

STEM COURSES

Agriscience	<u>Courses must be taken in sequence:</u>	
	Agriscience I (Year 1) CTS195/JTS195	
	Agriscience II (Year 2) CTS261/JTS261	
	Agriscience III (Year 3) CTS262/JTS262	
	Agriscience IV (Year 4) CTS264/JTS264	
	Agriculture SOE (Required in conjunction with another Agriscience class) CTS199	
Agriscience Internship (Optional) CTS263		
Grade: 9-12	3 Year Program	Program offered at: AHS
<p>Current trends point to a national shortage of college graduates in agricultural science. Develop skills working with various species of livestock.</p> <ul style="list-style-type: none"> • Acquire an understanding of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment. • Operate and manage aspects of livestock production, reproduction, health, feeding. • Conduct research and study the agriculture industry, natural resource systems, agriculture mechanics, food sciences, and more. • Study nutritional requirements of animals and nutritive values of animal feed materials. 		Fee required

Architectural Drafting & Design	<u>Courses must be taken in sequence:</u>	
	Architectural Drafting I (Year 1) CTS144/JTS144	
	Architectural Drafting II (Year 2) CTS145/JTS145	
	Architectural Drafting III (Optional Year 3) CTS146/JTS146 (6 credits from PCC available)	
	Architectural Drafting IV (Optional Year 4) CTS148/JTS148	
	Architectural Drafting Internship (Optional) CTS147	
Grade: 9-12	2 Year Program	Program offered at: CDO
<p>There is a high demand for skilled drafters and plenty of professional growth opportunities in today's market.</p> <ul style="list-style-type: none"> • Learn techniques of sketching, drafting, computer aided drafting (CAD) programs, layout, design, blueprint Interpretation, and all phases of drawing house plans. • Instruction in construction and structural design, architectural and engineering drawings, problem solving, and 3D architectural rendering. • Build 3D house models from wood and foam board along with designing and constructing various projects and other real-life projects. • Students can demonstrate their skills in regional, state, and national SkillsUSA competitions. 		Fee required

DIGITAL PHOTOGRAPHY

Section: CTS155/JTS155		Introduction to Photography	
Grade: 9-12	All Year	Course offered at: AHS CDO IRHS	
Prerequisites: <i>None</i>			
<p>Students will learn basic digital camera operation and digital printing techniques involved in the input/output of digital media. Elements of photo composition will be introduced and incorporated, as well as the technical aspects of digital photography. This course includes units of instruction in all aspects of the industry, career development, applied math, safety, legal issues, customer service, basic computer, and design skills. This is a challenging course and each student is expected to be self-motivated, responsible, and able to work independently to meet deadlines.</p>			Fee required

Section: CTS156/JTS156		Photography	
Grade: 10-12	All Year	Course offered at: AHS CDO IRHS	
Prerequisites: <i>Introduction to Photography</i>			
<p>Students will learn basic digital SLR camera operation and digital printing techniques involved in the input/output of digital media. The elements and principles of photo composition will be re-introduced in addition to the introduction of many experimental processes, all incorporated into a professional portfolio. This is a challenging course and each student is expected to be self-motivated, responsible, and able to work independently to meet deadlines.</p>			Fee required

Section: CTS157/JTS157		Advanced Photography	
Grade: 11-12	All Year	Course offered at: AHS CDO IRHS	
Prerequisites: <i>Photography</i>			
<p>Computer manipulation (Adobe Photoshop and Adobe Lightroom) of black and white, as well as color photographs and studio techniques, are just the tip of the iceberg. Students will explore advanced camera work, experimental techniques, studio lighting techniques, and the refinement of compositional guidelines and artistic aesthetics. Students will be encouraged to start a quality portfolio (traditional and digital) of their work for future reference. This course prepares the individual to apply advanced knowledge and skills to produce quality photographs through the use of digital photography. Students will display their work in monthly themed art gallery shows. This course involves out-of-school work and students must be self-motivated to meet deadlines for the gallery openings. Career opportunities will be looked into for possible School-to-Work programs.</p>			Fee required

Engineering		<u>Courses must be taken in sequence:</u>	
		Algebra II (Year 1)	
		Introduction to Engineering Design (Year 1 or Year 2) CTS132/JTS117	
		Engineering 102 (Year 2 or Year 3, weighted grade)* SCl013/JTS129	
Engineering Internship (Optional) CTS130			
Grade: 10-12	3 Year Program	Program offered at: CDO IRHS	
Prerequisites: <i>Algebra I must be completed prior to Introduction to Engineering Design</i>			
Prerequisites for Engineering 102: <i>Successful completion of Introduction to Engineering Design and concurrent enrollment in Pre-Calculus or beyond</i>			
Build an airplane, design the longest bridge, or change how we deliver food to the world. <ul style="list-style-type: none"> • Hands-on projects using the engineering design process, creative problem solving, and collaboration. • Introduction to a wide variety of engineering careers such as mechanical, software, architectural, civil/structural, electrical, chemical, environmental, and mining. • Learn computer modeling and solve real-world problems by applying math and physics. <i>*Students enrolled in Engineering 102 can be dual enrolled with the University of Arizona's Engineering 102 for 3 credits, fully transferable to the University of Arizona by paying tuition.</i>			Fee required

