

CTE Learning that Works for DoDEA

What is CTE?

Career & Technical Education (CTE) prepares students for success in college and careers by helping them develop the knowledge, technical skills, academic rigor, and real-world experience for high-skill, high-demand, highly successful careers. It gives purpose to learning by emphasizing real-world skills and practical knowledge within a selected career focus.

What are Career Clusters and Pathways?

Career Clusters represent major groupings of similar occupations and industries within the U.S. job market. Each Career Cluster provides students with an overview of career options and an understanding of the broad industry. Within each of the Career Clusters are various Career Pathways, which are sequences of CTE courses designed to prepare students for careers and continued education.

DoDEA offers the following Career Clusters and Pathways:

 A/V Technology & Communications <ul style="list-style-type: none">• Video Communications Pathway	 Health Science <ul style="list-style-type: none">• Therapeutic Services-Patient Care Pathway
 Business Management & Administration <ul style="list-style-type: none">• Business Management Pathway	 Hospitality & Tourism <ul style="list-style-type: none">• Culinary Arts Pathway
 Education & Training <ul style="list-style-type: none">• Teaching as a Profession Pathway	 Information Technology <ul style="list-style-type: none">• Cybersecurity Pathway• Digital Design & Communication Pathway• Programming Pathway
 Government & Public Administration <ul style="list-style-type: none">• National Security Pathway	 Science, Technology, Engineering & Mathematics <ul style="list-style-type: none">• Engineering & Technology Pathway

What is a Career Pathway Endorsement?

Students completing a DoDEA Career Pathway will earn a Career Pathway Endorsement on their high school transcript. The Career Pathway Endorsement shows prospective employers, scholarship boards, colleges, universities, training programs, and the military that a student has:

1. Completed a comprehensive, in-depth, and applied course of study in a specialized area.
2. Developed transferable work habits including self-reflection, self-direction, and perseverance through purposeful and meaningful learning experiences.
3. Participated in learning opportunities that are diverse, rigorous, and connected to the world outside of the school building.



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A/V Technology & Communications

Video Communications Pathway

In DoDEA's Video Communications Pathway, students are introduced to the concepts and equipment related to video production. Through a hands-on, project-oriented approach, students apply knowledge to filming, editing and production, lighting, audio, computer graphics, and effects to communicate effectively using the video communication medium.

Sequence	Course Description	Credits
Year 1	PTV301 Video Communications I: The Video Communications I (year-long) course is designed to introduce students to the concepts and equipment related to video production. Topics include filming, composition, non-linear insert editing, lighting, storyboarding, audio, and computer graphics/effects. 	1.0
Year 2	PTV401 Video Communications II: The Video Communication II (year-long) course expands on the student's application of skills developed in the first course. Topics include video production techniques, studio production, on-site editing, video switching, lighting, scriptwriting, computer graphics, interview techniques, and computer based digital video processing. 	1.0
Year 3	PTV501 Video Communications III: The Video Communication III (year-long) course is designed to build on the Video Communications I and II courses and refine their resume of skills and products in order to gain entry into post-secondary or career entry-level programs in the fields of video/television/film production. 	1.0

 Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

Please see your guidance counselor for more information on DoDEA's Video Communications Pathway.



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Business Management & Administration

Business Management Pathway

In DoDEA's Business Management Pathway, students learn how to plan, monitor, and manage day-to-day business activities, human capital, and financial resources. Students also create strategic plans used to manage business growth, profit, and goals, and are introduced to laws and regulations affecting business operations and transactions.

