



THE CYBERSENTINEL

The official newsletter of CyberPatriot—AFA's National Youth Cyber Education Program

SEPTEMBER 2020 | In This Issue

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National Commissioner's Cache



As someone who follows Olympic sports (and someone who pretends to be a runner), I am amazed by the thin margins that determine winners among fields that are, by definition, comprised entirely of world-class athletes. Probably the closest race in Olympic history was the 1992 100-Meter Women's final in Barcelona. You can find videos of the race online, and it's amazing to watch. Of the eight runners, the top five finishers were separated by a total of six one-hundredths of a second. And even the last place runner finished within 0.37 seconds of the gold medalist! In this issue of the CyberSentinel you can read about three prestigious awards that we think rival Olympic medals.

Dr. Brian Kowal of Dayton Regional STEM School has been named CyberPatriot Coach of the Year. Mr. James Moore is being recognized as Mentor of the Year. And the Fort Gordon Cyber District/Alliance for Cyber Education is our Center of Excellence of the year. Please spend the time to read of each of their remarkable achievements and dedication, and please join the CyberPatriot Program Office in congratulating each of them. But as even these remarkable people will tell you, it's always a tight race. We are so thankful for each and every CyberPatriot coach and mentor.

And our Centers of Excellence are doing amazing work. It's not an exaggeration to say only "a few hundredths of a second" separate many of them. Thank you! On a more somber note, please read the story about our recognition of the late Mr. George Bennett. This remarkable man will be sorely missed for many reasons, and his devotion to CyberPatriot students is one of them. As always, thanks to our generous sponsors, led by Northrop Grumman Foundation, without whose support nothing we do would be possible.

CyberPatriot XIII Competition Update

Team registration for the next competition season – CyberPatriot XIII – is open now through October 15, 2020 (extended by two weeks to allow more time for registration). The competition is open to all high schools, middle schools, home schools, and approved youth organizations. Over 2,000 teams have registered so far. Check out the full list of currently registered CP-XIII teams.

During the upcoming CyberPatriot XIII competition, teams will be expected to follow local, state, and federal guidelines concerning COVID-19.

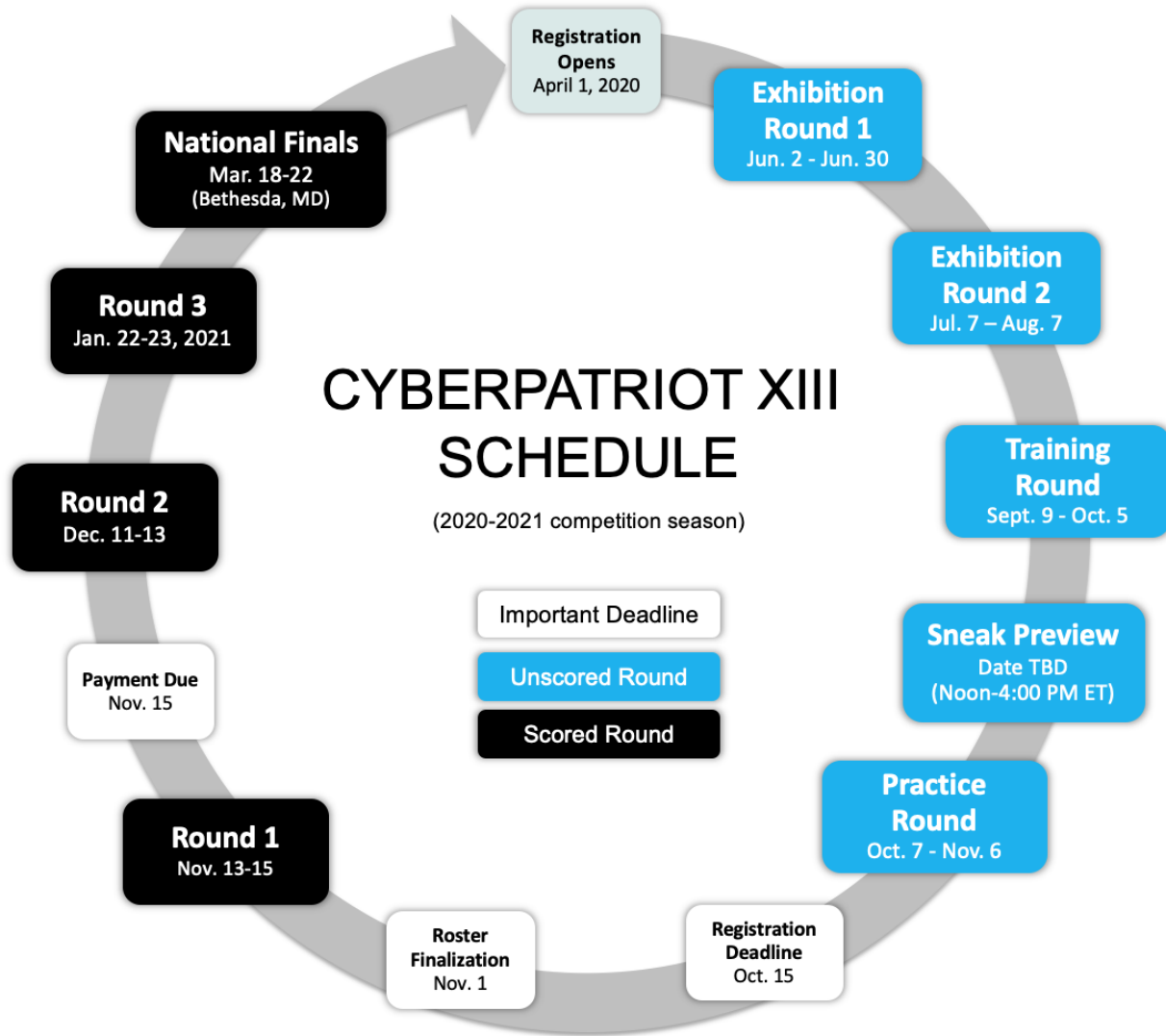
To assist our coaches in finding appropriate competition spaces, we will allow the location of team members during the same competition period to vary based on the team's situation. We are amending the competition rules to allow teams to compete in the following configurations:

- Team competes in-person as a group during the same competition period.
- Team members compete distributed at homes or facilities in the same competition period.
- Team competes as a hybrid of in-person or distributed at homes of facilities in the same competition period.

Additionally, some other rules will change for this competition this season:

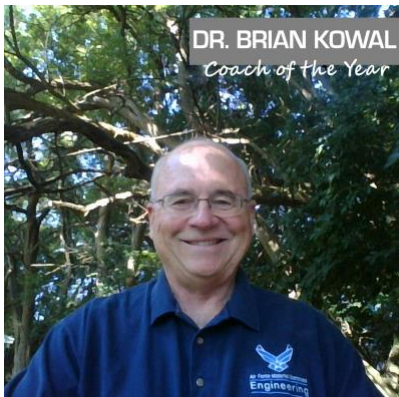
- There will be only three online competition rounds.
- Competitors may download images at home.
- Teams traditionally affiliated with a school may compete without an affiliation if the school has directed cancellation of extracurricular activities as a COVID-19 precaution. If you fall into this category, please select "Unaffiliated due to COVID restrictions" as your organization type during the registration process.

The competition schedule can be viewed below:



CP-XII Coach and Mentor of the Year

Coach of the Year | Dr. Brian Kowal



Congratulations to Dr. Brian Kowal, the CyberPatriot XII Coach of the Year! Dr Kowal is the lead CyberPatriot Coach for the Dayton Youth Cyber Club and is also the founder of the CyberPatriot Program at the Dayton Regional STEM School where he served as lead coach for eight years. He has been involved in CyberPatriot from the start, coaching teams for ten years and training over 140 students with five Ohio State Championships. Graduates of his cyber training program include a Naval Academy midshipman who is studying cybersecurity, an NSA intern, and a Collegiate College Defense Competition team captain.

When asked about his coaching experience, he said, "During my tenure as a CyberPatriot coach, there are often times when very experienced and

knowledgeable adult cyber mentors had indicated that they believed they have learned more from the students than they have imparted.

