GISD Course Guide Addendum: 2024-2025
Pending Official Board Approval: 8/19/2024

## PATHWAY UPDATES

| Endorsement: Business and Industry | | | | | |
|---|---|---|---|---|---|
| **CTE Career Cluster** | **CTE Program of Study<br>GISD Focus Area** | **9th** | **10th** | **11th** | **12th** |
| | | | | | |
| | | | | | |
| **Business, Marketing, and Financial** | **Business Management / Entrepreneurship<br>Business Management** | Principles of Business, Marketing, & Finance<br>(1 credit) | Business Information Management 1<br>(1 credit) | Business Management<br>(1 credit)<br><br>*GISD Sequence Pre-Req* | ~~Entrepreneurship (1 credit)~~<br><br>Entrepreneurship I<br>(1 credit)<br>13011101<br><br>*- OR -*<br><br>**Practicum in Business Management<br>(2 credits)** |
| | | | | | |
| **Transportation, Distribution, and Logistics** | **Aviation Maintenance<br>Aviation** | Intro to Engineering Design<br>(1 credit) | ~~Aircraft Maintenance (1 credit)~~<br>&<br>~~Intro to Aircraft Technology (1 credit)~~<br><br>**Aircraft AirFrame Technology (Level III)<br>(2 credits)<br>13039400** | **Aircraft Avionics / Lab<br>(2 credits)<br>PEIMS TBD** | **Aircraft Powerplant Technology<br>(2 credits)<br>13039500** |

Note: We are proposing a pathway change to reorder Aircraft Avionics/Lab with Aircraft Powerplant Technology. Since the PEIMS code exists for the Powerplant course and the Aircraft Avionics course is “TBD” this would allow us to avoid another change next year if it remains TBD.

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## PATHWAY UPDATES (CONT'D)

| Endorsement: Science, Technology, Engineering, and Math | | | | | | |
|---|---|---|---|---|---|---|
| **CTE Career Cluster** | **CTE Program of Study**<br>**GISD Focus Area** | 8th<br>*(optional)* | 9th | 10th | 11th | 12th |
| **Engineering**<br><br>*In addition to coherent sequence, students must earn credit for: Chemistry, Physics, and Algebra 2* | **Engineering Foundations**<br>**Advanced Engineering** | Principles of Applied Engineering<br>(1 credit) | Intro to Engineering Design<br>(1 credit) | **Engineering Science**<br>**(1 credit)**<br><br>*GISD Sequence Pre-Req* | **Civil Engineering & Architecture**<br>**(1 credit)**<br>-AND-<br>~~Construction Engineering & Management~~<br>~~(1 credit)~~<br><br>Career and Technical Education Project Based Capstone<br>(1 credit)<br>12701101<br>No Required Prereq | **Digital Electronics**<br>**(1 credit)**<br>-AND-<br>**Scientific Research and Design**<br>**(1 credit)** |
| | **Mechanical & Aerospace Engineering**<br>**Drones** | Principles of Applied Engineering<br>(1 credit) | Intro to Engineering Design<br>(1 credit) | **Engineering Science**<br>**(1 credit)**<br><br>*GISD Sequence Pre-Req* | ~~**Aerospace Design I**~~<br>~~**(1 credit - 1st Sem)**~~<br>~~**-AND-**~~<br>~~**Aerospace Design II**~~<br>~~**(1 credit - 2nd Sem)**~~<br><br>Introduction to UMV<br>(1 credit)<br>Level II<br>N1304670<br>No Required Prereq<br><br>AND<br><br>Robotics I<br>(1 credit)<br>Level II<br>13037000<br>No Required Prereq | ~~**Practicum in STEM**~~<br>~~**(2 credits)**~~<br><br>Practicum in Manufacturing<br>Level IV<br>(1 credit)<br>13033000 |

Note: While Aerospace Design I and II were 1 credit classes per semester intentionally, we suggest a traditional route with Intro to UMV and Robotics to ease scheduling and transcription. The need for the credit per semester is no longer necessary with the new courses.

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## COURSE MODIFICATION

### Earth Systems Science (030602150) *Richarte High School Only*

Credits: 1.0 | Length: YR | Credit Type: State | Counted in Rank GPA: Yes

Pre-requisites: Algebra I and two credits of high school science.

