FuturesLAB

Located on the campus of Timnath Middle High School
(970) 488-4400
futureslab@psdschools.org

'22-'23 Pathways

Each offers 20 or 40 high school credits, plus Concurrent Enrollment college credit, industry credential(s) or both.

Advanced Manufacturing

Audio Production & Management

Aviation

Business and Innovation

Coding

Culinary & Hospitality

Design Build

Early Childhood Education

Multimedia & Graphic Design

Natural Resources

Networking & Cybersecurity

Design Principles

The design principles reflect the mission and vision of the Futures Lab, allowing a consistent experience for all learners.

AUTONOMY
Learning is self-directed, with student ownership of path and product.

DEEP LEARNING
Learning is an iterative process that is immersive, complex, and messy.

CONNECTION
Learning connects concepts, skills, and people in novel ways.

AUTHENTIC WORK
Learning impacts the world beyond the classroom walls.

January Info Night!
1/20/22, 5:00 or 6:30 pm
Visit our website for more information

Schedule

Pathways are available for any high school student in Poudre School District. They are held at our building in half-day bundles of courses in either 1st or 2nd semester: AM 9:15am-12:15pm / PM 12:45pm-3:45pm. Bussing is provided for all students to/from their base high school.

Example Pathway structure at Futures Lab:

	Mon	Tue	Wed	Thur	Fri
90 min	**Pathway Course** 10 credits				
90 min	**Futures Lab Seminar** (9 weeks) 5 credits Language Arts **Option for Graduation** Credit (9 weeks) 5 credits in Economics, Personal Finance, Math, Humanities, or Language Arts				**Flex Friday:** -ICAP -Blended time -Off-site projects

How to Register

Step 1 Review our pathway options on our website

Step 2 Choose your pathway and contact your high school counselor with your selection.

FuturesLAB

2022-2023 Pathway Options

Advanced Manufacturing
Up to 20 credits available

Prepare for a high-needs industry with this unique opportunity to learn knowledge and skills using state of the art equipment.

The Advanced Manufacturing Pathway will develop learners' specialized skills and enable them to enter an industry in need of talented individuals. Learners will foster the knowledge and skills for proper application of principles of manufacturing through hands-on learning with cutting-edge industry equipment. Local industry partners are excited to work alongside learners in this pathway to provide authentic and relevant experiences.

Advanced Manufacturing:
- 2416ACEFRHS Introduction to Manufacturing A, 5 cr Elective
- 2414CEFRHS Introduction to Machine Shop, 5 cr Electives
 Futures Lab Seminar, 5 cr Lang Arts

Concurrent Enrollment/Certification:
-6 credits Front Range Community College

Audio Production & Management
Up to 40 credits available

Interested in audio engineering, podcast production, or sound mixing? Come join a community of audio enthusiasts and take a deep dive into the inner workings of the audio industry.

Learners in the Audio Production and Management Pathway will develop technical skills with an emphasis on production. Learners will be able to explore potential audio production careers such as audio for radio and television broadcasting, audio for video and film, audio for animation and game design, music production and live sound, and additional entrepreneurial opportunities and skill sets.

Audio Production Semester 1:
- 2420 Foundations of Design, Multimedia Arts, & Digital Communications, 5 cr Fine & Applied Arts
- 2421 Principles of Audio, 5 cr Fine & Applied Arts
- Futures Lab Seminar, 5 cr Lang Arts

Audio Production Semester 2:
- 2419A Digital Audio Technology A, 5 cr Fine & Applied Arts
- 2419B Digital Audio Technology B, 5 cr Fine & Applied Arts

Concurrent Enrollment/Certification:
-Ableton

Aviation
Up to 40 credits available

Come fly with us! Aviation is a growing industry with huge workforce needs over the next decade. Learners with interest in professional piloting, air traffic control, unmanned aerial systems, or aeronautics can start growing their skills to get a step ahead in the field.

Learners in the Aviation Pathway will earn their FAA Part 107 UAS Commercial Certification. This will allow learners to immediately enter the growing drone field through opportunities in research, mapping, and videography. Learners will operate, maintain, and design unmanned aerial vehicles developing both engineering and flight skills.

Aviation Semester 1:
- 2014 Intro to Aviation & Aerospace, 5 cr Elective
- 2423CEAIMS UAS Flight Training, 5 cr Fine & Applied Arts
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Aviation Semester 2:
- 24** Aviation of UAS Drone Technology B
- 24** Special Industrial Applications of Drone Technology, 5 cr Elective

Concurrent Enrollment/Certification:
-3 credits Aims Community College
- FAA107 UAS license

Business & Innovation
Up to 40 credits available

Apple, Amazon, Disney, and Microsoft all started with a wild idea in their founder's garage. Come develop, validate, incubate, and accelerate your wild ideas in the Business and Innovation Pathway.

