District Career & Technical Education (CTE) Pathway Proposal

The Career & Technical Education (CTE) Pathway proposal is to be submitted to the CTE Coordinator for prior approval and should include the following information:

Name of State approved (CCCS) CTE Program: Construction

CCCS Student Rights Assurance: Approved programs must assure and have strategies in place to ensure that no student is unlawfully: • Discriminated against the basis of age, race, religion, color, national origin, sex/gender, pregnancy status, gender identity, sexual orientation, or disability in its activities or programs as required by Title VI, Title IX, and Section 504, Age Discrimination Act, and Title II of the Americans with Disabilities Act. • Denied an equal opportunity to benefit from occupational education solely on the basis of race, color, religion, national origin, sex, age, or disability. Additionally, CTE staff must work with students with qualified disabilities (including the learning disabled and those with physical, sensory, and temporary disabilities) to provide appropriate assistance to students so that they may participate in approved CTE programs as fully as possible. Each program is responsible for providing evidence of each of these in the case of an audit or upon CCCS request.

I. GOALS

A. Provide a brief overview of the CTE Pathway. The Construction pathway prepares students to be career-ready by providing academic, employability, and technical skills. Students learn construction crafts and trades to ensure employability in this high skill and high demand industry.

B. How does this CTE Pathway fit into the overall educational program? CTE programs significantly increase not only the high school graduation rate, but also results in a higher percentage of students going to college and persisting through graduation. Students taking both academic and technical courses have lower dropout rates and better achievement gains than other students.

C. What benefits would students receive from this CTE pathway? This pathway provides students with classroom instruction and hands-on experiences in various aspects of the construction industry. Students will gain knowledge and apply it to the following areas: carpentry, electrical, masonry, and plumbing. A strong emphasis is placed on safety, career and college readiness, career exploration, and construction competencies.

II. CAREER & TECHNICAL EDUCATION (CTE) PATHWAY COURSES

Complete the table below indicating the course sequence students would take within the CTE program. Other courses may be added or changed within the program, based upon the need of students or program modifications. New course names will be indicated in red text.

Pathway Name:	Construction

Sub-Pathway Name (if applicable):	Construction

Level:	*State Approved Course Name:*	*State Approved Description:*	*CIP Code*
Level 1	Principles of Construction	Principles of Construction is a foundational course in the Architecture & Construction cluster covering essential knowledge, skills, and concepts required for careers in construction. Upon completion of this course, proficient students will be able to describe various construction fields and outline the steps necessary to advance in specific construction careers. Students will be able to employ tools safely and interpret construction drawings to complete projects demonstrating proper measurement and application of mathematical concepts. Standards in this course also include an overview of the construction industry and an introduction to building systems and materials.	460000
Level 1	Woodworking Technology (A & B)	This course provides an overview of the planning, design, layout, and technical drawing interpretation for practical use in woodworking, cabinetmaking, and mill working. Different cabinet and furniture styles used, various wood products and materials, and proper tool selection may also be covered. Students will be introduced to the different construction processes in the cabinetmaking, furniture making, and millwork industries. Students will learn about measurement, layout, shop drawings and cutting lists. They will gain a basic understanding of the various kinds of materials used in the industry. Students will learn to use selected woodworking tools and machinery. Correct and safe use of tools and equipment is emphasized. The construction of several projects will develop student's woodworking skills.	460000

Level 2	Construction Technology (A & B)	This is the foundation course to basic residential construction. Students will demonstrate competencies that are nationally recognized by the construction industry. Students will learn and practice structural framing of floors, walls, ceilings, and roofs. This course also includes the use of basic construction tools and machinery, applied math, and an introduction to blueprint reading. This course teaches students industry safety including the use of all machines and tools	460000
Level 2	Mechanical, Electrical & Plumbing Systems (A & B)	Mechanical, Electrical, and Plumbing Systems prepares students for electrical, plumbing, and HVAC careers by introducing students to the physical principles of these systems and the fundamental skills needed to work with them. Upon completion of this course, proficient students will be able to follow safety procedures and use tools to perform basic operations with electrical circuits, as well as demonstrate understanding in fundamental concepts of electricity theory (i.e. Ohm's Law). Students will be able to apply proper tools and procedures to perform basic operations with plastic piping, including measuring, cutting, and joining pipe. Furthermore, students will be able to apply mathematics concepts to solve HVAC, electrical, and plumbing problems. This course is intended to provide an introduction and lay a solid foundation for those students entering the construction or craft skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment.	460000
Level 2	Carpentry Technology (A & B)	Carpentry Technology prepares students for careers in residential and commercial carpentry. Students will be able to frame floors, walls, ceilings, roofs, and stairs while safely employing tools and interpreting construction drawings to complete projects. Emphasis is placed on demonstrating proper measurement and application of mathematical concepts. Students to gain an understanding of wood grades and construction methods and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good	460000