“Upon reflection, this is not unexpected. Today's students have grown up in the digital age and have been immersed in technology their entire lives. Many of the adults do not have the same experience. Why this is important is that the students' strengths need to be leveraged to optimize the training. Not only do the students in many cases have superior knowledge but are usually better able to communicate with their peer groups. In many cases, the coach's most important job is to channel these natural students' training strengths into an effective training program. During our recent informal CyberCamp we tasked the senior students to develop the training material... It went remarkably well. This concept of utilizing the students as an integral part of the training program is probably the most important lesson I could share with other coaches.”

Dr. Kowal decided to get involved in CyberPatriot after receiving a call from his son's school saying that he was suspended for hacking into the school's computer system. At that point, he decided to channel this energy towards cybersecurity researching programs until he stumbled across CyberPatriot and started the program. He wanted to make sure that the proper training and ethical standards were a focus of his son's cyber talents. With proper guidance, Dr. Kowal's son went on to become the captain of a collegiate cyber defense competition team and is now working as a cybersecurity professional for the financial services industry.

Dr. Kowal has shown a dedication to the promotion of the CyberPatriot program in the Dayton area. His ethical leadership has been inspirational to his team and recruited cyber experts. CyberPatriot is very proud of the work Dr. Kowal demonstrates and the influence he has on his competitors.

Mentor of the Year | James Moore



Congratulations to James Moore, the CyberPatriot XII Mentor of the Year! Mr. Moore took a first-year team from Robertsdale High School (Alabama) to the Platinum tier, the most advanced skill level in the competition. He drives nearly 100 miles round trip, coming from the next state over, to participate in practices and competitions. Outside of CyberPatriot, Mr. Moore actively serves in the Navy as a Cryptologic Technician, teaching computer security to fellow members of the military.

When asked about his time as a mentor, Mr. Moore said, "It was a privilege to watch the team develop a passion for cyber security, and I am honored to have been able to provide a helping hand."

William Frank Starr, the coach of the Robertsdale High School team could not be prouder of Mr. Moore as their technical mentor. He stated, "There cannot be another mentor who was driving farther, balancing a demanding military career with a family life, and delivering instruction, mentoring, and oversight to the extent that he did. The results bear out his effectiveness. Finishing with a Platinum rating and in the top 25% of over 6,700 teams nationally surpassed my expectations for our first-year team. His professional, infectious, can-do attitude were critical to our success and reflected great credit upon himself."

Mr. Moore, demonstrates what it means to be an exceptional technical mentor, leading our next generation in gaining the critical technical skills our Nation needs in cybersecurity and STEM. His experience in the military has created the perfect teaching and technical experience for a CyberPatriot mentor. Mr. Moore has been truly influential in the CyberPatriot program and to the students at Robertsdale High School.



Center of Excellence of the Year



Fort Gordon Cyber District / Alliance for Cyber Education named 2019-2020 CyberPatriot Center of Excellence of the Year

The Center of Excellence (COE) designation is awarded to communities and institutions that provide leadership and support to further the educational experiences of their students through the CyberPatriot program.

Fort Gordon Cyber District / Alliance for Cyber Education has been awarded the Center of Excellence of the Year for a second year in a row. First awarded the title of COE in December of 2018 and has since grown even further its support to the program. The exceptional level of involvement across all areas of CyberPatriot made Fort Gordon stand out from other outstanding Centers of Excellence.

As a CyberPatriot Center of Excellence, the Fort Gordon Cyber District promotes the program across two states (Georgia and South Carolina) and seven counties to inspire K-12 students toward careers in cybersecurity. With the help of the Fort Gordon Adopt-a-School program, the number of registered CyberPatriot teams in the area has increased from six teams to over 120 teams.

In the past year, the Alliance for Cyber Education conducted a free CyberPatriot training for over 70 regional teachers at the Georgia Cyber Center. It also held teacher and mentor training sessions prior to its two AFA CyberCamps. Students from 40 different schools participated in the camps, with over 60% of campers coming from middle school and an impressive 24% of registered campers being female.

Its most innovative achievement for the year was its filming and animation of both books in the CyberPatriot Literature Series. The Alliance for Cyber Education completely funded both book readings, which are now available on [YouTube](#).

