

Action Grant

2021-2022 Application

Submitted by

Hershey Public Schools

OFFICE OF CAREER, TECHNICAL, AND ADULT EDUCATION

NEBRASKA DEPARTMENT OF EDUCATION 500 S. 84th Street, Lincoln, NE 68510





Section 1: Application Overview

Introduction

The careers we prepare learners for are constantly emerging and changing. In order to keep up, Hershey Public Schools would like to position our CTE programming to allow learners the opportunity to participate in work-based learning and experience the "industry-standard" in the areas of health sciences and skilled & technical sciences. Hershey Public Schools believes that these priorities will improve, modernize, and expand our career education programs to align with Nebraska's economic priorities and workforce demands. Hershey Public Schools focused on three of the Perkins V Strategic Priorities: data use, aligned Career & Technical Education Programs, and work-based learning. According to our Perkins V Educational Service Unit #16 consortium application "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." Hershey Public Schools believes that adding a work-based learning coordinator and purchasing industry-standard equipment will lead us one step closer to this goal.

Work-Based Learning

It is apparent why the Nebraska Department of Education has deemed Work-Based Learning as a Carl D. Perkins V priority. Many students who enroll in college lack direction and drop out. Only **60%** of first-time undergraduates finish a four-year degree within six years, and only **30%** of students at community colleges earn an associate's degree within three years. As a result, the United States has the highest college dropout rate in the industrialized world. The community representatives that attended our reVISION Community Engagement Meeting also stated a need for students to participate in work-based learning to be more successful in their businesses and industries. However, only **4.92%** of ESU 16's CTE concentrators participate in work-based learning.

Because of this data, Hershey Public Schools believes that a robust career and technical education partnered with work-based learning will assist students in making the right choices for their future. Hershey Public Schools is seeking funding through the Nebraska Department of Education's reVISION Action Plan to finance a Work-Based Learning Coordinator position.

Industry-Standard in Health Sciences

Locally, health science occupations are needed in the Mid-Plains Economic Development region in Nebraska. Two of the top ten occupations for the Mid-Plains Region are in Healthcare (Registered Nurses as #2 and Licensed Practical/Licensed Vocational Nurses as #10). Great Plains Health, one of Lincoln County's largest employers, has pages and pages of unfilled healthcare positions daily. **58%** of the students enrolled at Hershey Public Schools have aptitudes/interests in the healthcare field. Current healthcare professionals present at Hershey's community engagement meeting expressed their needs for students to enter the healthcare workforce to fill the employment gap in the Mid-Plains Economic Development Region.

The National Athletic Trainers' Association has made access to athletic trainers a priority for the last few years. One of the major emphasis areas is at the secondary school level. Many high schools

¹ U.S. Department of Education, National Center for Education Statistics. (2018). Undergraduate Retention and Graduation Rates, May 2018

² William C. Symonds, Robert B. Schwartz, and Ronald Ferguson, February, 2011. Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century, p. 10. Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education.

have had athletic training services provided by an outside entity. Schools are now beginning to consider hiring their own on-staff athletic trainers. The need for certified athletic trainers in attendance for all collision/contact sports games and practices will likely occur in the foreseeable future. To help fill the need for certified athletic trainers, students can begin taking preliminary classes in high school and be able to have hands-on experience in the athletic training field. Classes that require an in-depth knowledge of anatomy to be successful will begin to differentiate between normal and injured anatomy.

Through research and healthcare professional recommendations, Hershey Public Schools would like to complement our newly revised health sciences program with a Biodex System 4 Pro. A Biodex System 4 Pro is used in the healthcare industry to identify, treat, and document the physical impairments that cause functional limitations. Sports and orthopedic medicine, pediatric medicine, neurorehabilitation, older adult medicine, industrial medicine, and researchers depend on Biodex to provide consistent, accurate, objective data.

Industry-Standard in Skilled & Technical Sciences

Locally, skilled & technical sciences occupations are needed in the Mid-Plains economic development region in Nebraska. Three of the top ten occupations for the Mid-Plains Region are in Skilled & Technical Sciences industry (Heavy Tractor Trailer Truck Drivers - #1, Farm Equipment Mechanics & Service Technicians - #6, Bus and Driver Mechanics & Diesel Engine Specialists - #8). The Union Pacific Railroad, one of Lincoln County's largest employers, has expressed a need for students to enter non-traditional fields at our community engagement meeting. **35%** of the students enrolled in Hershey Public Schools have aptitudes/interests in the skilled & technical sciences field.

Through research and industry professional recommendations, Hershey Public Schools would like to complement our skilled & technical sciences program with a Laser Engraver and Mini Lathe. The laser engraver will enable all students to create and design items in Skilled and Technical Sciences classes. This high skill development is needed for a high-demand, high-wage, and high-skill occupations like Welding. The more exposure a student has in high school the more comfortable a student will be in the skilled and technical sciences workforce. Employers have a challenge of finding people that have the capability to blend technology with equipment that creates a product. Hershey Public Schools is dedicated to providing industry-standard laptop computers to run the software for this laser engraving machine.

The mini lathe will encourage females and special needs students to enter into more skilled and technical science careers. The mini lathe is a smaller version of the large lathe that is used for woodworking and the metal working areas. This smaller version of the lathe will be used at the middle school and entry level classes with many students who will be using a lathe for the first time. This equipment can also lead to entrepreneurial skills for creating a product that is specialized and unique.

Conclusion

Hershey Public Schools is seeking a grant through the reVISION process to advance the technical skills of our students. Because of reVISION, we will graduate students that are more prepared to advance in jobs that are high-skilled, in high-demand, and are high-wage in our local workforce in our region. Hershey Public Schools understands that in order to have successful career & technical

education departments, work-based learning and industry-standard equipment must be purchased to offer students a truly hands-on and immersive Career & Technical Education experience.

Section 2: Key Objectives

Hershey Public Schools is dedicated to providing a <u>data-driven</u> Career & Technical Education program that <u>aligns to the local workforce needs</u> while providing students with <u>work-based learning</u> opportunities.

Objective #1: Data Use. Hershey Public Schools relies on data to improve, modernize, and expand our Career & Technical Education programming. As a school district, we have focused on student data (YouScience and Nebraska Career Connections assessments), the Nebraska Department of Economic Development data (H3 - high wage, high demand, high skill), and our community engagement night stakeholder data.

Students enrolled at Hershey Public Schools show a high aptitude/interest in the areas of health sciences and skilled & technical sciences. The student data from the YouScience and the Nebraska Career Connections assessments showed that **58%** of 7-12 students have high interest/aptitude for careers in the Health Sciences industry and **35%** of 7-12 students have high interest/aptitude in Skilled & Technical Sciences occupations.

According to the Nebraska Department of Economic Development in the Mid-Plains region, two of the top ten occupations are Health Sciences related (Registered Nurses as #2 and Licensed Practical/Licensed Vocational Nurses as #10). By 2026 in the Mid-Plains region, it is forecasted that there will be a **7.23%** increase in job openings for Registered Nurses and a **7.39%** increase in job openings for Licensed Practical/Licensed Vocational Nurses.³

Skilled & Technical Sciences is another area of emphasis for the Mid-Plains economic development region. Three of the top ten occupations for the Mid-Plains Region are in Skilled & Technical Sciences (Heavy Tractor Trailer Truck Drivers - #1, Farm Equipment Mechanics & Service Technicians - #6, Bus and Driver Mechanics & Diesel Engine Specialists - #8). By 2026 in the Mid-Plains region, it is forecasted that there will be a **8.67%** increase in job openings for Heavy Tractor Trailer Truck Drivers, a **7.28%** increase in Farm Equipment Mechanics & Service Technicians, and a **12.13%** increase in Bus and Driver Mechanics & Diesel Engine Specialists.⁴

Results from the ESU 16 regional community engagement night showed that employers need employees who are equipped with 21st century work skills (i.e. emotional intelligence, team player attitude, growth mindset, openness to feedback, adaptability, active listening, work ethic, communication skills, problem-solving, time management, demonstrate grit, etc...), have industry-standard certifications, and exposure to industry-standard equipment. Also, community stakeholders expressed the need for students to have exposure to job shadowing and/or interning.

ADVISER data shows that only **4.92%** of ESU 16's CTE concentrators participate in work-based learning. What is even more alarming are the statistics of special population students that are enrolled in work-based learning throughout ESU 16. **0%** of homeless students, **0%** of single parents,

³ Nebraska Department of Economic Development. H3. Retrieved April 22, 2021, from http://h3.ne.gov/welcome.xhtml

⁴ Nebraska Department of Economic Development. H3. Retrieved April 22, 2021, from http://h3.ne.gov/welcome.xhtml

0% of Hispanic students, **0%** of African-American students, and **0%** of English Language Learners participate in work-based learning.

Hershey Public Schools has analyzed multiple data sources to come up with our 3 priorities of work-based learning, industry-standard equipment in health sciences, and industry-standard equipment in skilled & technical sciences. These priorities will address the equity gaps for special populations students in work-based learning and ensure rural students have industry-standard equipment exposure.