Sequence	Course Description	Credits
Year 1	PTB401 Management Foundations: The Management Foundations (semester) course introduces students to basic management concepts and leadership styles as they explore business ownership, planning, operations, marketing, finance, economics, communications, and human relations.	0.5
	PTB501 Marketing and Entrepreneurship: The Marketing and Entrepreneurship (semester) course introduces students to the roles of business and marketing in the free enterprise system and the global economy. Emphasis is placed on the introduction and application of economics, business and marketing, interpersonal communication, and basic entrepreneurship concepts. 	0.5
Year 2	PTB301 Business and Personal Finance: The Business and Personal Finance (semester) course helps students develop financial literacy skills and an understanding of economic principles. Students will learn how to make informed, responsible decisions related to budgeting, banking, credit, insurance, spending, taxes, saving, and investing. 	0.5
	Spreadsheet/Database: The Spreadsheet/Database (semester) course provides students with the opportunity to develop professional level skills in spreadsheet and database management software while learning the basic principles, concepts, and practices of accounting. 	0.5
Year 3	PTB503 Business Law: The Business Law (year-long) course introduces students to the foundations of the American legal system. Students will learn the rights and responsibilities of citizens and gain practical knowledge and skills by exploring economic and social concepts related to laws governing business and individuals. Focus areas include contracts, consumer protection, criminal law, tort law, international law, family/domestic law, employment law, cyber law, and careers in the legal profession.	1.0

 Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

 Course is also offered in Virtual School

Please see your guidance counselor for more information on DoDEA's Business Management Pathway.



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Education & Training

Teaching as a Profession Pathway

In DoDEA's Teaching as a Profession Pathway, students learn to identify materials and resources needed to support instructional plans and use subject matter knowledge to plan and prepare effective instruction. Through hands-on tasks and projects, students apply knowledge and skills in real-world situations across multiple education settings.

Sequence	Course Description	Credits
Year 1	Education I:	1.0
Year 2	Education II:	1.0
Year 3	Education III: 	1.0

 Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

Please see your guidance counselor for more information on DoDEA's Teaching as a Profession Pathway.



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Government & Public Administration

National Security Pathway (Air Force)



In DoDEA's National Security Pathway, students are enrolled in the Junior Reserve Officer Training Corps (JROTC). JROTC is a program that teaches students character education, student achievement, wellness, leadership, and diversity. JROTC cadets act with integrity and personal accountability as they lead others to succeed in a diverse and global workforce; engage in civic and social concerns in the community, government, and society; make decisions that promote positive social, emotional, and physical health; value the role of the military and other service; and graduate prepared to excel in post-secondary options and career pathways.

Sequence	Course Description	Credits
Year 1	VEF301 Air Force JROTC I: The Air Force JROTC I (year-long) course is designed to acquaint students with the historical development of flight and the role of the military in history. Additionally, wearing of the uniform, Air Force U.S. customs and courtesies, and basic drill skills are introduced.	1.0
Year 2	VEF401 Air Force JROTC II: The Air Force JROTC II (year-long) course is designed to acquaint students with the aerospace environment, the human requirements of flight, and the principles of flight and navigation. Students develop an understanding of the environment, and how the environment affects flight.	1.0
Year 3	VEF501 Air Force JROTC III: The Air Force JROTC III (year-long) course is designed to emphasize the propulsion systems of aircraft. Both reciprocal and jet engines are studied in some detail. Rocketry and spacecraft portions of the course include rocket propulsion, guidance and control, and orbits.	1.0
Year 4	VEF601 Air Force JROTC IV: The Air Force JROTC IV (year-long) course is designed to present the primary features of civil aviation and its impact on our society careers available in the civil and military aerospace community, and descriptions and uses of modern aerospace vehicles.	1.0

Please see your guidance counselor for more information on DoDEA's National Security Pathway.



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Government & Public Administration

National Security Pathway (Marines)



In DoDEA's National Security Pathway, students are enrolled in the Junior Reserve Officer Training Corps (JROTC). JROTC is a program that teaches students character education, student achievement, wellness, leadership, and diversity. JROTC cadets act with integrity and personal accountability as they lead others to succeed in a diverse and global workforce; engage in civic and social concerns in the community, government, and society; make decisions that promote positive social, emotional, and physical health; value the role of the military and other service; and graduate prepared to excel in post-secondary options and career pathways.