Learners in this zero-barrier pathway will develop an entrepreneurial mindset in this start-up style hub for innovation. Young entrepreneurs will partner will local businesses and community mentors, work in high-performing teams, and learn the ins and outs of project management. Learners will foster the courage to take on the unexpected and to ultimately develop businesses for a better world.

Business Incubator:
- 2424A Business Incubator, 5 cr Electives
- 2424B Business Incubator, 5 cr Electives
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Innovator's Studio:
- 2435 Innovator's Studio 1, 5 cr Fine & Applied Arts
- 2436 Innovator's Studio 2, 5 cr Fine & Applied Arts
- 2429 Design Thinking, 5 cr Language Arts
- 2439 Creativity & Innovation, 5 cr Humanities

Industry Certification:
- Entrepreneurship & Small Business through Certiport

Coding
Up to 40 credits available

Everyone can code. No experience required. Learners in our coding pathway develop the technical and professional skills to create mobile apps to share with the world.

This pathway places learners in an authentic workplace environment where they will develop and apply problem-solving, collaboration, and communication skills and understand industry best practices, like paired programming, the agile development cycle, and rapid iteration. Young developers in this pathway build their app portfolios, analyze errors in their code, and adjust to solve problems.

After building their baseline of proficiency in Swift, learners have the opportunity to further refine their development and entrepreneurial skills by forming development teams and building apps for actual customers.

Coding Semester 1:
- 2425A MobileMakers A, 5 cr Math & Computer Science
- 2425B MobileMakers B, 5 cr Math & Computer Science
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Coding Semester 2:
- 2426A MobileMakers Studio A, 5 cr Fine & Applied Arts
- 2426A MobileMakers Studio A, 5 cr Fine & Applied Arts

Industry Certification:
- App Development via Swift

Culinary & Hospitality
Up to 40 credits available

Join us to delve into the relationship between a guest and a host, a connoisseur and a chef, and a tourist and a guide through the Culinary and Hospitality Pathway.

In this pathway, learners will experience how to manage, market, and operate a variety of aspects within the hospitality industry. Learners will have engaging, unique opportunities to advance their culinary skills and will deepen their understanding of the connections between business operations and human experience.

Students interested in taking this pathway for the entire year will have the opportunity for Work-Based Learning credit and will help operate a real catering business.

Culinary & Hospitality Semester 1:
- 2427A ProStart 1A, 5 cr Fine & Applied Arts
- 2427B ProStart1B, 5 cr Fine & Applied Arts
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Culinary & Hospitality Semester 2:
- 2428A ProStart 2A, 5 cr Fine & Applied Arts
- 2428B ProStart 2B, 5 cr Fine & Applied Arts
- 9220 Work-Based Learning: Culinary & Hospitality

Industry Certification:
- ServSafe Food Manager & Food Handler
- ProStart 1 & ProStart 2 through the National Restaurant Association

Design/Build
Up to 40 credits available

Ever wonder how cities are planned, parks and communities are designed, and buildings are built? Explore the wonders of the natural world and built environment in the Design Build pathway at Futures Lab. Learners will focus on the fundamentals of design theory, architectural hand-drafting skills, and proper safety precautions. After learning how to conceptualize and design small buildings and parks, they'll research how to build them! Students will take field trips to construction sites and design firm studios to help inform their own builds.

Students continuing into the second semester of this pathway will focus on the skills necessary to create a functioning and safe structure. They'll learn the principles of electrical, plumbing, and HVAC systems necessary in the world of construction and craft skills.

Design/Build Semester 1:
- 2413A Introduction to Drafting & Design Concepts A, 5 cr Fine & Applied Arts
- 2456 Futures Lab Principles of Construction, 5 cr Electives
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Design/Build Semester 2:
- 2457 Futures Lab Construction Technology, 5 cr Fine & Applied Arts
- 24** Mechanical, Electrical, & Plumbing Systems,

Industry Certification:
- OSHA 10 safety certificate

Early Childhood Education
40 credits | Grades 11-12

Successful educators are lifelong learners. In this pathway, you will learn the fundamentals of early childhood education and will earn 12 college credits towards a degree in Education. Important outcomes for this pathway will include a strong understanding of a growth mindset, conversational diplomacy, professional collaboration, creating inclusive classrooms, and brain development.