Objective #2: Aligned CTE Programs. The careers we prepare learners for are constantly emerging and changing. To keep up, Hershey Public Schools has prioritized aligning current Career & Technical Education programming with the high-skill, high-wage, and high-demand (H3) occupations. Through the use of economic development data and community engagement data, Hershey Public Schools is working to ensure that all Career & Technical education programming is aligned with the next opportunities learners will encounter (post-secondary, on-the-job training, entry-level positions, certifications, etc...).

Aligning Hershey Public School's Health Sciences programming to health sciences industries means industry-standard equipment must be purchased. This equipment will allow students to experience the most up-to-date technology to identify, treat and document the physical impairments that cause functional limitations. The Biodex System 4 Pro is the current industry-standard in sports and orthopedic medicine, pediatric medicine, neurorehabilitation, older adult medicine, and industrial medicine. Students who are interested in a future in health sciences will benefit with an experience in the Biodex System 4.

Hershey Public School's skilled & technical sciences program is working to align to the industry-standard as well. Union Pacific Railroad is one of Lincoln County's largest employers. They have expressed a need for students to enter non-traditional fields to seamlessly transition into the industry. This lathe will encourage students to explore careers as a lathe operator in a welding business, wheel lathe operator at the Union Pacific Railroad, and wood turning operator for a woodworking business. Lathe operators are needed in welding fabrication companies to help their corporations meet the demands for the needs in the community. Combining the mini lathe with the laser engraver can encourage students to create a business and explore entrepreneurship. The state of Nebraska has a need for people to create small businesses to keep small rural communities growing.

Workforce alignment is a top priority for the Career & Technical Education programming at Hershey Public Schools. Through economic development data and community engagement data, Hershey Public Schools is confident that students can seamlessly transition into high-skill, high-wage, and high-demand (H3) occupations within the Mid-Plains region in Nebraska.

Objective #3: Work-Based Learning. Work-based learning strategies connect learners with employers to prepare them for success in an ever-changing workplace. However, students in rural parts of Nebraska are not afforded the same opportunities as students in high populated areas. It can be difficult to ensure rural students have access to work-based learning experiences because of the distance to businesses and industries. Only **4.92%** of students within the Educational Service

Unit 16 are taking advantage of work-based learning opportunities. Because of this data, Hershey Public Schools has made work-based learning a priority.

According to Gallup, business leaders value an internship or work-based learning experience more than grades or college major. Hershey Public Schools understands that work-based learning helps students: strengthen academic, technical, and career readiness (employability) skills, explore career options, enhance personal finance knowledge and skills, foster positive relationship with adults, observe all aspects of a company's operation, and develop an awareness of the requirements of careers so they can effectively plan postsecondary and career pursuits.

By hiring a work-based learning coordinator, Hershey Public Schools can ensure that students are partnered with H3 industries that align to their aptitudes/interests and students are safely transported to the workplace. A work-based learning coordinator will communicate with business and industry professionals to ensure students are learning through work. Hershey Public Schools will utilize the Nebraska Department of Education's work-based learning resources to ensure a successful start to this program.

Section 3: Project Activities.

Project #1. Work-Based Learning Coordinator. Hershey Public Schools would like to utilize reVISION Action Grant funds to finance the salary and benefits of a Work-Based Learning Coordinator. Only **4.92%** of students within the Educational Service Unit 16 are taking advantage of work-based learning opportunities. Through the reVISION process, Hershey Public Schools have realized the deficit in work-based learning. Because of this, a Work-Based Learning Coordinator would benefit the Career & Technical Education programming at Hershey Public Schools. The Work-Based Learning Coordinator will be responsible for many activities.

- Plan, develop, and evaluate the work-based learning program.
- Administer and manage the work-based learning program.
- Build relationships with local and regional businesses and community organizations, local and regional economic development and labor offices.
- Coordinate relational classroom instruction and on-the-job instruction.
- Guide and advise student participants
- Create and/or review communications and public relations materials.
- Safely transport students to worksites.

The goal for this project is to ensure that all students have the opportunity to participate in an immersive and hands-on work-based learning experience. Hershey Public Schools will emphasize the importance of students in special populations to be represented in work-based learning, including those with disabilities. A Work-Based Learning Advisory Committee will be created to evaluate the program. The Work-Based Learning Committee will consist of many members: administrators, school counselor, career & technical education instructors, students, parents/guardians, work-based learning coordinator, school board members, business/industry representatives, and a Department of Labor representative. Students and worksite supervisors will also be surveyed to evaluate the program to determine if necessary changes are needed. Hershey Public Schools has a person in the community interested in this position.

With an emphasis in work-based learning in the state of Nebraska, gaining the opportunity to start a program at Hershey Public Schools would provide students a chance to expand their experiences outside of the classroom. Starting this program would give Hershey Public Schools the opportunity to sustain this position for future years and continue to build relationships in our community and the surrounding area.

Project #2. Industry-Standard in Health Sciences.

Hershey Public Schools would like to utilize reVISION Action Grant funds to finance a Biodex System 4 Pro, the industry-standard in health science occupations. This system is used to identify, treat, and document the physical impairments that cause functional limitations in joints. It is used in sports and orthopedic medicine, pediatric medicine, neurorehabilitation, older adult medicine, and industrial medicine. The requested BIODEX System 4 PRO comes complete with the dynamometer head, seat and T-bar base. It also has attachments to work all joints of the body. It may be used for work simulation rehabilitation for faculty and staff.

The BIODEX objective data helps practitioners communicate need, progress, and outcome clearly and accurately to patients and healthcare providers. Data is gathered from multiple setting options. The options include: Isokinetic Resistance Mode (Isokinetics provide a variable resistance against the limb as it goes through the range of motion.) Reactive Eccentric Mode (Eccentrics over power the muscle while it goes through the range of motion), Passive Motion Mode (Passive mode helps provide movement in the early stages of rehabilitation.), Isometric Mode (Isometrics provide strengthening against an immovable resistance.), and finally Isotonic Mode (Isotonics provide a more traditional resistance of a constant resistance.)

BIODEX equipment marks the highest correlation coefficients for reliability, accuracy, validity and repeatability. Evidence-based clinical protocols combine science with practical application to ensure that you provide the best outcomes. BIODEX can be used to treat children from ages. There are pediatric attachments and age-based normative data are available to provide evidence-based standards for isokinetic muscle testing, objective data for neuromuscular control and strength.

The established partnerships with local colleges and universities play an integral part in the successful integration of the BIODEX System 4 PRO unit. Prior knowledge of this very technical machine will give our students an advantage above other applicants for health career professions.

Hershey Public School's Health Sciences teacher, Dr. Long has extensive experience with the Biodex products. He has used isokinetics since 1988 in athletic training and physical therapy settings. His expertise with the Biodex allowed him to attend the National Football League's scouting combine in Indianapolis, Indiana in 2010 and 2011 as a member of the isokinetic testing team. The team tested college seniors who were invited to the combine. Information from the Biodex reports were used to identify potential weaknesses in the lower extremities of the athletes.

Two of the top ten occupations for the Mid-Plains Region are in Healthcare (Registered Nurses as #2 and Licensed Practical/Licensed Vocational Nurses as #10). Great Plains Health, one of Lincoln County's largest employers, has pages and pages of unfilled healthcare positions daily. **58%** of the students enrolled in Hershey Public Schools have aptitudes/interests in the healthcare field. Current

⁵ Nebraska Department of Economic Development. H3. Retrieved April 22, 2021, from http://h3.ne.gov/welcome.xhtml

healthcare professionals present at Hershey's community engagement meeting expressed their needs for students to enter the healthcare workforce to fill the employment gap in the Mid-Plains Economic Development Region.

The following standards/benchmarks will be taught in Health Sciences I utilizing the BIODEX:

- Standard 1. Students will explore the history of healthcare and pathways of health careers. (Benchmarks 1.1 1.4)
- Standard 2. Students will differentiate between legal and ethical standards of health care. (Benchmarks 2.1 2.2)
- Standard 3. Students will develop the various methods of giving and obtaining information including oral and written (Benchmarks 3.1 3.3)
- Standard 4. Students will understand the roles and responsibilities of individual members of an effective team (Benchmarks 4.1)
- Standard 5. Students will understand existing and potential safety hazards in the health care setting (Benchmarks 5.1 5.2)
- Standard 6. Students will demonstrate technical skills in health professions (Benchmarks 6.1 6.2)

The following standards/benchmarks will be taught in Health Sciences II utilizing the BIODEX:

- Standard 1. Students will explore and experience the wide variety of Health Professions (Benchmarks 1.1 1.2)
- Standard 2. Students will understand health literacy. (Benchmarks 2.1 2.2)
- Standard 3. Students will survey basic human structure and function and disease processes (Benchmark 3.1 3.5)
- Standard 4. Students will assess basic first aid situations. (Benchmarks 4.1 4.3)
- Standard 5. Students will analyze and evaluate legal and ethical issues in healthcare (Benchmarks 5.1 5.3)

Evaluation is essential to the success of our health sciences program. To measure outcomes, we will gather data from the senior exit surveys, student achievement data, student surveys and enrollment numbers in our health sciences program of current and past students. Hershey Public Schools will want to ensure that what we are offering in our Program of Study is setting our students up for success with the skills and credentials necessary to continue their education and find employment in high-skill, high-wage, and high-demand (H3) occupations. If needed, changes will be made based on the data/feedback received.