Sequence	Course Description	Credits
Year 1	VEM301 Marine JROTC I: The Marine Corps JROTC I (year-long) course focuses on introducing and integrating students to the JROTC program and its objectives. Classes focus on introducing leadership concepts such as definition, traits, morals & ethics, and responsibilities.	1.0
Year 2	VEM401 Marine JROTC II: The Marine Corp JROTC II (Leadership Education II) (year-long) course is a continuation of the Marine Corps JROTC I course with the further development of individual leadership skills.	1.0
Year 3	VEM501 Marine JROTC III: The Marine Corps JROTC III (year-long) course focuses on the development of advanced leadership skills.	1.0
Year 4	VEM601 Marine JROTC IV: The Marine Corps JROTC IV (year-long) course focuses entirely on the application of all previously learned leaderships training and sub-course contents. The students serve in the highest leadership billets in the Marine Corps JROTC program and under the guidance of the JROTC Instructor staff, serve as assistant instructors in the presentation of specified periods of instruction, inspections, and the lower level Marine Corps JROTC courses.	1.0

Please see your guidance counselor for more information on DoDEA's National Security Pathway.



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Government & Public Administration

National Security Pathway (Army)



In DoDEA's National Security Pathway, students are enrolled in the Junior Reserve Officer Training Corps (JROTC). JROTC is a program that teaches students character education, student achievement, wellness, leadership, and diversity. JROTC cadets act with integrity and personal accountability as they lead others to succeed in a diverse and global workforce; engage in civic and social concerns in the community, government, and society; make decisions that promote positive social, emotional, and physical health; value the role of the military and other service; and graduate prepared to excel in post-secondary options and career pathways.

Sequence	Course Description	Credits
Year 1	VER301 Army JROTC I: The Army JROTC I (year-long) course is designed to present the history, purpose, and objectives of the junior and senior JROTC program; the wearing of the uniform; respect for the flag and National Anthem; and organizational principles.	1.0
Year 2	VER401 Army JROTC II: The Army JROTC II (year-long) course is designed to present discussion of self-concept; the definition of management: the elements of the leadership process; practical exercise in the development of leadership skills; the school of the soldier; the role of cadets as leaders; and the value of physical exercise and conditioning.	1.0
Year 3	VER501 Army JROTC III: The Army JROTC III (year-long) course is designed to present discussion of military leadership and managerial techniques, the aspect of mutual respect (leader/subordinate relationship), the duties of a leader/manager the building of teamwork and team spirit, the flow of communication, the management to operating level and back, the problem-solving process, staff supervision of assigned tasks, and staff functions and procedures.	1.0
Year 4	VER601 Army JROTC IV: The Army JROTC IV (year-long) course is designed to present the psychology of leadership; review of LD-3 instruction; the moral aspects of leadership; group relations and behavior; indicators of leadership, communications, and management of resources; the problem-solving process; and practical exercises in problem solving and management.	1.0

Please see your guidance counselor for more information on DoDEA's National Security Pathway.



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Government & Public Administration

National Security Pathway (Navy)



In DoDEA's National Security Pathway, students are enrolled in the Junior Reserve Officer Training Corps (JROTC). JROTC is a program that teaches students character education, student achievement, wellness, leadership, and diversity. JROTC cadets act with integrity and personal accountability as they lead others to succeed in a diverse and global workforce; engage in civic and social concerns in the community, government, and society; make decisions that promote positive social, emotional, and physical health; value the role of the military and other service; and graduate prepared to excel in post-secondary options and career pathways.