The center's success is in large part also due to the establishment of the Fort Gordon Cyber District / Alliance for Cyber Education subcommittee in all seven school districts and three private schools within the COE's region. This committee meets at least quarterly to discuss implementation strategies for multiple CyberPatriot programs.

"We are so very proud of our students, our teams, our school superintendents, our teachers, the Fort Gordon Cyber District, the Alliance for Fort Gordon, our education committee, our local businesses, the GA Cyber

Center, our sponsors, and our region for being named the Cyber Patriot Center of Excellence of the year for two straight years,” said Dr. Tom Clark, Executive Director of the Alliance for Fort Gordon. “Back to back COE awards is something our team and our region can all be truly proud of.”

For more information on the Fort Gordon Cyber District and CyberPatriot's Center of Excellence program, visit <http://uscyberpatriot.org/about/centers-of-excellence>.

Award of Distinction | George Bennett



CyberPatriot staff and the Air Force Association would like to honor the late George Bennett for his lifelong dedication to education and his support of the CyberPatriot program since 2015.

Scott Setter of Chantilly Governor's STEM Academy said, "George was often the first one to school each morning and greeted everyone who entered our hallways with a warm and welcoming smile. His sense of humor, joyful attitude and willingness to support student learning were just a few of the many attributes that we will all deeply miss about George. The hallways and classrooms of our school will not be the same without Mr. Bennett."

It is Mr. Bennett's CyberPatriot students who wrote to the program about his exceptional teaching of Cybersecurity and how much he impacted each of their lives. He was truly beloved by his students. Mr. Bennett is described as devoting his life to helping others pursue their academic careers. One student wrote, "He was a very honest man who would always do the right thing. After his first heart attack, he was already back at school 2 weeks later; it was really surprising to see his dedication to us." Mr. Bennett will be remembered for his passion for teaching and the impact he has had with the CyberPatriot program.

AFA CyberCamps In Review

The last week of AFA CyberCamps finished in early August, marking the end of the seventh year of camps. 2020 saw the first ever virtual hosting of the program because of COVID-19 restrictions, but that didn't stop hosts across the country from carrying out successful sessions. An estimated 20,000 campers (35% female) attended the 307 camps that were held over the course of the summer.

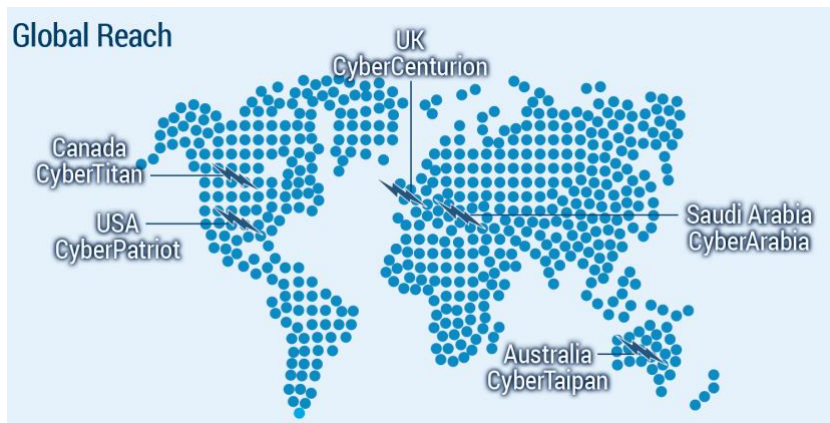
Based on camp survey feedback from both instructors and students, standard and advanced camps were largely rated as "effective" or very effective" and the majority of participants would recommend AFA CyberCamps to a friend or colleague. More importantly, student knowledge on the covered cybersecurity topics increased a least a full point (on a 1-5 rating scale) from the beginning to the end of camp.

CyberGenerations Update

Based on camp survey feedback Don't forget that CyberGenerations - The Senior Citizens' Cyber Safety Initiative - has gone virtual! To keep participants safe, we are offering [guided workshops lessons on our website, available to anyone at any time](#). Check them out today!

CyberTaipan Update

[CyberTaipan](#) is an Australian cyber security competition that is modeled on the Air Force Association's CyberPatriot program. After a successful pilot by AustCyber in 2018-19, CyberTaipan is presented by Northrop Grumman now in partnership with CSIRO Digital Careers. Round 1 of the competition had a remarkable 104 teams competing. Round 2, the final round of the competition, concluded with all teams competing on August 28-30, 2020.