Hershey Public Schools will fiscally prepare for updates and repairs to The Biodex System 4 Pro. Curriculum materials have already been purchased that will assist students in the discovery of health science occupations. A retired certified athletic trainer has been employed by Hershey Public Schools to lead the Health Sciences program. This employee has secured his doctorate and brings numerous years of experience in the Health Sciences field. Dr. Doug Long has worked with this Biodex System 4 Pro first-hand in the industry. Hershey Public Schools plans to fiscally support this employee's salary and benefits for future years to come.

Project #3. Industry-Standard in Skilled & Technical Sciences. Hershey Public Schools would like to utilize reVISION Action Grant funds to finance a laser engraver and a mini-lathe.

The versatility of the laser engraving machine lends itself to be used in all the skilled and technical science classes at Hershey. The engraver has the capabilities to cut thin material and engrave on both wood and metal. The current classes at Hershey utilize wood and metal material in the student's projects. The engraver will also allow students to use plastics and other materials to create a product according to the Nebraska State Standards. Having the ability to expand the types of materials will open opportunities that Hershey Public Schools does not currently have to the students. Hershey Public Schools is dedicated to providing industry-standard laptop computers to run the software for this laser engraving machine.

The mini lathe will be utilized in the 8th grade class and woodworking classes. This entry level type of equipment will help students learn measuring skills and put a hands-on application to the knowledge learned in their mathematics classes. There is more need for students to not only have an understanding of math but how is their mathematical knowledge used in the workforce to create a product.

Three of the top ten occupations for the Mid-Plains Region are in Skilled & Technical Sciences (Heavy Tractor Trailer Truck Drivers - #1, Farm Equipment Mechanics & Service Technicians - #6, Bus and Driver Mechanics & Diesel Engine Specialists - #8).⁶ **35%** of the students enrolled in Hershey Public Schools have aptitudes/interests in the skilled & technical sciences field.

The laser engraver, mini lathe, and computers will ensure these Nebraska State Standards that will be covered more precisely.

- STS.HS.2.1: Apply safety principles, practices and guidelines to the work environment
- STS.HS.2.2: Investigate career opportunities in skilled and technical sciences areas.
- STS.HS.5.3: Demonstrate use of manufacturing communications.
- STS.HS.5.5: Manufacture a product using manufacturing technology.
- STS.HS.6.4: Identify the materials, tools and equipment needed to manufacture a product.
- STS.HS.9.1: Applies appropriate academic and technical skills.
- STS.HS.9.2: Produce a product.

Evaluation is essential to the success of our skilled & technical sciences program. To measure outcomes, we will gather data from the senior exit surveys, student achievement data, student surveys and enrollment numbers in our skilled & technical sciences program of current and past students. Industry professionals will be used to evaluate student projects. Hershey Public Schools will want to ensure that what we are offering in our Program of Study is setting our students up for success with the skills and credentials necessary to continue their education and find employment in high-skill, high-wage, and high-demand (H3) occupations. If needed, changes will be made based on the data/feedback received.

Hershey Public Schools will fiscally prepare for updates and repairs to the industry-standard laser engraver and mini-lathe. The Skilled & Technical Sciences instructor salary, benefits, and industry-standard laptop computers to run the laser engraver software will also be fiscally supported by Hershey Public Schools.

⁶ Nebraska Department of Economic Development. H3. Retrieved April 22, 2021, from http://h3.ne.gov/welcome.xhtml

Perkins V Objectives

According to our Perkins V Educational Service Unit #16 consortium application "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." Hershey Public Schools believes that adding a work-based learning coordinator and purchasing industry-standard equipment will lead us one step closer to this goal.

Section 4: Commitment & Capacity

Hershey Public Schools is committed to growing work-based learning opportunities for the 2021-22 school year. By introducing industry-standard equipment, students will be more competitive in the workforce and post-secondary education.

The Perkins V reVISION grant leadership team will consist of:

Ms. Jane Davis (Hershey Public Schools Superintendent): Fiscal Leadership and Curriculum Development Oversight; Mr. Jeff Steinbeck (Hershey High School 7-12 Principal): Curriculum Development and Instructional Leadership; Dr. Doug Long: (Hershey High School Athletic Trainer, Health Sciences/Careers Teacher): Curriculum, Class instruction, Field Experience/Observation/Visitation and Experiences, HOSA Advisor and Practicum Supervision; Mr. Will Winchester (Hershey High School Skilled & Technical Sciences Teacher): Curriculum, Class Instruction, SkillsUSA Advisor

Advisory Council members may include, Brett Julius, Hershey School Guidance Counselor; Trey Johnson DPT, PT, Great Plains Health; Dr Kazuma Akehi, UNK Athletic Training Program Director; Megan Timmerman (UNMC Clinical Education Coordinator, Medical Nutrition Education Division; Kevin Howard: UNK Health Careers Department; Tanya Custer, UNMC Associate Professor, Distance Education Director; Tim Golden, Welding instructor at Mid Plains Community College; Kirk Guynan, Welding operations owner for Guynan Machining Inc.

Hershey Public Schools understands that many students leave high school without knowledge of what they want to do professionally. It is the goal at Hershey Public Schools to ensure that every student walks out our doors with a career goal and a plan to tackle that goal. This can be accomplished through work-based learning, aligned Career & Technical Education, student aptitude/interest surveys, personalized learning plans, industry-standard equipment, etc..

Job statistics indicate that the need for healthcare careers and skilled & technical science careers are going to increase over the next several years. The growth of the knowledge base that is available at the high school level will allow students to be more successful in college and entry-level positions. One of the main goals of the activity is to have an increase in students transitioning into healthcare and skilled & technical science careers. The two governing bodies will ensure grant funds will meet the goals by monitoring and developing curricular activities, field experiences/observations and in-school events.

These two governing bodies will use data from the senior exit surveys, student achievement data, student surveys and enrollment numbers health sciences program and skilled & technical sciences program of current and past students to determine if goals have been met.

Budget

Activity Budget: Activity # 1				
Expenditure	Unit Cost	Total		
Salaries – Specified by Position (Object Code 100)				
Work-Based Learning Coordinator Salary	\$16,740.00	\$16,740.00		
	Subtotal	\$16,740.00		
Employee Benefits – Specified by Position (Object Code 200)				
Health Insurance - Work-Based Learning Coordinator	\$0.00	\$0.00		
FICA - Work-Based Learning Coordinator	\$1224.00	\$1224.00		
Retirement - Work-Based Learning Coordinator	\$1566.00	\$1566.00		
	Subtotal	\$2,790.00		
Professional & Technical Services – (Object Code 300)				
Not Applicable	\$0.00	\$0.00		
	Subtotal	\$0.00		
Other Purchased Professional Services - (Object Code 400/500)				
Not Applicable	\$0.00	\$0.00		
	Subtotal	\$0.00		
Supplies— including Operational Equipment - (Object Code 600)				
Not Applicable	\$0.00	\$0.00		
	Subtotal	\$0.00		
Capital Assets- (Object Code 700)				
Not Applicable	\$0.00	\$0.00		
	Subtotal	\$0.00		
	ACTIVITY TOTAL	\$19,530		

Activity Budget: Activity # 2		
Expenditure	Unit Cost	Total
Salaries – Specified by Position (Object Code 100)		
Health Sciences Instructor Salary	\$75,950.00	\$75,950.00
	(in-kind)	(in-kind)
	Subtotal	\$75,950.00
		(in-kind)
Employee Benefits – Specified by Position (Object Code 200)		
Health Insurance	\$23,592.00	\$23,592.00
	(in-kind)	(in-kind)
FICA	\$7,009.00	\$5,664.00
	(in-kind)	(in-kind)
Retirement	\$8955.00	\$7,304.00
	(in-kind)	(in-kind)
	Subtotal	\$36,560.00
		(in-kind)
Professional & Technical Services – (Object Code 300)		, ,
Nebraska State Athletic Trainers' Association Summer Education	\$6000.00	\$6,000.00
Conference, Mid-America Athletic Trainers' Association's Annual	\$2000.00	\$2,000.00
Spring Symposium and the National Athletic Trainers' Associations	(in-kind)	(in-kind)
Annual Symposium and Exposition and the Nebraska Career	,	,
Education Conference		
	Subtotal	\$6,000.00
		\$2,000.00
		(in-kind)
Other Purchased Professional Services - (Object Code 400/500)		
Not Applicable	\$0.00	\$0.00
	Subtotal	\$0.00
Supplies— including Operational Equipment - (Object Code 600)		
Not Applicable	\$0.00	\$0.00
	Subtotal	\$0.00
Capital Assets- (Object Code 700)		
BIODEX System 4 Pro	\$47,850.00	\$47,850
	Subtotal	\$47,850
	ACTIVITY TOTAL	\$53,850.00
		\$114,510.00
		(in-kind)