Richarte High School Only - Earth Systems Science is a course designed to build on students' prior scientific and academic knowledge and skills to develop understanding of Earth's system in space and time. These systems (the atmosphere, hydrosphere, geosphere, and biosphere) interact through time to produce the Earth's landscapes, climate, and resources. Students explore the geologic history of individual dynamic systems through the flow of energy and matter, their current states, and how these systems affect and are affected by human use. TEKS

| | | |
|---|---|---|
| Earth Systems Science | ESS | Course Weight: Core |

### CT Entrepreneurship I

Credits: 1.00 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisites: None

Recommended Prerequisite: Principles of Business, Marketing, and Finance, Business Management

Students will gain the knowledge and skills needed to become an entrepreneur. Students will learn the principles necessary to begin and operate a business. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, and developing a plan to organize and promote the business and its products and services. In addition, students understand the capital required, the return on investment desired, and the potential for profit. TEKS **[Articulated Course]**

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|---|---|---|---|
| CT Entrepreneurship | CTENT | **13011101** | Course Weight: Core |

### Instructional Technology Applications (84700ITA)

Students explore various uses for technology learning tools in order to enhance technology integration into the academic experience. Through project-based learning, students will design, create, produce and present multi-media products using instructional technology applications and programs, with specific focus on current content area integration. Students will progress though the Bloom's Digital Taxonomy as they develop Higher Order Thinking Skills in discovering innovative application of digital media and programming.

| | | | | |
|---|---|---|---|---|
| Instructional Tech Apps | ITA | Semester | Grade | 7th / 8th |
| Instructional Tech Apps | ITAY | Full Year ~~(Wagner Only)~~ | Grade | 6th |

## COURSE MODIFICATION (CONT'D)

### CT Career Preparation

Credits: 2.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Recommended Prerequisites: Students must be 16 years of age and have reliable transportation to enroll in this program. Students must average a minimum 10 hours of work per week.

Students must maintain employment throughout the entire school year at an approved jobsite to continue in this work-based learning program. The student's approved worksite should relate to his/her Program of Study. Career Preparation provides opportunities for students to participate in a learning experience that combines classroom instruction with paid business and industry employment experiences and supports strong partnerships among school, business and community stakeholders. The goal is to prepare students with a variety of skills for a fast-changing workplace. This instructional arrangement should be an advanced component of a student's individual program of study. Students are taught employability skills, which include job-specific skills applicable to their training station, job interview techniques, communication skills, financial and budget activities, human relations and portfolio development. Career preparation is relevant, rigorous and supports student attainment of academic standards and effectively prepares students for college and career success. TEKS

| | | | |
|---|---|---|---|
| CT Career Prep General First Time Taken | CTCAR1 | 12701111 | Course Weight: Core |
| CT Career Prep General First Time Taken | CTCAR1M | 12701111 | Course Weight: Modified |
| CT Career Prep General Second Time Taken | CTCAR2 | 12701112 | Course Weight: Core |
| CT Career Prep General Second Time Taken | CTCAR2M | 12701112 | Course Weight: Modified |

### CT Career Preparation Extended

Recommended Grades: 11-12

Credits: 3.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Recommended Prerequisites: Students must be 16 years of age and have reliable transportation to enroll in this program. Students must average a minimum 15 hours of work per week.

Students must maintain employment throughout the entire school year at an approved jobsite to continue in this work-based learning program. The student's approved worksite should relate to his/her Program of Study. Career Preparation provides opportunities for students to participate in a learning experience that combines classroom instruction with paid business and industry employment experiences and supports strong partnerships among school, business and community stakeholders. The goal is to prepare students with a variety of skills for a fast-changing workplace. This instructional arrangement should be an advanced component of a student's individual program of study. Students are taught employability skills, which include job-specific skills applicable to their training station, job interview techniques, communication skills, financial and budget activities, human relations and portfolio development. Career preparation is relevant, rigorous and supports student attainment of academic standards and effectively prepares students for college and career success. TEKS

| | | | |
|---|---|---|---|
| CT Career Prep General Extended 1st Time Taken | CTCARE1 | 12701131 | Course Weight: Core |
| CT Career Prep General Extended 1st Time Taken | CTCARE1M | 12701131 | Course Weight: Modified |
| CT CareerPrep General Extended 2nd Time Taken | CTCARE2 | 12701132 | Course Weight: Core |
| CT CareerPrep General Extended 2nd Time Taken | CTCARE2M | 12701132 | Course Weight: Modified |

