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: Aviation

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. This pathway will provide information on the aviation and aerospace industry and provide a close examination of Aviation career opportunities. Students will explore the concepts and principles of Aviation and delve into general practices of the aerospace field. Areas of study are aviation history, pilot training, airplane structure, engines, basic aerodynamics, flight environment, airports, aviation weather, and navigation. In addition, the course exposes the student to the history of manned space flight.

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? Students will be exposed to the world of aviation while allowing them to explore the many aspects of the industry and career opportunities. Those students who are passionate about flying will be provided with the foundational knowledge to launch into a pilot career.

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:	Aviation

Sub-Pathway Name (if applicable):	Aviation Flight

Level:	*State Approved Course Name:*	*State Approved Description:*	*CIP Code*
Level 1	Introduction to Aviation and Aerospace (A & B)	This course will provide an introduction to the aviation and aerospace industry and provide an entry level examination of Aviation career opportunities. Students will explore the concepts and principles of Aviation and delve into general practices of the aerospace field. Areas of study are aviation history, pilot training, airplane structure, engines, basic aerodynamics, flight environment, airports, aviation weather, and navigation. In addition, the course exposes the student to the history of manned space flight.	490101
Level 2	Aviation Weather	This course develops basic meteorological concepts that apply to aviation. Emphasis is on the use of national weather service reports and forecasts to evaluate flight conditions. The course also prepares students for the weather section of the FAA Private Pilot Knowledge examination.	490101
Level 2	Aerodynamics	This course studies the basic principles of aerodynamics, including airfoil shapes and aerodynamic forces, airplane performance, stability and control, strength limitations, and the application of these to specific flight situations. Included in this course are flight performance with airflow in the sub-, trans-, and supersonic envelope. Federal Aviation Administration: https://www.faa.gov/regulations_policies/	490101

Level 3	Principles of Flight	Principles of Flight builds on the fundamental knowledge and skills learned in Introduction to Aerospace while teaching students the essential competencies needed for flight under normal conditions. Upon completion of this course, proficient students will be able to apply knowledge, skills, and procedures in a variety of simulated flight environments. Moreover, students who complete this course will have the opportunity to move on to advanced study in Advanced Flight, where they will continue to prepare for the FAA Private Pilot written exam.	490101
Level 3	Aviation of UAS & Drone Technology (A & B)	This course will cover advanced flight topics from area Aviation experts. Students will be exposed to new concepts in UAS and drone technology as well as expanding topics covered in Aviation I to an advanced level. Students will be preparing to pass the Federal Aviation Administration (FAA) private pilot written exam. Successful completion of Introduction to Aviation and Aerospace is a prerequisite. (This course covers all competencies of AVT 160 and AVT 155.)	490101
Level 4	Advanced Flight	Advanced Flight is the capstone course in the Aviation Flight program of study intended to prepare students for careers in aviation. While continuing to build upon the knowledge, skills, and competencies acquired in Introduction to Aerospace and Principles of Flight, students in Advanced Flight will receive rigorous instruction in preparation to take the Federal Aviation Administration (FAA) Private Pilot written exam. This course goes beyond the mastery of procedures under normal conditions learned in Principles of Flight and introduces students to the troubleshooting and diagnostic techniques used by pilots and other aircraft personnel to assess and correct for malfunctions, make adjustments in hazardous weather conditions, and perform other crucial emergency procedures. Continued emphasis is placed on maintaining the safety of flight and developing sound judgment (“judgment training”) throughout these conditions. In addition, students will develop a keen understanding of advanced aerodynamics and the physics of flight to aid in decision making and technical adjustments while working under simulated abnormal procedures.	490101
Level 4	Aviation Fundamentals (MSU_AES1100)	This course presents the fundamentals of aviation for the beginning student which includes a study of the airplane and its components, aerodynamics, basic aircraft systems, the airport environment, air-traffic control procedures, Federal Aviation	490101

		Regulations, the basic elements of air navigation including radio navigation, and a review of aviation weather. It prepares the student for the Federal Aviation Administration (FAA) Private Pilot Knowledge examination.	
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.	490101

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 21, 2021 14:07 MST)

Does the Director of CIPG approve adoption of this program? ** *Your signature below indicates your approval of the program.*
Signature Erica Mason Erica Mason (Jan 21, 2021 16:20 MST)

Does the Chief Assessment Officer approve adoption of this program? ** *Your signature below indicates your approval of the program.*
Signature Matt Reynolds Matt Reynolds (Jan 21, 2021 16:40 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:	