Activity Budget: Activity # 3		
Expenditure	Unit Cost	Total
Salaries – Specified by Position (Object Code 100)		
Skilled & Technical Sciences Instructor Salary	\$72,800.00	\$72,800.00
	(in-kind)	(in-kind)
	Subtotal	\$72,800.00
		(in-kind)
Employee Benefits – Specified by Position (Object Code 200)		
Health Insurance - Skilled & Technical Sciences	\$23,592.00	\$23,592.00
	(in-kind)	(in-kind)
FICA - Skilled & Technical Sciences	\$5,730.00	\$5,730.00
	(in-kind)	(in-kind)
Retirement - Skilled & Technical Sciences	\$7,325.00	\$7,325.00
	(in-kind)	(in-kind)
	Subtotal	\$36,647
		(in-kind)
Professional & Technical Services – (Object Code 300)		
Nebraska Career Education Conference Registration	\$350.00	\$350.00
	(in-kind)	(in-kind)
	Subtotal	\$350.00
		(in-kind)
Other Purchased Professional Services - (Object Code 400/500)		
Hotel & Mileage for Nebraska Career Education Conference	\$350.00	\$350.00
	(in-kind)	(in-kind)
	Subtotal	\$350.00
		(in-kind)
Supplies— including Operational Equipment - (Object Code 600)		
Industry-Standard Laptop Computers 14@\$1,100	\$15,400	\$15,400
	(in-kind)	(in-kind)
Torchmate software, AutoDESK Revit, and autoCAD software for	\$4,200	\$4,200
laptops. \$300 @ 14 laptops	(in-kind)	(in-kind)
Mini-Lathe: Superpen Makg Startr St w/Lathe from Penn State Industries	\$710.95	\$1,422.00
	Subtotal	\$1,422.00
	Justicial	\$19,600
		(in-kind)
Capital Assets- (Object Code 700)		
H2I Group - Universal Laser System	\$25,198.00	\$25,198.00
The Group Chiversal Laser System	423,130.00	723,130.00
	Subtotal	\$25,198.00
		\$129,747.00
		(in-kind)
	ACTIVITY TOTAL	\$26,620
		\$129,747
		(in-kind)

		Budget Summary		
			Grant Funds	In-Kind
Salaries				
	Activity 1	Employ a Work-Based Learning Coordinator Salary 1080 hours @ \$15.50	\$16,740.00	
	Activity 2	Employ Dr. Doug Long certified athletic trainer/K-12 certified instructor		\$75,950.00
	Activity 3	Employ Will Winchester as our Skilled & Technical Sciences certified Instructor		\$72,800.00
Employee Bei	nefits			
	Activity 1	Health/Retirement/FICA	\$2,790.00	
	Activity 2	Health/Retirement/FICA		\$36,560.00
	Activity 3	Health/Retirement/FICA		\$36,647.00
Professional 8	& Technical Se	rvices		
	Activity 2	Nebraska State Athletic Trainers' Association Summer Education Conference, Mid-America Athletic Trainers' Association's Annual Spring Symposium and the National Athletic Trainers' Associations Annual Symposium and Exposition and the Nebraska Career Education Conference	\$6,000.00	\$2,000.00
	Activity 3	Nebraska Career Education Conference Registration		\$350.00
Other Purcha	sed Services			

	Activity 3	Hotel & Mileage for Nebraska Career Education Conference		\$350.00
Supplies				
	Activity 3	Industry Standard Laptops - 14 @\$1,100		\$15,400.00
		Torchmate software, AutoDESK Revit, and autoCAD software for laptops. \$300@ 14 laptops		\$4,200.00
		Mini-Lathe: Superpen Makg Startr St w/Lathe from Penn State Industries.	\$1,422.00	
Capital Asset	S			
	Activity 2	BIODEX System 4 Pro	\$47,850.00	
	Activity 3	H2l Group Universal Laser System	\$25,198.00	
		Grand Total	\$100,000.00	\$244,257.00
		In-Kind funds will be paid for through General Fund Property Tax receipts and receipts from the John Applegate Grant Fund		

Section 6: Supplemental Documents

Supplemental Document #1 - Community Engagement Stakeholder Input

Supplemental Document #2 - YouScience Data Collection

Supplemental Document #3 - BIODEX System 4 Pro Brochure

Supplemental Document #4 - Laser Engraver Quote

Supplemental Document #5 - Dr. McKenzie Support Letter

Supplemental Document #6 - Laser Engraver Brochure

Supplemental Document #7 - Mini-Lathe Quote

Supplemental Document #8 - Lynn Reinhart Support Letter

Supplemental Document #1 - Community Engagement Stakeholder Input

Question #1 - What strategies can we use to help students master the Nebraska Career Readiness Standards? How should their mastery be measured/documented?:	Question #2 - Reflecting on the Nebraska Career Education Model and the data presented, what courses should our schools offer to prepare students for careers in our future economy?:	Question #3 - What strategies should our school and/or community employ in order to prepare our students for careers in our future economy?:
Create a business course in career development/ job pursuit, employability skills	What if schools partnered to create a course or series of courses around employability skills, résumé writing, and interviewing? Could that be a grant funded program through reVISION?	 Career Exposure/Exploration Shadowing Career Counseling Mentoring
Require 4 years of Math	CNA Courses through MPCC - Prerequisite to work in healthcare facility	 Job Shadow Complete Résumé Dave Ramsey's Total Money Student Makeover Interview Skills Have businesses talk to the students about drug testing, phones, being on-time, etc Let the business people help you educate student Join in partnership with your community college. Career Report - Students seek out business interview to report on

	T	
Question #1 - What strategies can we use to help students master the Nebraska Career Readiness Standards? How should their mastery be measured/documented?:	Question #2 - Reflecting on the Nebraska Career Education Model and the data presented, what courses should our schools offer to prepare students for careers in our future economy?:	Question #3 - What strategies should our school and/or community employ in order to prepare our students for careers in our future economy?:
Increase opportunities for job shadowing, internships, etc Job Exposure - Tours - Farms/Ranches, Manufacturers, Hospitals, etc	Information Technology courses related to Agriculture	Employment Fairs
Rubric	 Instructional Technology related to Agriculture Nursing Assistant 	 Bring community members in for interviews Job Shadows
-Remove/don't allow excuses for failure -Integrate aspects of standard in core classes (e.g. English - critical thinking, Social Studies - problem solving, STS classes-creativing, technology programs)	Careers Class	Have businesses or others in the community help with mock situations (interviews, presentations, etc)
Careers Class	Early Career Exposure	Not college fairs, but employment fairs
There may be very impactful speakers or videos of speakers to teach many standards (customer service, problem solving, conflict resolution)	Project- Based Learning	Job Shadows

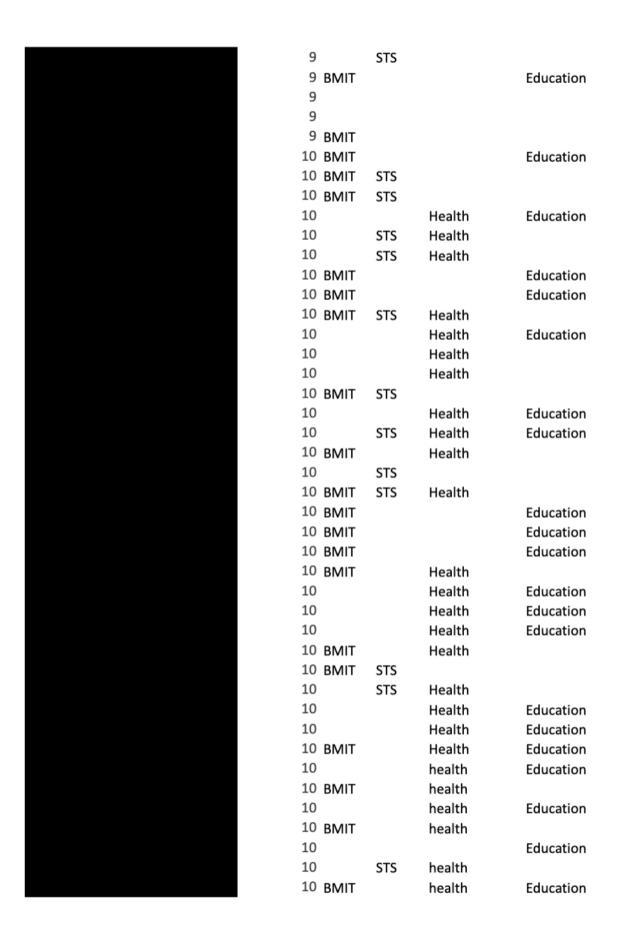
Question #1 - What strategies can we use to help students master the Nebraska Career Readiness Standards? How should their mastery be measured/documented?:	Question #2 - Reflecting on the Nebraska Career Education Model and the data presented, what courses should our schools offer to prepare students for careers in our future economy?:	Question #3 - What strategies should our school and/or community employ in order to prepare our students for careers in our future economy?:
State Department of Education needs to recognize potential to collaborate with Nebraska Extension on Real Life Problems & Skills	Centralized Career Academy	Internships
It seems we are so focused on life skills. Responsible kids are being held back. It's no wonder the responsible kids don't return to rural Nebraska.	Schools need to be forced to collaborate to bring programs to each other. Many kids are missing out.	Career Counselor
Career Readiness Integration in Content Curriculum	Schools identify core academies, have students visit employers, or host panels. Community fairs are also efficient.	Career Fairs
Workplace Exposure/ Experiences	Opportunity to do something regionally	Internship
	Have someone put together videos for each field that one teacher can monitor that kids watch that are directly related to their field.	Mentoring
	Technology & Communication	Leverage technology. Most schools have tablets or laptops. It would be easy to connect employers to students to talk about ongoing projects, etc To expose students to real-life examples.