ECE - Yearlong:
- 7497CEUNHS Intro to Early Childhood Education, 5 cr Lang Arts, 3 UNC credits
- 7918CEUNHS Guidance Strategies for Children, 5 cr Elective, 3 UNC credits
- 2450CEUNHS Nutrition, Health, & Safety for Educators, 5 cr Wellness, 3 UNC credits
- 9677CEUNHS Culturally Diverse Literature for Children, 5 cr Lang Arts, 3 UNC credits
- 2451 Professional Collaboration & Project Management, 10 c Elective
- 4034 Work-Based Learning: Education
- Futures Lab Seminar, 5 cr Lang Arts

Concurrent Enrollment/Certification:
- 12 credits University of Northern Colorado

Multimedia & Graphic Design
Up to 40 credits available

Develop your skills and creative confidence while earning certifications in industry-standard software packages! Students in the yearlong **Multimedia & Graphic Design Pathway** will explore a range of multimedia software applications and develop basic multimedia skills. All courses in this pathway apply directly toward the Associate of Applied Science degree in Graphic Design from FRCC. Students will have the opportunity to sit for their certifications in Adobe Photoshop, Illustrator, and InDesign.

Multimedia & Graphic Design Semester 1:
- 2454CEFRHS Adobe Photoshop, 5 cr Fine & Applied Arts, 3 FRCC credits
- 7477CEFRHS Adobe Illustrator, 5 cr Fine & Applied Arts, 3 FRCC credits

Multimedia & Graphic Design Semester 2:
- 2455CEFRHS Introduction to Visual Communications, 5 cr Fine & Applied Arts, 3 FRCC credits
- 1735CEFRHS Adobe In-Design, 5 cr Fine & Applied Arts, 3 FRCC credits
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Concurrent Enrollment/Certification:
- 12 credits towards FRCC Certificate in Fundamentals of Multimedia Tech

Natural Resources
Up to 20 credits available

Living in Colorado, we are surrounded by a complex system of natural resources and wildlife. More than ever, it's important to learn how to cultivate and protect our natural surroundings. This new pathway at Futures Lab will introduce students to the fundamentals of forestry and Colorado wildlife through a mix of classroom and outdoor learning. Students will learn the principles of drendology, forest science, and forest fire behavior. Field activities to various locations are included to enhance the students' understanding of Colorado native birds, insects, reptiles, amphibians, mammals and fish.

Natural Resources Semester 1:
- 2458CEFRHS Introduction to Forestry Management, 5 cr Science, 3 FRCC credits
- 2459CEFRHS Colorado WIldlife, 5 cr Elective, 3 FRCC credits
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Concurrent Enrollment/Certification:
- 6 credits towards FRCC Certificate in Forestry, Wildlife, & Natural Resources

Networking & Cybersecurity
2 Semester (Full-Year) | Half-Day | 25-40 Credits | Grades 9-12

Prepare to enter a competitive, emerging field with a variety of unique and highly valued real world opportunities.

Learners in the Networking and Cybersecurity Pathway will complete challenging hands-on tasks that will prepare them for careers in an evolving industry. Learners will diagnose security risks, manage networks, and delve into the world of ethical hacking. The ability to earn multiple industry valued certifications will enable learners to compete for attractive positions within the field.

After developing their skills and mindsets, learners will have the opportunity to intern with professional information technology services to further apply their skills in the real world.

Networking & Cybersecurity Semester 1:
- 9271CEAIHS Introduction to PC Apps, 5 cr Elective, 3 AIMS credits
- 7934CEAIHS A+ Certification Preparation, 5 cr Math & Computer Science, 3 AIms credits
- 2410 Futures Lab Seminar, 5 cr Lang Arts

Networking & Cybersecurity Semester 2:
- 2432A Networking A, 5 cr Math & Computer Science
- 7971CEAIHS Networking 1, 5 cr Math & Computer Science, 3 cr Aims

Concurrent Enrollment/Certification:
- 9 credits Aims Community College
- Microsoft Office Specialist certification
- CompTIA A+ certification
- Red Hat Certified Systems Administrator certification

Optional Graduation Requirements:
Futures Lab offers a variety of classes to give more flexibility in home high school schedules and provide more opportunities for credit towards graduation. You can select from:
- Economics
- Personal Finance
- Disruptive Technology for Humanities credit
- Design Thinking for Language Arts credit
- Data Analysis & Probability for Math credit