Film & TV Production		<u>Courses must be taken in sequence:</u>	
		Intro TV/Video (Year 1) CTS153/JTS153	
		TV/Video Productions (Year 2) CTS176/JTS176	
		Advanced TV/ Video Productions (Optional Year 3) CTS178/JTS178	
TV/Video Production Internship (Optional) CTS177			
Grade: 9-12	2 Year Program	Program offered at: AHS IRHS	
Be a part of this huge industry using both creativity and technology.			
<ul style="list-style-type: none"> • Create movies, advertisements, and incredible special effects using professional software. • Watch and discuss film, television, and advertising as art and entertainment, and their place in society. • Star or work behind the scenes on the school's weekly announcements show. • Select the appropriate equipment, from the type of lens, to the appropriate lighting. • Operate computer editing systems, video switching equipment, and digital video effects units to produce a final video product. 			Fee required

Graphic Design		<u>Courses must be taken in sequence:</u>	
		Intro to Graphic Design (Year 1) CTS154/JTS154	
		Graphic Design II (Year 2) CTS151/JTS151	
		Graphic Design III (Optional Year 3) CTS152/JTS152	
		Graphic Design IV (Optional Year 4) CTS226/JTS226	
Graphic Design Internship (Optional) CTS216			
Grade: 9-12	2 Year Program	Program offered at: IRHS	
Prepare to be part of this growing industry.			
<ul style="list-style-type: none"> • Produce and design high-quality artwork using professional graphic design, layout, and photo editing software (Adobe Photoshop, InDesign, and Illustrator). • Run a full-scale design firm and create advertising campaigns. • Usher a product from design to production. • Create product packaging and learn screen-printing. 			Fee required

Graphic Design (YK)		<u>Courses must be taken in sequence:</u>	
		Graphic Design I (YK) (Year 1) CTS223/JTS223	
		Graphic Design II (YK) (Year 2) CTS224/JTS224	
		Graphic Design III (YK) (Optional Year 3) CTS225/JTS225	
		Graphic Design Internship (Optional) CTS216	
Grade: 9-12	2 Year Program	Program offered at: CDO	
Learn every aspect of the publication industry while creating the yearbook. <ul style="list-style-type: none"> • Photograph school events, interview students and teachers, and write stories and captions for yearbook photographs. • Produce and design a high-quality yearbook using professional graphic design, layout, and photo editing software (Adobe Photoshop, InDesign). • Manage the yearbook staff through leadership positions (Editor-in-Chief, Editor, Story Editor, Photo Editor). • Promote the yearbook by creating advertising campaigns (posters, events, announcements). 			Fee required

Music and Audio Production		<u>Courses must be taken in sequence:</u>	
		Music and Audio Production I (Year 1) CTS240/JTS240	
		Music and Audio Production II (Year 2) CTS241/JTS241	
		Music and Audio Production III (Optional Year 3) CTS242/JTS242	
		Music and Audio Internship (Optional) CTS243	
Grade: 9-12	2 Year Program	Program offered at: IRHS	
Music and sound can be made, but it has to be captured and mixed to be heard and remembered. <ul style="list-style-type: none"> • Intensive study of the history of sound recording and hands-on experience with studio equipment. • Students will apply technical knowledge and skills to the production of sound recordings as finished products or as components of film/video, broadcast, live, or mixed media production. • In-depth practical understanding of the three phases of the media creation process; pre-production, production, and post-production. 			Fee required

Photo Design (YK)		<u>Courses must be taken in sequence:</u>	
		Photo Design I (YK) (Year 1) CTS220/JTS220	
		Photo Design II (YK) (Year 2) CTS221/JTS221	
		Photo Design III (YK) (Optional Year 3) CTS222/JTS222	
		Digital Photo Internship (Optional) CTS158	
Grade: 9-12	2 Year Program	Program offered at: AHS IRHS	
Learn every aspect of the publication industry while creating the yearbook. <ul style="list-style-type: none"> • Photograph school events, interview students and teachers, and write stories and captions for yearbook photographs. • Produce and design a high-quality yearbook using professional graphic design, layout, and photo editing software (Adobe Photoshop, InDesign). • Manage the yearbook staff through leadership positions (Editor-in-Chief, Editor, Story Editor, Photo Editor). • Promote the yearbook by creating advertising campaigns (posters, events, announcements). 			Fee required

Software & App Design		<u>Courses must be taken in sequence:</u> Software & App Design I (Year 1) CTS203/JTS203 Advanced Placement Computer Science Principles (Year 1, weighted grade) CTS149/JTS120	
		Software & App Design II (Year 2) CTS179/JTS179 Advanced Placement Computer Science A (Year 2, weighted grade) CTS182/JTS182	
		Software & App Design Internship (Optional Year 3 & 4) CTS185	
Grade: 9-12	2 Year Program	Program offered at: AHS CDO IRHS	
<p>Combine your creative and technology skills to prepare for one of the fastest growing industries.</p> <ul style="list-style-type: none"> • Develop skills that are adaptable across all careers, disciplines, and pathways - including medicine, engineering, and visual and performing arts. Having a fundamental understanding of computer science is critical in today's global economy. • Classes mirror the collaborative & creative culture of the software & app design industry, engaging in problem-solving, teamwork, and user-centered design. • Develop websites, apps, and other projects based on personal interests and working with community partners. • Dual enrollment and college credit opportunities available. 			Fee required