifications for specific students based on their needs.

- 13. In your district's Local and Regional CTE Assessments, action steps were identified to address any disparities in student performance data. First, write the district's overarching goal(s) for this element in the space provided. Then list, in priority**

**order, the action steps identified related to Student Performance Data that your district will address over the next four years.  
These activities should directly relate to the annual budget application for Perkins funds submitted to the NDE.**

**District's Goal(s) for Student Performance Data:**  
*(Copy and paste from the revision Summary)*

To consistently evaluate and improve programs, we should consistently examine the data to address our strengths and areas for improvement. With our trend data, the areas to address are as follows:

- Increase enrollment in capstone courses
  - Focus on non-traditional and special populations
- Incorporate reading, writing, and math strategies into units with interdisciplinary collaboration
- Ensure all marketing materials and district publications represent a diverse range of students

**Prioritized Action Steps for Student Performance Data:**

**Program Year**

**Action Steps**  
(What are you going to do to achieve your goal?)

- Year 1:  
2020-2021**
1. Review course descriptions and requirements for student entry into CTE classes
  2. Intentional focus on 4-Year Plans to encourage completion of career pathways
  3. Utilize EdReady software as a tool to increase reading and math scores for all students
  4. Provide professional development to incorporate technical reading and math strategies into lessons including, but not limited to: resource and manufacturer manuals, precision measurement calculations, and engineering design process and data gathering/manipulation.
  5. Purchase of digital camera and TV to market and raise awareness of CTE courses to students

- Year 2:  
2021-2022**
1. Market CTE careers to students through industry field trips and guest speakers
  2. Survey the special populations for program offering
  3. Analyze student data to identify gaps

	<ul style="list-style-type: none"> <li>4. Continually track, monitor and explore opportunities for students to gain certifications in CTE courses</li> </ul>
<b>Year 3: 2022-2023</b>	<ul style="list-style-type: none"> <li>1. Provide professional development to staff to create action plan to improve student test scores</li> <li>2. Create a plan to increase participants and concentrators in CTE pathways</li> <li>3. Market CTSOs to students for increased participation <ul style="list-style-type: none"> <li>a. Explore new opportunities for CTSO expansions</li> </ul> </li> <li>4. Collaborate with local business, industry and Chamber of Commerce to collect local workforce needs data</li> </ul>
<b>Year 4: 2023-2024</b>	<ul style="list-style-type: none"> <li>1. Identify gaps and action steps in technical skill attainment, secondary school completion, graduation rate, secondary school placement, and non-traditional placement and completion</li> <li>2. Attend trainings and conferences that include sessions on improving student assessment</li> <li>3. Survey student body for program offerings</li> </ul>

## Element 5: Recruitment, Retention, and Training of Faculty and Staff

**Context:** Providing high-quality instruction is at the heart of what CTE educators do in Nebraska every day. To prepare educators, take stock of your district's approaches towards recruiting a knowledgeable and diverse workforce, support services offered in order to retain staff, and the professional development provided to improve their skillsets. In this section, you will use the results of your districts Local and Regional CTE Assessments to prioritize the action steps identified for supporting educators and providing quality instruction to every student.

- 14. Describe how your district will coordinate with the NDE and institutions of higher education to support the recruitment, preparation, retention, and training, including professional development, of teachers, faculty, administrators, and specialist**

**instructional support personnel and paraprofessionals who meet applicable State certification and licensure requirements, including individuals from groups underrepresented in the teaching profession.**

**RESPONSE:** At Columbus Public Schools, we provide our teachers the opportunity to participate in numerous NDE offerings. For example, CTE teachers are heavily encouraged to attend the NCE Conference every summer as well as participate in curriculum and standards workshops offered in the fall semester. Teachers are encouraged to attend any training or professional development to improve their educational craft or trends in industry. Our district will also provide efforts towards recruitment of CTE teachers through the Educators Rising CTSO, specifically students interested in high needs areas. Moving forward, we will work with colleges and postsecondary institutions to recruit potential applicants through their educational classes and coursework.