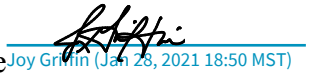
		work habits, and employability skills.	
Level 3	Construction Systems I (A & B)	Students in this class will learn about various facets of construction in both a classroom and hands-on setting. This program of study is intended to prepare students for careers in construction by developing an understanding of the different phases of a construction project from start to finish. Upon completion of this course, proficient students will be able to demonstrate knowledge and skill in the earlier phases of building construction, including site layout, foundation systems, framing systems, and electrical systems.	460000
Level 3	Construction Management I	This course provides an introduction to construction management principles used in the industry, including the organization of project teams, role of the project manager, how project management is used within the industry, and basic project management concepts and techniques.	460000
Level 3	Building Materials	Introduces the student to the scope of the construction industry. Examines the qualities, uses and characteristics of wood, ordering, pricing, fasteners, adhesives, manufactured wood products, steel, vinyl and aluminum and their applications in the construction process. Explores Built-Green products and their characteristics. This course explores inspection, estimation, and appraisal professions.	460000
Level 4	Construction Technology II (A & B)	In Construction Technology II, students will gain advanced knowledge and skills needed to enter the workforce as carpenters, building maintenance technicians or supervisors, or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will build on the knowledge base from Construction Technology I and are introduced to exterior and interior finish out skills.	460000
Level 4	Construction Management II	This course provides an introduction to basic project management techniques and tools used in the construction industry to oversee the planning, design, and construction of a project, from its beginning to its end.	460000
Level 4	Metal Working I (A & B)	This class which emphasizes shop safety will allow students to develop basic skills in various areas of the metalworking industry such as welding, pipes, metal manipulation, equipment, etc. This course is intended to provide students in the construction pathways with basic knowledge of metalworking and not intended as a pathway course for welding.	460000

Level 4	Work-based Learning (WBL)	This course is designed to prepare students to enter the workforce through on-the-job training in the form of a work-based learning experience and may be combined with class instruction. Students will build on prior knowledge and skills in the program of study aligned to their career and academic plan to further develop and apply employability and technical skills that prepare them for success in future career and postsecondary education. Students will have the opportunity to develop skills in supervised practical experience on the job or in a classroom-based job environment. A personalized learning plan is a requirement of this course.	460000

Signature Page

Does the Career and Technical Education (CTE) Coordinator approve adoption of this program?

*** Your signature below indicates your approval of the program.*

Signature  Joy Griffin (Jan 28, 2021 18:50 MST)

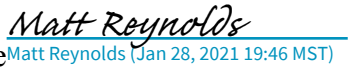
Does the Director of CIPG approve adoption of this program?

*** Your signature below indicates your approval of the program.*

Signature  Erica Mason (Jan 28, 2021 19:31 MST)

Does the Chief Assessment Officer approve adoption of this program?

*** Your signature below indicates your approval of the program.*

Signature  Matt Reynolds (Jan 28, 2021 19:46 MST)

Does the Assistant Superintendent approve adoption of this program?

*** Your signature below indicates your approval of the program.*

Signature 

Does the Board of Education approve adoption of this program?	Yes	No

Date of BOE Meeting _____

Signature _____

Office use: The following information is required to build individual courses into Infinite Campus.

Credit Type: (FNA, PRA, MAT, etc)	
Department Code:	
Course Number:	
Course entered in NCAA database if applicable.	
Update Graduation Competencies course document if applicable for Math and English courses.	
VIP Code:	
CIP Code:	
Add to HEAR list, if applicable.	
Course Mapping SCED code:	
Date entered into Infinite Campus	
Credit amount:	