Sequence	Course Description	Credits
Year 1	VEV301 Navy JROTC I: The Navy JROTC I (year-long) course is designed to present the history, purpose, and objectives of the Navy JROTC program; introduce cadets to the precepts of citizenship, the elements of leadership, and basic military discipline. This course is also designed to engender a sound appreciation for the heritage and traditions of America, with recognition that the historically significant role of sea power will be important in America's future, and develop in each cadet a growing sense of pride in his/her organization, associates, and self.	1.0
Year 2	VEV401 Navy JROTC II: The Navy JROTC II (year-long) course is designed to provide definition of management; the elements of the leadership process; practical exercise in the development of leadership skill; the role of cadets as leaders; the value of physical exercise and conditioning, and to learn about the basic elements and requirements for national security and their personal obligations as American citizens to contribute toward national security.	1.0
Year 3	VEV501 Navy JROTC III: The Navy JROTC III (year-long) course is designed to focus on the development of advanced leadership and management skills.	1.0
Year 4	VEV601 Navy JROTC IV: The Navy JROTC IV (year-long) course focuses entirely on the application of all previously learned leadership and management skills and trainings. The students serve in the highest leadership billets in the Navy JROTC program.	1.0

Please see your guidance counselor for more information on DoDEA's National Security Pathway.



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Health Science



Therapeutic Services – Patient Care Pathway

In DoDEA's Therapeutic Services – Patient Care Pathway, students learn health and safety policies, how to utilize emergency procedures and protocols, employ communication strategies used in the delivery of healthcare, and are introduced to cultural, social, and ethnic diversity as it applies to health care delivery.

Sequence	Course Description	Credits
Year 1	PTH402 Health Science I: The Health Science I (year-long) course provide students understanding disease transmission, care of infants and children through pre-school, and care of dependent disabled and geriatric clients.	1.0
Year 2	PTH502 Health Science II: The Health Science II (year-long, 2 blocks) course provide students understanding disease transmission, care of infants and children through pre-school, and care of dependent disabled and geriatric clients. Students successfully completing this course (and Health Science I) may be eligible to take the Certified Nursing Assistant (CNA) exam.	2.0

Please see your guidance counselor for more information on DoDEA's Therapeutic Services – Patient Care Pathway.



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Hospitality & Tourism

Culinary Arts Pathway

In DoDEA's Culinary Arts Pathway, students are equipped with the skills needed to manage projects and meet deadlines, multi-task, and work effectively with coworkers. Students are exposed to a variety of cooking methods and techniques from basic to advanced skills. Students also learn catering, nutrition, menu and facility planning, cold food preparation, and food service management.

Sequence	Course Description	Credits
Year 1	PTF401 Culinary Arts I: The Culinary Arts I (year-long with two blocks) course will teach students the skills required for a career in the restaurant and food industry. Students will learn knife skills and basic food preparation techniques as well as practical sanitation skills. Other topics include: sauces, soups & stocks, elements of entree production, fundamentals of baking, pastry arts, nutrition and menu planning, dining room service, international cuisine, food preservation, purchasing and receiving, catering, and presentation & plate design.	2.0
Year 2	PTF402 Culinary Arts II: The Culinary Arts II (year-long with two blocks) course builds on the skills learned in Culinary Arts I. This course consists of practical training in the kitchen. Students will learn advanced knife skills and food preparation techniques as well as practical sanitation skills. Further advanced instruction in table service, baking, pastries, and management techniques are emphasized.	2.0

Please see your guidance counselor for more information on DoDEA's Culinary Arts Pathway.



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Information Technology



Cybersecurity Pathway

In DoDEA's Cybersecurity Pathway, students explore a wide variety of issues ranging from networking and operating systems to mobile devices and security. Students learn to troubleshoot PC and mobile device issues, identify and protect against security vulnerabilities, and explore cyber trends and threats.