- 15. In your district's Local and Regional CTE Assessments, action steps were identified to address CTE educator recruitment, retention, and training and what your district hopes to address over the next four years. First, write the district's overarching goal(s) for this element in the space provided. Then list, in priority order, the action steps identified related to Recruitment, Retention, and Training of Faculty and Staff that your district will address over the next four years. These activities should directly relate to the annual budget application for Perkins funds submitted to the NDE.**

**District's Goal(s) for the Recruitment, Retention, and Training of Faculty and Staff**  
*(Copy and paste from the revision Summary)*

- The greatest indicator of student performance is the quality of the teacher in the classroom. To ensure the quality of the CTE staff put in front of our students, certain areas of focus will be taken. Recruitment, and most importantly, retention of our staff is key to a stable and quality program.
- Partner with the Chamber of Commerce to promote CTE positions at career fairs, research teacher education career fairs, partner with college method classes to bring pre-service teachers into the classroom
  - Utilize marketing materials for CTE during recruitment opportunities
  - Provide travel accommodations for CHS staff to attend teacher education job fairs
  - Continue to offer relevant professional development for current staff

<b>Prioritized Action Steps for the Recruitment, Retention, and Training of Faculty and Staff:</b>	
<b>Program Year</b>	<b>Action Steps</b> (What are you going to do to achieve your goal?)
<b>Year 1: 2020-2021</b>	<ol style="list-style-type: none"> <li>1. Promote CTE teaching careers to CTSOs, specifically the Educators Rising group for students interested in the teaching field</li> <li>2. Recruit practicum students in college systems to promote Columbus High School's CTE programming</li> <li>3. Provide relevant professional development including industry standards and certification</li> <li>4. Networking and travel for recruitment at college and career fairs</li> <li>5. Use planned purchase of TV and camera for marketing of CTE education/educators</li> </ol>
<b>Year 2: 2021-2022</b>	<ol style="list-style-type: none"> <li>1. Recruit student teachers from college systems to promote Columbus High School</li> <li>2. Expand our network of potential job openings to a broader field (i.e. currently employed persons)</li> <li>3. Continue to retain current experienced employees through personalized trainings and professional development opportunities</li> <li>4. Expand enrollment in CTSOs for student recruitment</li> <li>5. Promote established mentoring program with existing staff members</li> </ol>

<b>Year 3: 2022-2023</b>	<ol style="list-style-type: none"> <li>1. Collaborate with local business and industry for training with industry-grade equipment</li> <li>2. Partner with college and industry representatives for qualified applicants</li> <li>3. Utilize Career Coordinator for recruitment opportunities</li> </ol>	
<b>Year 4: 2023-2024</b>	<ol style="list-style-type: none"> <li>1. Potentially utilize community colleges for staffing partnerships</li> <li>2. Address competitive salary packages and potential incentives</li> <li>3. Participate in college method classes to promote CHS CTE program</li> </ol>	
<b>Element 6: Work-based Learning</b>		
<p><b>Context:</b> 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 learning about work. Nebraska will evaluate the quality of CTE programs, in part, by the percentage of CTE concentrators who participate in high-quality work-based learning experiences. Additional information about Nebraska's work-based learning strategies can be found here:</p> <p><a href="https://www.education.ne.gov/workplace-experiences/phase-3-work-based-learning-strategies-overview/">https://www.education.ne.gov/workplace-experiences/phase-3-work-based-learning-strategies-overview/</a>.</p>		
<p><b>16. Describe the WBL opportunities provided to CTE students in your district and how you will work with businesses and employers to develop or expand WBL opportunities, as applicable.</b></p>		

**RESPONSE:** At Columbus High School, students are provided numerous opportunities to participate in work-based learning opportunities. To start, we host Perkins Advisory meetings to gain input from local business and industry members covering the trends they are facing as well as the potential for program offerings at the high school. Furthermore, CHS partners with the local Chamber of Commerce to help with the coordination of businesses to schools for the placement of students into job shadows. Additionally, in the Workplace Experiences class, students are provided the opportunity to job shadow or potentially a paid apprenticeship or internship in different career fields. Another opportunity provided by CHS is Project Search that is a partnership between the school and the local hospital. In this partnership, students gain employability skills and have the potential for a job after their placement. Lastly, a new learning experience for students will be a partnership with a local construction contractor to build a house for resale.

- 17. In your district's Local and Regional CTE Assessments, action steps were identified related to work-based learning. First, write the district's overarching goal(s) for this element in the space provided. Then list, in priority order, the action steps identified related to Work-based Learning that your district will address over the next four years. These activities should directly relate to the annual budget application for Perkins funds submitted to the NDE.**

District's Goal(s) for Work-based Learning:

*(Copy and paste from the revision Summary)*

Providing meaningful and unique experiences to our students will continue to grow and expand our CTE programs. To do this, we will concentrate on specific areas to grow and others to explore.