Competitor Spotlight

Max Van de Velde



Max Van de Velde is currently a sophomore at Our Lady of Good Counsel High School in Olney, Md. Max started his CyberPatriot experience by attending the Standard and Advance CyberCamps at the U.S. Air Force Association at Fort Meade High School.

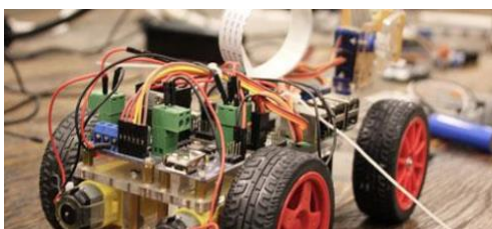
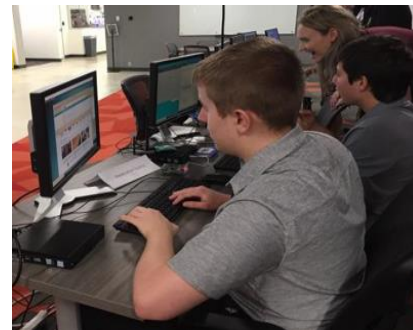
Dr. James Van de Veld said, "The Fort Meade Chapter (#160) of the Air Force Association (AFA) appreciates the exceptional support of Max Van de Velde, a student who voluntarily assisted with Cyber Security training for staffs and students throughout Ann Arundel County, Maryland. [Max's four-minute video](#) introduced the training course by explaining the value of cyber security and CyberPatriot from a student's perspective. It launched an AFA discussion on participation in CyberPatriot national competition. The county school board plans to offer his video to schools across the state of Maryland"

To watch Max Van de Velde's video on CyberPatriot and cybersecurity, click [here](#).

Alex Valente

Alex Valente, a rising 12th grade student at the North County High School STEM Program has demonstrated the exceptional leadership and skills gained from the CyberPatriot program. As a two-year competitor in CyberPatriot's National Youth Cyber Defense Competition, and as an AFA CyberCamp attendee, Alex has gained lifelong skillsets in the field of cybersecurity.

His success in the program has opened numerous doors, including an internship with USCYBERCOM's [DreamPort](#) program, a Computer Engineering internship with the National Security Agency, and a teaching assistant opportunity.



During the USCYBERCOM's [DreamPort](#) Internships, Alex designed an operational computer network for a 15 person startup company, developed collision avoidance software, and participated in panel discussions with senior government and military leaders.

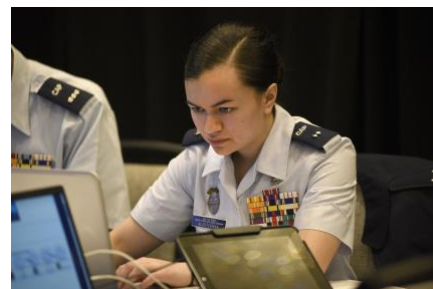
Alex will graduate from high school in the spring of 2021, after first completing two AP computer science courses.

Annabelle Klosterman



One of our own CyberPatriot alumni, Annabelle Klosterman, was named to Cyber Defense Magazine's Top 100 Club for Women in Cybersecurity, CISOs and Cybersecurity Startups. When interviewed by the magazine, she said "I am honored to be a recipient of the first annual Cyber Defense Media Group Women in Cybersecurity scholarship. As a recent high school graduate, I am blown away with the positive support I have been receiving for pursuing my passion in cybersecurity. The support will help me impact our youth, improve companies, and better ensure the safety of our country.

Annabelle currently attends Dakota State University where she's pursuing a degree in cyber operations for a degree in Cyber Operations. She starts her college career with nearly 40 course credits (all earned in high school) and over 2000+ hours of volunteering experience with cyber programs. A highlight of Annabelle's cyber experience is being a two-time National Finalist for CyberPatriot.