Sequence	Course Description	Credits
Year 1	PTI309 Computer Service and Support: The Computer Service and Support (year-long) course prepares students to perform shop maintenance, repair computers, install operating systems and software, acquire employment, and develop skills in computer networking and resource sharing. Students successfully completing this course may be eligible to take the CompTIA A+ certification exam. 	1.0
Year 2	CTP331 Coding for Everyone: The Coding for Everyone Course (semester) prepares students to write code, understand the concepts of sound coding technique. Students will use the engineering design process to solve real world problems. Students will gain firsthand knowledge of coding tools, techniques and devices.  	0.5
	CTP332 Coding for Everything: The Coding for Everything Course (semester) prepares students to build interface circuits and write code that turns digital devices into intelligent machines. Students will use the engineering design process to solve real world problems. Students will learn how to build and code relevant solutions in STEM, and in turn, invent things that perform interesting and useful tasks.  	0.5
Year 3	CTI331 Cybersecurity: The Cybersecurity (year-long) course develops foundational understanding of cybersecurity and how it relates to information and network security. The course introduces students to characteristics of cybercrime, security principles, technologies, and procedures to defend networks. Through interactive, multimedia content, lab activities, and multi-industry case studies, students build technical and professional skills to pursue careers in cybersecurity.  	1.0

 Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

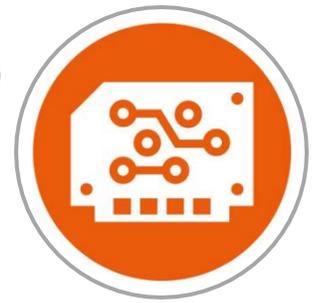
 Course is also offered in Virtual School.

Please see your guidance counselor for more information on DoDEA's Cybersecurity Pathway.



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Information Technology



Digital Design & Communication Pathway

In DoDEA's Digital Design & Communication Pathway, students learn to create, design, and produce interactive multimedia products and services, including digitally-generated or computer-enhanced media used in business, training, entertainment, communications, and marketing.

Sequence	Course Description	Credits
Year 1	PTI405S Digital Media: The Digital Media (semester) course provides students with the opportunity to develop professional-level skills in multimedia using Adobe Flash. Topics include creating professional digital media creations using animation, sound, and videos. The course also introduces students to document construction for publishing on the World Wide Web using authoring software. Students successfully completing this course may be eligible to take the Adobe Certified Associate Animate certification exam. 	0.5
	PTI307S Digital Imaging: The Digital Imaging (semester) course provides students with the opportunity to develop professional level skills in imaging software. Students successfully completing this course may be eligible to take the Adobe Certified Associate Photoshop certification exam. 	0.5
Year 2	PTV301 Video Communications I: The Video Communications I (year-long) course is designed to introduce students to the concepts and equipment related to video production. Topics include filming, composition, non-linear insert editing, lighting, storyboarding, audio, and computer graphics/effects. 	1.0
Year 3	PTI407S Web Design: The Website Design (semester) course is designed to teach students the concepts, skills and processes involved in website development and management. Students successfully completing this course may be eligible to take the Adobe Certified Associate Dreamweaver certification exam.  	0.5
	PTI308S Digital Publishing: The Digital Publishing (semester) course provides students activities using Adobe InDesign software. Topics include Basic Graphic and Layout Designs; Graphic and Layout Design; Imaging Process and Creating Publications. Students successfully completing this course may be eligible to take the Adobe Certified Associate Illustrator certification exam. 	0.5

 Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

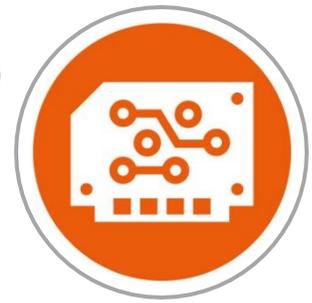
 Course is also offered in Virtual School.

Please see your guidance counselor for more information on DoDEA's Digital Design & Communication Pathway.



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Information Technology



Programming Pathway

In DoDEA's Programming Pathway, students gain advanced knowledge of computer operating systems, programming languages, and software development necessary to design, develop, implement, and maintain computer systems and software.