- Continue to grow and enhance our advisory board to meet local workforce needs
- Continue to partner with the Chamber of Commerce and the PATH program to develop and foster relationships with local business and industry to provide job shadowing opportunities for students
- Provide ongoing industry field trips, virtual job shadowing, guest speakers, and other student networking opportunities with local business leaders

**Prioritized Action Steps for Work-based Learning:**

**Program Year**

**Action Steps**

(What are you going to do to achieve your goal?)

1. Provide students in experiences with guest speakers, field trips, job shadows and other industry related opportunities
2. Research best practices and other relevant instructional practices related to Career Readiness for students
  - a. Engage in industry partnerships and promote work-based learning among students
  - b. Virtual Job Shadow license to provide experiences in under-represented industries
3. Provide professional development for staff members on ways to incorporate work-based learning strategies and experiences in the classroom setting

**Year 1:  
2020-2021**

<p><b>Year 2: 2021-2022</b></p> <ul style="list-style-type: none"> <li>1. Purchase industry grade equipment for CTE pathways, specifically the Construction pathway in partnership with Shelby Lumber</li> <li>2. Continue to engage employers on the benefits of providing experiences to students in the Workplace Experiences course</li> <li>3. Engage students in career experiences through virtual reality devices with business partnerships (NPPD)</li> <li>4. Identity and target other healthcare career employers in the Columbus Area to provide job shadowing opportunities for students.</li> </ul>	<p><b>Year 3: 2022-2023</b></p> <ul style="list-style-type: none"> <li>1. Identify ways to increase participation in job shadowing experiences through CTE capstone courses</li> <li>2. Expand and provide more opportunities for students in the healthcare pathway</li> <li>3. Expand and provide more opportunities for students in the education pathway</li> <li>4. Continue partnership with local entities for students in special populations and individualized education plans</li> </ul>	<p><b>Year 4: 2023-2024</b></p> <ul style="list-style-type: none"> <li>1. Explore work-based learning opportunities through classroom structure           <ul style="list-style-type: none"> <li>a. Ex. Through capstone courses, integrate job shadowing, apprenticeship, or internship opportunity</li> <li>b. Interdisciplinary, student-led enterprise projects</li> </ul> </li> <li>2. Expand opportunities for students to participate in Food Sciences pathway</li> <li>3. Partner with local businesses for CTSO service learning projects</li> </ul>
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## **Ensuring Equitable Access**

**18. How was improving the access to and success in CTE programs for each student, especially those who are members of a special population, examined and considered throughout the development of your goals for all six elements?**

**RESPONSE:** Throughout the reVISION process with the six elements and the development of our goals, different areas of focus were analyzed. To start, reaching our students at a younger age is a priority. At the middle school level, opportunities for industry experiences and learning opportunities is a positive attribute that we are always finding ways to expand. When transitioning to the high school and taking career development to the next level, a Career Seminar course will be offered for all freshmen to obtain career education knowledge, employability skills, and workplace experiences. Within individual pathways, different work-based learning opportunities will be provided such as field trips, guest speakers, and non-traditional experiences. Additionally, we continue to explore certification opportunities in all CTE areas for students to become more employable after high school. Within each program, it is a priority to provide the best experience possible for all students with up to date and upgraded industry grade equipment as well as providing the necessary professional development that teachers request. As a district, we will continually analyze student data to adjust and make improvements with deficiencies in the current programs offered as well as potential offerings. We are committed to providing offerings for students in special populations and to tailor experiences to their specific needs.

## **Stakeholder Engagement and Consultation**

Eligible recipients are required to engage a broad range of stakeholders who represent CTE and core academic areas, school counselors, special education, advisement professionals and academic counselors, administrators, instructional support professionals, parents and students, special populations (gender, race, ethnicity, migrant status, disability, economically disadvantaged, nontraditional, single parent, pregnant women, out of work individuals, English learners, homeless, foster care, active duty military, corrections), postsecondary CTE faculty, local workforce development, regional economic development, local business and industry, Indian Tribes and Tribal Organizations, and youth corrections, as applicable, in the development of the Local Perkins Application.