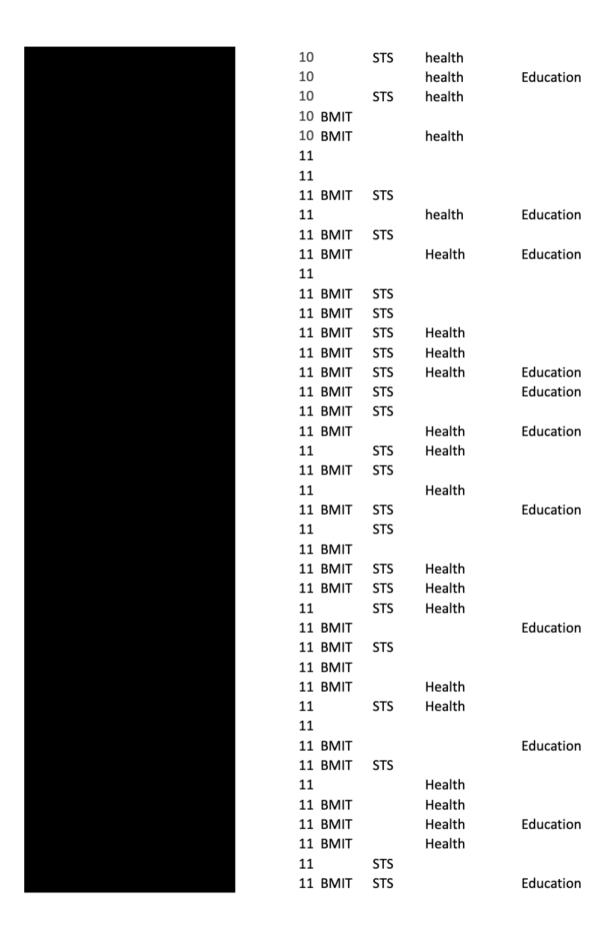
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	CNA	Expose students to not only job shadows, but employer training. Leverage what employers are already doing. Offer students the ability to observe and participate.	
	All day, 1x a week. Classes offered at the college or hands on classes at other schools	Job Shadowing	
	Anyone going into the medical field must take a CNA class. Which can be done in H.S.	Career Counseling	
	- CNA/Med Aide - Cooking Class/Dietary - Take College Class and do skills at local nursing home (Note: SCC - Beatrice does course on Skype and students do the skills at local nursing home)	 Career Shadowing in Health Job Fairs Panel to Explain Health Opportunities 	
	Develop program so a student is required to job shadow with 8 - 10 businesses per semester	Job Shadowing with businesses Teach School as it's a job	

Question #1 - What strategies can we use to help students master the Nebraska Career Readiness Standards? How should their mastery be measured/documented?:	Question #2 - Reflecting on the Nebraska Career Education Model and the data presented, what courses should our schools offer to prepare students for careers in our future economy?:	Question #3 - What strategies should our school and/or community employ in order to prepare our students for careers in our future economy?:
	Résumé writingInterviewsCooperative Councils	Have Business People come in and interview students for an XYZ job (sample job)
	 Habitudes (1 day training) NGadge - Jr. High CDL - 76 hours 	7 Cooperatives. That could be a resource.
		UPRR Connections

Supplemental Document #2 - YouScience Data Collection

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12 BMIT			Education
12 BMIT		Health	
12 BMIT		Health	Education

	12 BMIT	STS	Health	
Total	98	61	100	64
Percentage	56.98%	35.47%	58.14%	37.21%

Supplemental Document #3 - BIODEX Brochure



The Clinical Advantage $^{\text{\tiny TM}}$

System 1

DYNAMOMETER

Identify, Treat, Document

ISO 13485:2016 CERTIFIED **BIODEX**

For more than 30 years the System 4 continues to be the choice of the most distinguished clinics and research facilities worldwide.



Technology
Featuring six modes of operation, the System 4 offers pioneering breakthroughs in neuromuscular testing and rehabilitative technology.



Phases of Rehabilitation The System 4 allows for six phases of rehabilitation following the model of proving need, progress, and outcome.



Advantage BX™ Software
Streamlined, intuitive
experience so users can
capture and document
every stage of the rehab
process. Now features
report for ACL Return
to Play.



Versatility
Expand your applications to provide consistent, accurate, objective data for sports/orthopedic medicine, pediatric, research and more.



Adaptability
The potential uses for the System 4 go well beyond ACL rehab. The System 4 Dynamometer is used worldwide on a variety of joints and neuromuscular injuries.

I find isometrics a great way of helping patients build confidence in producing force, and they have immediate biofeedback to consolidate this confidence."



- Gareth Thomas, Scholars Therapies

Distinguish Yourself For people who know the difference



The Technology

Based on accepted science, backed by independent studies, supported by clinical protocols and normative data.

Isokinetic Resistance Mode

Completely accommodating throughout the entire range of motion

- Resistance continuously matches effort, accommodating to variations in patient force output due to weakness, pain or fatigue at specific points in the individual's range of motion.
- By identifying the area that is weak, a targeted rehabilitation program can be designed.
 Targeting and concentrating on the impairment allows a faster, measurable recovery.
- The unique impact-free acceleration and deceleration eliminates joint trauma, allowing exercise and testing at more functional speeds.
- Applied torque response ensures limb velocity increases or decreases in proportion to the torque applied during acceleration and deceleration, enabling neuromuscular control measurements.
- Choose concentric and eccentric contractions to perform isolated plyometric exercises.
- Concentric torque up to 500 ft-lb
- Eccentric torque up to 400 ft-lb

Isometric Mode

Effectively develop strength and decrease joint effusion

- Commonly used pre- and post-operatively or when pain associated when motion is a factor.
- Work the agonist, antagonist or both muscles at specified joint angles.

Passive Motion Mode

Multi-function modality

- Unique control properties allow for early intervention throughout all phases of rehabilitation.
- Passive speeds can be set as low as 0.25 degrees per second and as fast as 300 degrees per second.
- Ideal for proprioceptive testing Active joint position testing stimulates joint and muscle receptors and provides a functional assessment of afferent pathways.

Isotonic Mode

Restore function

- Allows velocity to vary while providing inertia-free constant force and concentric or eccentric muscular contractions.
- Higher performance
 - Isotonic force as low as 0.5 ft-lb = 6 inch pound; and as high as 400 ft-lb
- Selecting force provides protective pre-loading of the joint prior to movement.

Reactive Eccentric Mode

For submaximal neuromuscular re-education in early phases of rehabilitation

- Patient must produce and maintain a predetermined minimum force output to initiate movement, loading the muscles surrounding the joint, producing preload, thus stabilizing and protecting the joint.
- · Eccentric torque up to 400 ft-lb.







Prove need, progress, and outcome

Six phases of rehabilitation.

- Healing Constraints and Proving Need
 In Passive Mode, gentle range of motion exercise
 can facilitate the healing process and restore
 normal range of motion necessary for function.
 Isometric mode allows safe, comfortable
 strengthening and testing at specified angles
 that are safe for both your pre- and
 post-operative patients.
- 2. Controlling Joint Effusion/Inflammation
 Utilizing the Passive Mode with other modalities
 allows the structures around the joint to work as a
 pump to move blood, lymph and waste products
 out of the joint. System 4 has the capability to move
 the limb as slow as .25 degrees per second and
 with force capabilities as low as .5 ft-lb.
- 3. Restoring Range of Motion Controlling the System 4 through the GUI interface in Passive Mode allows range of motion to be restored by gradually increasing range of motion on the fly in a specified direction, at appropriate speeds and safe torque levels.

- 4. Restoring Strength and Proving Progress Isometric, active assistive, submaximal concentric, eccentric contractions are early strengthening techniques that are available to the System 4 user. More progressive maximal concentric, eccentric contractions are available in Isokinetic, Isotonic, Passive and Reactive Eccentric modes. These modes are also suitable for testing and delineating a documentable progression of muscular strength, endurance and joint position sense.
- 5. Restoring Function

Isokinetic concentric / concentric mode allows for safe exercise at speeds which approximate function. Impact and inertia-free Isotonic Mode allow muscles to contract exactly as they would perform during functional activities. Proprioception, muscular acceleration and deceleration are also activities that are addressed with the Biodex System 4.

6. Proving Outcome

All five modes can objectively assess isolated joint muscle strength and neuromuscular control.









- 7 -



Advantage BX™ Software

Simple. Logical. Intuitive.

Capture and document every stage of the rehabilitation process with efficient functionality and intuitive navigation.