Virtual Mentoring Tips



To prepare teams, coaches and mentors for an unprecedented season that will involve virtual competitions and virtual mentoring, Maj Bill Blatchley, CAP, an experienced CyberPatriot mentor shares his knowledge. Bill started as a virtual mentor between 2012 and 2013 for Civil Air Patrol teams across the country. His first big success was during CyberPatriot VII when one of his teams made it to the National Finals Competition. Since CyberPatriot IX, Bill has switched gears and started mentoring CAP coaches on how to start a successful CyberPatriot team. Even with his mentoring reach, he still manages to coach his own teams with the Colorado Springs Cadet Squadron.

Bill mentions the two biggest challenges that he faces when mentoring virtually, (1) computing systems and hardware issues and (2) Not being able to be there in person.

Bill said, "The best virtual mentoring happens when you are helping a coach remotely and offering them guidance and training material. That way, there is some in-person assistance and someone who can gather the technical issues for later discussion. Of course, that is what I did in the past. In today's current environment, most everyone is in a virtual mode which means there is no coach present for a team meeting. Right now, keeping your team engaged is important. Having challenging images for the team members to complete is critical to their overall learning. A regularly scheduled meeting time and homework assignments are also important in the growth of the team and the individual members. In a in-person environment, it is important for the team members to be involved in the training of the newer team members. Continue doing this in a virtual format as well. For the last several meetings, I have had the more experienced team members teach through a topic on our check list. That way, they are reinforcing the procedures in their own mind while the newer team members are learning."

When CyberPatriot asked Bill, what tips can you give other mentors who have not mentored virtually before, he provided the following feedback.

- Don't try to provide all the answers for the team. CyberPatriot is much more than a technical challenge.
- Engaging in critical thinking and teamwork are probably more important than the technical aspects of the competition.
- As a mentor it is best to provide the outline for training and then guide competitors into teaching themselves. Just as CyberPatriot does not provide an answer key to competition images, neither do I with my training images.

Tools and applications that Bill likes to use for virtual mentoring include: (1) GoTo Meeting but he says any video conferencing application that allows you to present a screen will do just fine. (2) Cloud Storage to allow team members to download sample images used for training. For mentors that have access to servers, setting up a virtual environment for competitors to access remotely is a great tool. (3) VMWare ESXi server with an Apache Guacamole front end allows competitors without strong computing power to access training images running under ESXi. This remote server implementation also allows for coaches and mentors to track the time being spent on training.

From our Sponsors

Embry-Riddle Aeronautical University: Home to Prestigious Cyber Intelligence and Security Program.



Embry-Riddle Aeronautical University's Arizona Campus is home to the nation's first comprehensive degree-granting [College of Security and Intelligence \(CSI\)](#). Since 2013, CSI has been training future cyber and global security professionals using state of the art

laboratory equipment, expert faculty, and direct collaboration with current and former security and intelligence professionals from industry and government. [The Department of Cyber Intelligence and Security \(CIS\)](#), housed in the College of Security and Intelligence, specializes in offering undergraduate and graduate degrees that place students in position for cyber leadership roles around the globe and in key roles to keep cyberspace secure.

In 2019, the National Security Agency (NSA) and the Department of Homeland Security (DHS) designated Embry-Riddle Aeronautical University a [National Center of Academic Excellence in Cyber Defense Education](#) (CAE CDE) through 2024.

“Our CIS Department was established to serve as the center of excellence for cybersecurity curriculum and practice—and empower students with the knowledge, mindset, and skillset to make a difference,” said Dr. Krishna Sampigethaya, Embry-Riddle Cyber Security Department Chair. “This designation places our CIS department programs among the best in the nation and validates the learning environment created for our students. It makes us eligible to apply for grants that support students with generous scholarships and research opportunities.”

An example is the prestigious [Department of Defense \(DoD\) Cyber Scholarship Program \(CySP\)](#) grant recently won by the CIS department. This program supports the recruitment of new cyber talent and the retention of current highly skilled professionals within the cyber workforce to help secure the US against the threats of information systems and networks. Students who receive the CySP scholarship pledge to work for a DoD agency as a civilian employee for one year for each year of scholarship assistance.