**Evidence of this can be provided in several ways:**

1. Upload a completed copy of your stakeholder verification worksheet(s) provided in the revision Resource Manual and include a description of how you will continue to engage these stakeholder groups throughout the duration of the Application (2020-2024); or
2. Detail the membership of an Advisory Committee that meets regularly to provide counsel, direction, and assistance to CTE programs. Include meeting dates, a sample agenda, and a description of the engagement that will take place throughout the duration of the Application (2020-2024). Membership should include representation from the above mentioned stakeholder groups, as applicable; or
3. Describe in detail how efforts were made to engage each of the required stakeholder groups throughout the development of this Local Perkins Application and how your district will continue to meaningfully engage them throughout the duration of the Application (2020-2024).

**It is recommended existing structures and means for engaging stakeholders that local districts no doubt already have in place are utilized as a starting point.**

**RESPONSE:** At Columbus Public Schools, we value the input and rely heavily on the support from local businesses and industry. In the past, an annual meeting was held during the school year to outline the CPS Perkins budget, programs of study, student data, and provided time for breakout groups to collaborate. In October 2019, a local needs assessment was conducted and invitations were sent out to the representatives for the Advisory Meeting that was hosted in November 2019. Through the 2019-20 Local Needs Assessment and the 2019 Perkins Advisory Meeting, the results and gaps in the local needs were presented and discussed in depth. The input from that meeting and the local needs assessment were the foundation to the creation of the new grant application.

Throughout the duration of the 2020-2024 Perkins Grant process, we will hold at a minimum of one Advisory Committee Meeting per school year. During the school year, the Career Coordinator interacts, participates, and is an active member of the Workforce Capture group through the local Chamber of Commerce as well as attends the Industry Leaders breakfast quarterly.

## Sample Agenda

### 2019 Fall Perkins Advisory Meeting November 20, 2019

- Introduction of Staff and Invitees
- Purpose of Perkins
- What's New at Columbus High School
  - Personal Finance class
  - Certifications
  - Past/Present Expenditures
  - Pathways at Columbus High School
- Budget, Data, Local Needs Assessment
- Breakout Sessions
  - Business
  - Skilled and Technical Sciences
  - Family, Consumer, Sciences

## Agenda

2020-21 Perkins Advisory Meeting  
February 10, 2021

- Introductions of staff members
- Purpose of Perkins/reVISION
- What's new at CHS
- CHS student data
- Pathways offered at CHS
- Program changes
- H3 Occupations
- Goals and action steps
- Current expenditures
- Community input

## Section 3: Annual Budget Worksheets

**The next step will be completed each year through 2024 and is based on the above four-year Local Perkins Application.**

Based on the Action Steps identified for each element for the program years 2020-2024, detail your budget request **for the upcoming program year** using the budget template provided. List all direct costs associated with the implementation of the proposed activities/action steps that are allowable and justified. Provide explicit detail (e.g. if you plan to use funds to attend a national conference, the name and date of the conference along with all associated costs must be listed if known; if you plan to purchase a piece of equipment, list the name, model, and price). Add/remove rows as needed.

**Allowable uses of funds:** All grant funds must adhere to the Perkins Guidelines for use of Federal Perkins Funds as defined in the Nebraska Perkins Management Guide. In particular, no consumable items, furniture, or items that become part of a permanent structure may be purchased. Please visit <https://cdn.education.ne.gov/wp-content/uploads/2019/04/NonAllowableUseofFunds.pdf> for additional information related to allowable uses of funds. **As a reminder, only those activities that directly align with the outcomes of the revision process (as detailed in the Local Perkins Application) may be eligible for Perkins funding.**

**Non-allowable uses of funds:** Perkins grant funds may not be spent on costs associated with writing the application, consumable items, whole-school improvement efforts not directly related to CTE programs, professional development not directly related to needed changes identified in the revision process, direct assistance to students (i.e. subscriptions or single-use licenses), or students below grade five. Perkins funds cannot be used to supplant funds. Carefully review the non-allowable uses of funds document found under the Perkins Management Guide link noted above.

[Click here for the Annual Perkins Budget Worksheet Template](#)



### Helpful Tip

When writing your action steps and developing your budget, remember there are some activities that require no funds, some that are being addressed by existing programs and initiatives within a school, college, or program, and still others that will require funds outside of the Perkins grant.