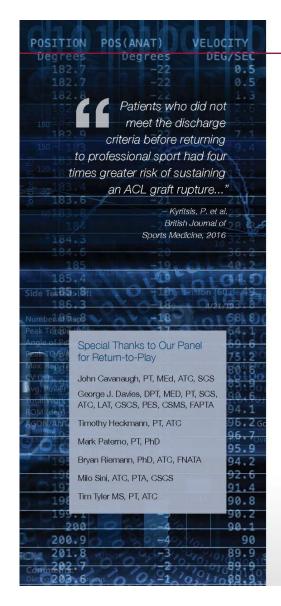
- NEW Return-to-Play Report for ACL
- NEW Data Management Capabilities
- Fresh, modern interface
- Intuitive navigation
- Guides you step by step through protocol-based activities
- · SQL database with easy access to patient data and reports
- · Quick start and repeat activity options
- · Ability to store and pin frequently used activities
- · Create custom protocols on the fly
- · Fast access to training mode
- Integrated analog/EMG output signal scaling

Integrated and Enhanced Data Management Capabilities

- Easily share test data and custom protocols between dynamometers running Advantage BX
- Export both single and multiple test data with comprehensive metrics and raw data for use with third party tools
- Import existing patient lists into Advantage BX

www.biodex.com/s4



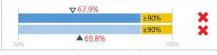


NEW Reporting for ACL Return-to-Play

There's a reason for the recent resurgence of isokinetic strength testing after ACL reconstruction. Limb strength symmetry and balanced hamstring to quadriceps ratios are major components of return-to-play criteria shown to reduce reinjury in athletes after ACL-R.

- Time
- Isokinetic strength testing: symmetry and hamstring/quadriceps ratios
- Functional test symmetry
- Agility testing
- Psychological readiness

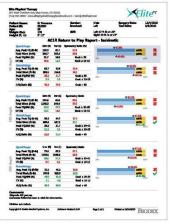
New reporting capabilities make it even easier to communicate with patients, doctors, third party payers and employers.



Limb symmetry index

Clearly Communicate Test Results

Grounded in the latest research and supported by a panel of field experts, Biodex introduces the first-ever Return-to-Play report. Results can be understood at a glance with clear pass/fail for isokinetic tests throughout the athlete's recovery. This unique report gives patients and referring physicians the added confidence they are ready to return to play.



Physicians can understand report at a glance with clear pass/fail results.

References:

Grindem H, et al. Br. J Sports Med 2016:50 804-808. doi:10.1136/bjsports-2106-096031

Kyritsis P, et al. Br. J Sports Med 2016:50: 946-951. doi:10.1136/bjsports-2016-096098

Webster KE., Feller JA, The Orthopsedic Journal of Sports Medicine, 6(4). doi:10.11177/325967118763763

AAOS, Return to play checkliet reducas re-injury for artifields following anterior cruciate ligament. Science Daily, March 6 2018

BIODEX

- 9



The Markets

Highly Versatile.

As the premier multi-joint system for objective testing, the Biodex System 4 Dynamometer helps you provide the best outcomes for your patients, supports your research, and separates your facility from the rest.

- · Sports and Orthopedic Medicine Isolate performance data for a broad range of upper and lower body joints.
 - Anterior Cruciate Ligament
 - Hamstring Injury
 - Shoulder Dysfunction
 - Knee Osteoarthritis
 - Lateral Ankle Sprains
 - Patellofemoral Dysfunction
 - Preseason screening, injury prevention and athletic performance enhancement
- Occupational Medicine/Workplace Health
 - Helps employers gauge physical competence of applicants.
 - Reduces injury and workers' compensation claims.
 - Objective measurement for pre-employment testing as outlined by the Department of Labor
 - Optional attachments designed to simulate specific Older Adult work-related motions.

Research

Used in over 1,000 published studies.

- Integrated Analog Signal Access Settings Provides real-time analog voltage output of torque, position and velocity from the dynamometer. Perfect for integration with EMG devices.
- Customizable Protocols Protocol Based Activities can be predefined or created and saved at the time of testing. Saved protocols are easily retrievable via a dynamic list of frequent activities.

Neurorehabilitation

- Helps patients build strength, endurance and coordination. Spasticity management includes objective quantification at specific contraction.
- Passive mode is used for repetitive exercises.
- Eccentric mode is useful for controlled strengthening.
- Specially designed upper extremity attachments for hemiparetic patients promote neuro recovery and improve strength.

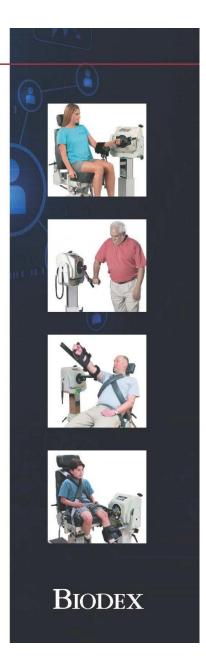
Pediatrics

- Used to treat children worldwide.
- Isokinetic muscle testing provides objective data for neuromuscular control and strength.
- Pediatric attachments and age-based normative data goals are available.

- Objective testing and training for balance disturbances.
- Isokinetic testing will identify weakness.
- Exercise improves ankle and leg strength.

Military Strength Training

- Used by military special forces for injury prevention and performance optimization.
- Strength testing identifies residual deficits and predisposition for repeat injury.



-11-

Expand the use of your Biodex Dynamometer

Upper Extremity Attachments to accommodate hemiparetic patients



Lightweight, carbon-fiber attachments promote neuro recovery and improve strength, accommodating the impaired grasp associated with hemiplegia. The eccentric mode is especially useful for controlled strengthening.

Hamstring Attachment



Objective testing provides valuable, isolated muscleperformance data for pre-emptive injury screening, managing rehabilitation and determining readiness for return to play.

Work Simulation Tools



Replicate job-specific tasks for the hand, wrist, elbow and shoulder, recreating job challenges in ranges of motion, strength and endurance.

Pediatric Attachments



Isokinetic muscle testing on children helps clinicians by providing objective data for neuromuscular control and strength.

Closed Kinetic Chain Attachment



Designed to provide early, safe, progressive rehabilitation for both the upper and lower extremity.

Dual Position Back Extension/Flexion Attachment



Objectively measure back muscle extension/flexion and rehabilitation in the semi-standing and seated-compressed lumbar positions.

















Specifications

Shared Specifications

Performance

- . Concentric speed up to 500 deg/sec
- . Eccentric speed up to 300 deg/sec
- . Concentric torque up to 500 ft-lb (680 Nm)
- Eccentric torque up to 400 ft-lb (542 Nm)
- · Passive speed as low as 0.25 deg/sec
- Passive torque as low as 0.5 ft-lb (0.68 Nm)
- Isotonic torque as low as 0.5 ft-lb (0.68 Nm)

Dynamometer and Positioning Chair:

- Pneumatically assisted dynamometer height adjustment
- · Precision dynamometer rotation and tilt
- Front-to-back chair adjustment with 360 degrees of horizontal rotation
- · Seat-back tilt from 90 to 0 degrees

Clinical Data Station:

- Windows® 10 Enterprise LTSC Operating System
- Biodex Advantage BX[™] Software
- 22" LCD Flat Panel Touchscreen Monitor with Integrated Speakers
- Color Printer

Accessories

- Attachment cart
- Calibration kit
- Wall chart

Power

• 230 VAC, 50-60 Hz, 20 amp

Certifications:

ANSI/AAMI ES60601-1:2005+A1:2012+C1:2009 +A2:2010.CAN/CSA C22.2 No. 60601-1:14. IEC 60601-1-2:2014. IEC 60601-1:2005 (Third Edition) +CORR. 1:2006 + CORR. 2:2007 + A1:2012 (or IEC 60601-1: 2012 reprint).





Warranty: One year parts and labor







System 4 Quick-Set™

Compare Systems	System 4 Pro™	System 4 MVP™	System 4 Quick-Set™
Chair Height	Motorized adjustment	Fixed	Fixed
Dynamometer Positioning	Side to side	Side to side	Fixed
Knee Attachment	Standard	Standard	Standard
Shoulder Attachment	Standard	Standard	Standard
Ankle Attachment	Standard	Standard	Standard
Elbow Attachment	Standard	Standard	Standard
Wrist attachment	Standard	Standard	Standard
Hip Attachment	Standard	Optional	Optional
Hamstring Attachment	Optional	Optional	Optional
UE Hemiparetic Attachment	Optional	Optional	Optional
Dual Position Back Extension/Flexion Attachment	Optional	Optional	Optional
Closed Kinetic Chain Attachment	Optional	Optional	Optional
Work Simulation Tools	Optional	Optional	Optional
Anti-Shear Attachments	Optional	Optional	Optional
Pediatric Attachments	Optional	Optional	Optional
Wide Seat	Optional	Optional	Optional

Support Installation

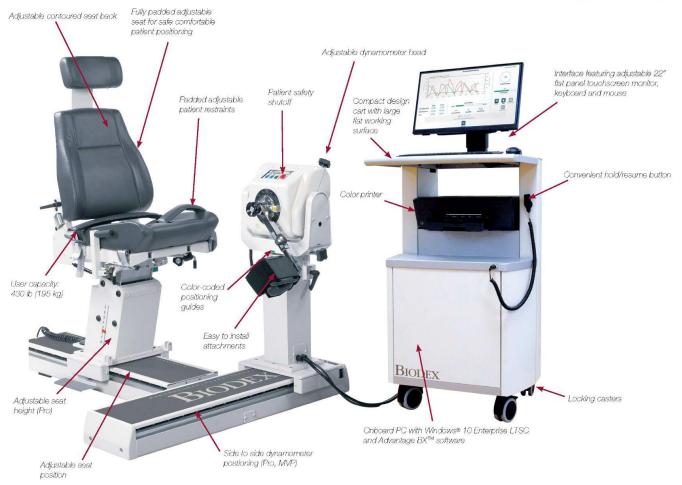
It all starts upon delivery of your System 4. Biodex devices are installed by certified application specialists and include a one day in-service training program. Step-by-step hands-on training will show you how to use and maximize the System 4 to help meet your specific demands.