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## COURSE DELETION - DEACTIVATION

### CT Aerospace Design I

Credits: 1.0 | Length: SM | Credit Type: State | Counted in Rank GPA: No

GISD Recommended Prerequisite: Engineering Science

AEROSPACE DESIGN 1 is the first semester class to be taken as part of the drones program. This course will offer a full year's worth of content and credit through double-blocked/two-period scheduling in a single semester. The semester grade earned in this course will be awarded for both semester 1 and semester 2 of the course on the student's high school transcript. It is a 1 credit course that will be taken in 1 semester (double blocked) at the FRC. Semester 2 will be Aerospace Design 2 [CTAD2].

| | | | |
|---|---|---|---|
| Aerospace Design 1 | CTAD1 | PENDING TEA | Course Weight: Core |

### CT Construction Engineering & Management

Credits: 1.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisites: None
Corequisite: Civil Engineering & Architecture (PLTW)

Full course description pending Texas Education Agency update.

| | | | |
|---|---|---|---|
| CT Construction Engineering MGT | CTCEM | PENDING TEA | Course Weight: Core |

### CT Aerospace Design II

Credits: 1.0 | Length: SM | Credit Type: State | Counted in Rank GPA: No

Prerequisite: Engineering Science, Aerospace Design 1

AEROSPACE DESIGN 2 is the second semester class to be taken as part of the drones program. This course will offer a full year's worth of content and credit through double-blocked/two-period scheduling in a single semester. The semester grade earned in this course will be awarded for both semester 1 and semester 2 of the course on the student's high school transcript. It is a 1 credit course that will be taken in 1 semester (double blocked) at the FRC.

| | | | |
|---|---|---|---|
| CT Aerospace Design 1 | CTAD2 | PENDING TEA | Course Weight: Core |

These courses have yet to be approved by TEA. They will remain in the course guide for future year use, pending TEA approval. GISD will "deactivate" the courses so they are not used at the campus level inadvertently.

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## COURSE ADDITION

### CT Aircraft AirFrame Technology

Credits: 2.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisite: None

Aircraft Airframe Technology is designed to teach the theory of operation of aircraft airframes and associated maintenance and repair practices. Airframe maintenance and repair practices include knowledge of the function, diagnosis, and service of airframe structures, systems, and components of aircraft.

| | | | |
|---|---|---|---|
| Aircraft AirFrame Technology | CTAAT | **13039400** | Course Weight: Core |

### CT Career and Technical Education Project Based Capstone

Credits: 1.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisite: None

This course is designed for students to develop and enhance essential skills while investigating real-world problems, issues, or interests. Students work independently or collaboratively with others within or across career clusters or programs of study. Students partner with mentor(s) or advisor(s) to develop a project. Students conduct research, compile findings, implement project activities appropriate to student contribution, and present their work to a relevant audience that may include industry experts. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge and skills in a variety of settings to become productive and contributing members of society.

| | | | |
|---|---|---|---|
| CTE Project Based Capstone | CTPRJBC | 12701101 | Course Weight: Core |

### CT Introduction to Unmanned Aerial Vehicles (UAV)

Credits: 1.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisite: None

Course Description: The Introduction to Unmanned Aerial Vehicle (UAV) Flight course is designed to prepare students for entry-level employment or continuing education in piloting UAV operations. Principles of UAV is designed to instruct students in UAV flight navigation, industry laws and regulations, and safety regulations. Students are also exposed to mission planning procedures, environmental factors, and human factors involved in the UAV industry.

| | | | |
|---|---|---|---|
| Intro to Unmanned Aerial Vehicles | CTIUAV | N1304670 | Course Weight: Core |

### CT Robotics I

Credits: 1.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisite: None

In Robotics I, students will transfer academic skills to component designs in a project-based environment through implementation of the design process. Students will build prototypes or use simulation software to test their designs. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotic and automation industry.

| | | | |
|---|---|---|---|
| Robotics I | CTROBO | 13037000 | Course Weight: Core |

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## CT Practicum in Manufacturing

Credits: 2.0 | Length: YR | Credit Type: State | Counted in Rank GPA: No

Prerequisite: None

The Practicum in Manufacturing course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

| | | | |
|---|---|---|---|
| Practicum in Manufacturing | CTPMFG | **13033000** | Course Weight: Core |