Sequence	Course Description	Credits
Year 1	CTP331 Coding for Everyone: The Coding for Everyone (semester) course prepares students to write code, understand the concepts of sound coding technique. Students will use the engineering design process to solve real world problems. Students will gain firsthand knowledge of coding tools, techniques and devices.  	0.5
	CTP332 Coding for Everything: The Coding for Everything (semester) course prepares students to build interface circuits and write code that turns digital devices into intelligent machines. Students will use the engineering design process to solve real world problems. Students will learn how to build and code relevant solutions in STEM, and in turn, invent things that perform interesting and useful tasks.  	0.5
Year 2	PTP305 Java Programming I: The Java Programming I (semester) course is designed to teach students Java programming concepts using a structured approach. Students will develop Java applications and applets. Problem solving and program documentation will be emphasized.  	0.5
	PTP306 Java Programming II: The Java Programming II (semester) course continues to teach students Java programming concepts using a structured approach.  	0.5
Year 3 (Choose 1)	CTP612 AP Computer Science Principles: The AP Computer Science Principles (year-long) course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. Students successfully completing this course may be eligible to earn college credit and placement.  	1.0
	PTP611 AP Computer Science A+: The AP Computer Science A+ (year-long) course is an introductory course in computer science that is built around the development of computer programs to solve a given problem. Students successfully completing this course may be eligible to earn college credit and placement.  	

 Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

 Course is also offered in Virtual School.

Please see your guidance counselor for more information on DoDEA's Programming Pathway.



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Science, Technology, Engineering & Mathematics

Engineering & Technology Pathway

In DoDEA's Engineering & Technology Pathway, students are equipped with the knowledge and skills (e.g., problem solving, critical thinking, and creativity) to successfully design, develop, and produce various technologies, as well as recognize the relationship between science, technology, engineering, and math.

Sequence	Course Description	Credits
Year 1	PTE301 Principles of Engineering: The Principles of Engineering (year-long) course is designed to provide students with an exposure to the various engineering and related career choices. The content includes studying the process of engineering and engineering systems.	1.0
Year 2 (Choose 1)	CTE504 Green Technology Engineering: The Green Technology Engineering (year-long) course teaches students the engineering and design processes in alternative and renewable energy systems through the application of STEM to real world scenarios via laboratory practices, computer applications and emulations.	1.0
	CTE502 Robotics Engineering: The Robotics Engineering (year-long) course teaches high school students the engineering/design processing mechanisms, machines, and robotic systems, as well as pre-employment and employment skills.	
	CTE503 Biotechnology Engineering: The Biotechnology Engineering (year-long) course is an introduction to the field of biotechnology engineering and providing an overview of the following biotechnology domains: Safety and Skills, History of Biotechnology, DNA Technology, Forensic and Medical Biotechnology, Agricultural Biotechnology, Industrial Biotechnology, and Bioinformatics.	
	PTE303 Engineering Drawing CAD: This Engineering Drawing-CAD (year-long) course is a Computer Aided Drawing and Design (CAD) course designed to provide students with instruction in computer graphic skills and design fundamentals. Students will learn the use of a CAD system for two-dimensional drawing and three-dimensional modeling.	
	CTI401 Gaming Technology I: The Gaming Technology I (semester) course teaches students the concepts and requirements for intermediate development of computer games. Students will gain first-hand knowledge by creating games that tie directly to the industry.	
	CTI402 Gaming Technology II: The Gaming Technology II (semester) course teaches students the concepts and requirements for advanced development of computer games. Students will create 2-D and 3-D games.	
Year 3	PTE603 Engineering Design and Development: The Engineering Design and Development (year-long) course forms the capstone project for the Pre-Engineering curriculum. As students work on their capstone project they will develop technical writing skills and use a variety of CAD, CAM, GIS, fabrication, manufacturing, and robotics technologies.	1.0

Course satisfies the 0.5 credit CTE Computer Technology graduation requirement.

Please see your guidance counselor for more information on DoDEA's Engineering & Technology Pathway.