Service

Biodex stays with you every step of the way. Phone support and on-site field service allow you to concentrate on treating patients, not your equipment.

- 14 -

System 4 Pro™ shown



BIODEX



Biodex Medical Systems, Inc.
20 Ramsey Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (Int'l 631-924-9000), Fax: 631-924-9241, Email: info@biodex.com, www.biodex.com

FN: 20-229 7/20

Supplemental Document #4 - Laser Engraver Quote



H2l Group Inc. Fax:(866) 427-5007

Quote

Date	Quote #
04/28/21	52680

Name/Address	Ship To	
Hershey High School Hershey High School 301 South Lincoln Hershey, NE 69143	Hershey High School Hershey High School 301 South Lincoln Hershey, NE 69143 309-539-1588 will.winchester@hpspanthers.org	

Due Date	Rep	Proje	Tax Rate
05/14/21	Larry Granec	87163	0

Base Rem(s)

VLS4.75 Laser System Pkg

Qty	Part #	Description	UOM	List Price	Unit Price	Total
1	VLS4.75-XX Universal Laser System	VLS4.75-50 Laser System Complete Package, 24"x18" engraving area with 50 Watt Laser Cartridge Honeycomb Cutting Table, Air Assist, Color: BLUE, Freight & Onsite Installation & Training also included	Each	\$18250	18,250.00	\$18,250.00
1	Fume Extraction System for Laser	Fume Extraction System for VLS4.75 laser System . Stand-alone filter- based fume extraction system . Elim inates the need to exhaust the laser to the outside. Includes filter set, hose kit, and freight.	Each	\$3342	3,342,00	\$3,342,00
1	Rotary1	Standard Rotary Fixture for VLS Platform Models	Each	\$1800	1,800,000	\$1,800.00
14	CorelDRAW Graphics Suite 2021 For Windows - Education License	CoreIDRAW Graphics Suite 2021 For Windows - Education License	Each	\$129	129,00	\$1,806.00
1	Note:	Air assist ready, Requires 50-60 PSI clean, dry air supply. (Please let me know if interested in compressor supplied by H2I Group added to quote).	Each	\$0	0.00	\$0.00

Page 1 of 2

Subtotal:	\$25,198.00
Freight:	\$0
Тах:	\$0
Total:	\$25,198.00

Base Item(s)

Subtotal:	\$25,198.00
Total Freight:	\$0
Total Tax:	\$0
Total:	\$25,198.00

NOTE: Tax exempt form required or any applicable taxes will be added to invoice. 2% fee added for credit card payments.

To help ensure a more expec	dient delivery of your parts, p	lease fill out the following information:	
Delivery Contact			
Delivery Contact Phone #:			
Dock:	□ Yes	□ No	
Truck lift gate needed:	□ Yes	□ №	
Pallet Jack needed:	☐ Yes	□ №	
Delivery Hours:			
Additional Comments:			

Auth Contact	Auth Signature
Acceptance Date	Purchase Order

Supplemental Document #5 - Dr. McKenzie Support Letter



Physician Network | gphealth.org

April 14, 2021

To Whom It May Concern:

My name is Mark McKenzie, MD and I am an orthopedic surgeon who practices here in North Platte, Nebraska at Great Plains Health. I have been practicing here for over 20 years and have worked with Doug Long for many of those years. Recently Doug asked me if I would be willing to provide a letter of recommendation for Hershey High School to receive the reVISION Grant. It is my understanding that this will provide Hershey High School the opportunity to add equipment to their study of human anatomy program.

I personally have grown up in a very small town in South Dakota with a population of 800 people. I understand the difficulty of attracting people in the healthcare field to less populated rural areas. It pleases me greatly to hear of these educational opportunities that are available now to the Hershey High School students. Adding essential equipment is so important to ensure that quality programs can be provided.

This reinforces my impression that Hershey High School is on the right pathway in stimulating and educating their student body.

Sincerely,

Mark McKenzie, MD

Mich une po

MKM/db

Locations **Great Plains Health**

516 West Leota St. North Platte, NF 69101

- O 308.568.3700
- F 308.534.3813

Great Plains Health

215 McNeel Lane North Platte, NE 69101

- O 308.568.3800
- F 308.534.6662

Great Plains Health Psychiatric Services

601 West Leota St., Suite 500 North Platte, NE 69101

- O 308.568.7251
- F 308.568.7261

Great Plains Health Wound Healing Center

601 West Leota St. North Platte, NE 69101

- O 308.568.8648
- F 308.568.8649

North Platte Health Pavilion

611 W. Francis St North Platte, NE 69101

Great Plains Health Heart & Vascular Center Suite 150

O 308.568.8577 F 308.568.8579

Great Plains Health Internal Medicine Suite 160 O 308.568.3500 F 308.568.3739

Great Plains Health Endocrinology Infectious Disease Nephrology

Neurosciences Pain Management Pediatrics Pulmonology

Spine Center Urology

Suite 200 O 308.568.3500

F 308 568 3509

Supplemental Document #6 - Laser Engraver Brochure





VLS4.75



Platform Overview

The VLS4.75 is a free-standing platform with a materials processing envelope of 24" x 18" x 8.5" or 3,672 in³ (610 x 457 x 216 mm or 60,214 cm³). The single laser platform supports a $10.6\mu m$ CO₂ laser source ranging in power from 10 to 75 watts or one $9.3\mu m$ CO₂ 30 watt, 50 watt, or 75 watt laser source.

Platform Specifications

	VLS4.75
Laser Material Processing Area (W x H)	24 x 18 in (610 x 457 mm)
Maximum Part Size (W x H x D)	29 x 23 x 8.5 in (737 x 584 x 216 mm)
Overall Dimension (W x H x D)	36 x 38 x 36 in (914 x 965 x 914 mm)
Rotary Capacity	Max Diameter: 8 in (203 mm)
Motorized Z Axis Lifting Capacity	40 lbs (18 kg)
Available Focus Lenses	2.0 in (50 mm) HPDFO™ (High Power Density Focusing Optics)
Laser Platform Interface Panel	Five button keypad
Computer Requirements	Requires dedicated PC with Windows® 7/8/10 32/64 bit and one available USB port (2.0 or higher)
Optics Protection	Integrated with included gas assist
Cabinet Style	Free-Standing
Laser Options	10, 30, 40, 50, 60 and 75 Watts
Weight	270 lbs (122 kg)
Power Requirements	110V/10A 220V-240V/5A
Exhaust Requirements	One 4 in (102 mm) port 250 CFM @ 6 in static pressure (425 m³/hr at 1.5 kPa)

Included Accessories

· Gas Assist ·

Manual Gas Assist (with Optics Protection)

Gas Assist injects a stream of gas onto the material being processed at the point where the laser focuses onto the material.

Optics protection supplies a constant stream of clean air creating positive pressure around critical optical elements, such as mirrors and lenses to keep them clean. The gas can be supplied either by an air compressor or from external gas tanks.

- Reduces accumulation of residue deposits
- Improves cutting and engraving
- Protects optics

Software

Universal Control Panel

The Universal Control Panel (UCP) is a user interface that controls ULS laser systems. This intuitive interface enables users to produce expert quality results. The UCP includes a Printer Driver and Direct Import Feature for uploading graphic designs. The UCP also provides an Intelligent Materials Database that calculates optimized settings for laser processing on hundreds of materials.

Benefits

- · Intuitive and easy to use: allows laser cutting, engraving, and marking to be executed in three easy steps
- Time saving features maximize productivity: Direct Import, Materials Database, Duplicate, Estimate, Storage and Organization
- Manual Control feature allows users to enter individual laser settings for unique materials and applications, providing unlimited processing flexibility

Intelligent Materials Database

The Intelligent Materials Database automatically calculates optimized settings for laser processing on hundreds of materials.

Renefits

- Ever expanding database of laser processable materials allows users to achieve optimal results and avoid the learning curve for processing new materials
- · Gives you limited control over your laser processing parameters when needed

Optional Accessories

· Gas Assist ·

Coaxial Gas Assist Attachment

The Coaxial Gas Assist attachment directs flow perpendicular to the material's surface. There are different Coaxial Gas Assist Attachments for each focusing lens; these maintain the optimal distance from the material while avoiding beam path obstruction. The Coaxial Gas Assist attachment forces air against the material and helps remove laser material processing byproducts from cutting, engraving, and marking processes.

- · Improved laser material processing
- Increased system safety
- Reduced maintenance

Lateral Gas Assist Attachment

The Lateral Gas Assist attachment is an adjustable attachment that can direct air along the material's surface at a variety of incident angles. This is particularly helpful in raster engraving applications where debris can be removed from the engraving for ideal processing.

Benefits

- · Improved laser material processing
- · Increased system safety
- Reduced maintenance

Compressed Air Source

ULS offers a compressed air solution that delivers optimally-conditioned air to both the Optics Protection and Gas Assist components. Additionally, the compressor controls the laser cutting, engraving, and marking equipment by supplying air only when it is demanded, reducing unnecessary wear, electrical costs and noise.

Benefits

- Clean and oil free air
- Dry air
- Turns on and off based on laser system requirements

Air Filtration and Handling

UAC 2000 Filtration System

ULS provides a line of air filtration solutions appropriately sized for each laser system.

- Increased Safety

 The innovative, patented sensor suite monitors filtration performance at every stage of filtration
- Improved Return on Investment Extremely efficient use of consumable filter media
- Enriched User Experience Extremely quiet operation, industry leading ease of use, and integration with the ULS product eco-system

Material Handling .

Flow-Through Cutting Table

The Flow-through Cutting Table consists of a thin-wall aluminum honeycomb-core evenly supported by an underlying hollow structure. The target material is placed on the honeycomb core. When excess laser power passes the lower surface of the target material during a laser cutting process, this excess power is passed into the supporting structure where it is absorbed in an unfocused state.

Renefite

- Damage-free Laser Cutting
 Mitigates or eliminates laser damage to lower surface of target-material being laser cut
- Consistent, Clean, Laser Cutting
 Precision-levelled table provides a path for excess laser power and for laser processing byproducts to escape

Rotary Fixture

The Rotary Fixture allows spherical, conical and cylindrical objects to be marked, cut and engraved.

Benefits

- · Accepts non-symmetrical objects
- · Maintains precision accuracy
- · Maintains repeatability
- Taper compensation
- 360 degree processing
- · Allows raster and vector processing

Configurable Cutting Table (Pin Table)

The Configurable Cutting Table consists of an anodized aluminum plate with an array of precision holes with regular spacing. Specially designed material-support pins are placed into these holes in an arrangement to fully support the target-material while avoiding the cutting path of the laser completely. The result is zero back-reflection onto the lower surface of the target-material while maintaining full material support.

- · Damage-free laser cutting
- · Consistent, clean laser cutting

· Optics ·

2.0" Lens

This is the most versatile lens. It provides an ideal balance of spot size, depth of focus and focal length for most laser cutting, engraving and marking applications.

Benefits

Versatility

HPDFO™

ULS offers customers the ability to drastically improve marking and engraving resolution, to directly mark onto some metals, and to increase the range of materials which can be cut with a CO₂ laser system. This is accomplished through ULS patented HPDFO*, which focuses the laser's energy into a much smaller area than is possible with standard lenses. The HPDFO* option includes a collimator which minimizes divergence across the laser processing area producing more consistent focal spot size and energy density. A collimator is required for HPDFO* to function.

Benefits

- · Produce unmatched resolution
- · Achieve high levels of detail and tighter tolerances
- . Directly mark metals with a CO2 laser

Productivity Enhancers

Automation Interface

The Automation Interface makes it possible to integrate ULS laser systems into automated manufacturing environments.

Programmable inputs and event-driven outputs, combined with a powerful user interface, allow users to seamlessly adapt their laser systems to diverse automated applications.

- Comprehensive External Laser System Control Initiate up to eight different laser system functions with programmable inputs
- Integrate External Devices into Laser Material Processing
 Control or signal up to two external devices using event-driven, programmable outputs

Software

1-Touch Laser Photo™

1-Touch Laser Photo™ is an innovative product for converting digital photographs into bitmap files that can be used to engrave the image into materials. This transforms an ordinary photograph into a professional quality engraving. Prior to 1-Touch this was possible only by experimenting with halftone screens, dithering patterns, and laser settings – an expensive and time consuming methodology.

Benefits

- · High quality results
- · Broadest material compatibility
- Intuitive user interface

Direct File Import/ Industry Standard Interchange Format Support

In addition to standard print drivers, ULS offers a Direct File Import option that enables users to import certain types of files including .PDF and .DXF directly into the laser system control software, without the need to print from any third party software.

Additionally, G-Code import is exclusively available for ULTRA platforms.

Benefits

- Allows the user to import standard design file interchange formats from any design platform (PC, Mac, Linux)
- · Offers improvement in vector processing quality

Contact Us



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Universal Laser Systems, Co. Ltd.

The Yokohama Landmark Tower 21F 2-2-1-1 Minatomirai, Nishi-ku, Yokohama, Japan +81 45-224-2279 Japan

Serving all of Asia, excluding India and New Zealand CDRH Class 1 safety enclosure for CO2 laser. Class 2 for red laser pointer.

CDRH Class 1 laser safety enclosure provides for safe operation without the need for an interlocked room or protective eyewear





WARNING: UNIVERSAL LASER SYSTEMS PRODUCTS ARE NOT DESIGNED, TESTED, INTENDED OR AUTHORIZED FOR USE IN ANY MEDICAL APPLICATIONS, SURGICAL APPLICATIONS, MEDICAL DEVICE MANUFACTURING, OR ANY SIMILAR PROCEDURE OR PROCESS REQUIRING APPROVAL, TESTING, OR CERTIFICATION BY THE UNITED STATES FOOD AND DRUG ADMINISTRATION OR OTHER SIMILAR GOVERNMENTAL ENTITIES. FOR FURTHER INFORMATION REGARDING THIS WARNING CONTACT UNIVERSAL LASER SYSTEMS OR VISIT WWW.U.SINC.COM.

Protected under one or more of U.S. patents 6,983,001; 7,060,934; 7,415,051; 7,469,000; 7,715,454; 7,723,638; 7,947,919; 8,101,883; 8,294,062; 8,599,898; 8,603,217; 9,155,988; 9,263,844; 9,263,845; 9,281,649; 9,346,122; 9,354,630; 9,694,448; 10.456,875; 9,737,958; 10,391,345. Other U.S. and International patents pending.

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Supplemental Document #7 - Mini Lathe Quote

	N STATI GLOBA		STRIES		QU	OTE			No		012806	
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From: Lynn Rinehart < lrinehart@nppsd.org>

Date: Thu, Apr 15, 2021 at 8:32 AM Subject: Recommendation letter

To: <will.winchester@hpspanthers.org>

To Whom It May Concern;

It was brought to my attention that Hershey Public School is seeking a Revision Grant in helping to purchase a Laser Engraver and Mini Lathe. Teaching at small and larger schools has given me the opportunity to see the difference in curriculum offerings. Smaller schools provide; an excellent student-teacher ratio, but one of the short comings is that they may not be able to afford the updated technology for the students as in larger schools.

Being able to implement the very same type of equipment in two schools that I taught in myself, I've seen the excitement it helped create in the STS programs. It helped increase enrollment in these classes along with assisting students to help make some career choices that they wouldn't have known about without this type of introduction into this technology.

Offering Hershey STS program this opportunity to help purchase a laser and mini-lathe would allow students the chance to explore how technology can be used in different ways and still not be that far behind larger school districts in the state. Not only will it give them the chance to learn new methods of doing things it would also give students a great opportunity to seek out some entrepreneurial experiences. This type of up-grading the current curriculum will give students another chance to test the waters of numerous career opportunities in (Logistics, Transportation, Manufacturing, Communication) and would enable students to expand on what is call the old traditional program offerings (woods, metals, drafting) that are being taught in the smaller schools of Nebraska.

Hershey Public Schools has an excellent Teacher in their STS program and will do a fantastic job of implementing newer technology into the current programs that they are offering. The STS (Science, Technology, and Science) instructor visited with a business, in the area, that implements Laser engraving and use of mini lathe in their business. This business has agreed to help train and work with the students in seeing possible career opportunities for people with these newly acquired skills. That shows me he is interested in helping students reach out and get a complete education that offers as many possibilities they can for their students. Enabling to make them more employable and able to make some sound career choices by having basic skills and knowledge for different career choices. Plus, the fact instructor has already reached out to partner with the community businesses. Show it would be something that not only helps the students but also the community in what the students would be able to create with these skills.

Respectfully submitted,

Lynn D. Rinehart

N.A.S.T.E. Sec./Treas., Owner/Operator LT Custom Gifts, STS Consulting





It is the policy of the Nebraska Department of Education not to discriminate on the basis of sex, disability, race, color, religion, marital status, age, national origin, or genetic information in its educational programs, admission policies, employment, or other agency programs.

This project was funded through the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), administered through the Nebraska Department of Education. However, the contents do not necessarily represent the policy of the United States Department of Education, and you should not assume endorsement by the Federal Government.