Two Prescott students, Grace Tevaseau ([Cyber Intelligence and Security](#) and [Global Security and Intelligence Studies](#)) and Dylan Galeazzo ([Software Engineering](#) – Cyber Track), were selected by the DoD to receive scholarships under this grant for 2020-2021. Apart from the prestige, this scholarship provides Grace and Dylan full tuition and books, fees (including healthcare), a laptop, a \$25,000 stipend to cover room and board, a paid summer internship and a full-time job after graduation with a DoD agency.

“Like most students, I was really worried about securing a career after graduation and the financial responsibilities that I had undertaken for this empowering education,” said Galeazzo. “Knowing that my tuition and housing will be covered while in school and that I will have a great career right out of college, I can now sleep easier.”

Furthermore, the DoD CySP grant will provide the CIS department with capacity building funds. For instance, this

year these funds will promote faculty, staff, students, and facilities across the Prescott campus to grow instruction in artificial intelligence, assured autonomy, urban air mobility, and aviation cyber security. In addition to the DoD CySP grant, Embry-Riddle also offers a special interest [CyberPatriot Scholarship](#) to high school students who have displayed significant achievements in education and leadership during their high school career. The scholarship awards up to \$5,000 annually to undergraduate students pursuing a Cyber Intelligence and Security degree.

“Embry-Riddle’s College of Security and Intelligence actively promotes education, research and outreach in security and intelligence across a broad range of topics critical to global security,” said Dr. Jon C. Haass, Dean of the College of Security and Intelligence. “Common to all is the need to bring intelligence analysis and critical thinking to issues and problems facing the nation and world.”

For more information on the nation’s first College of Security and Intelligence at Embry-Riddle, go to: <https://prescott.erau.edu/csi>

VMware IT Academy offers the NDG Safer Passwords Online Course -- Attend the upcoming Webinar to learn more

VMware IT Academy is pleased to offer the NDG Safer Passwords course. This short course, developed by Network Development Group (NDG), demonstrates why having good password practices is vitally important in protecting your information, workplace information, and your family’s network as well.

Each day, individuals and businesses are compromised due to weak passwords. According to the World Economic Forum, cybercrime will cost society an estimated \$2.9 million every minute in 2020. An estimated 80% of these cyber-attacks are password related.¹

This online course will demonstrate the various password cracking tools used, and the mechanisms employed to defeat weak passwords. To access the course beforehand, <https://bit.ly/3aQQSrq>



JOIN our upcoming Webinar –

September 24th – 2:00 EDT (New York Time)

Register here... https://VMware.zoom.us/webinar/register/WN_MWzwlbu_TnaQvAFg_Pzlnw

No prior knowledge of the topic is needed. It’s designed for complete beginners.

The course takes a serious subject and makes it easy to understand with fun analogies, such as, attending a fancy party where each guest has been sent a password with their invitation. A security guard is there to watch

the door and make sure only guests with the right passwords get in.

The course uses a Linux virtual machine powered by NDG Online. This is an IT training solution featuring a variety of courses and labs for instructor-led training and independent learning. The NDG Safer Passwords course provides a hands-on experience and demonstrates just how easily hacking can occur.

Students perform exercises that teach them about Linux, how hacking happens, and the importance of adhering to password best practices. Examples are provided that reflect human behaviors and specific software and operating systems drawbacks.

The step-by-step stories are easy to follow and learn from. Let's hope you don't recognize some of your own behavior in one of them.

In closing, before fingerprint readers and eye scans become common, let's learn how to implement strong password protocols to protect your valuable online resources.

Just like keeping lights on at home and having a barking dog to discourage burglars, strong passwords discourage unethical hacking and help maintain the safety and security of your workplace and home.

We hope you find the course helpful. Enroll here: <https://ndg.tech/essentials>

Reference

1 <https://www.weforum.org/whitepapers/passwordless-authentication-the-next-breakthrough-in-secure-digital-transformation>

CyberPatriot in the News

[Gen. Larry O. Spencer Named to CyberPatriot Board of Advisors](#)

The Air Force Association's (AFA) CyberPatriot Program Office announced today the appointment of General Larry O. Spencer (USAF, Ret.), as the newest member of the CyberPatriot Board of Advisors.

General Spencer served in many leadership roles during his military career, including as Vice Chief of Staff of the United States Air Force. He retired in 2015 following 44 years of distinguished service to the United States, having earned the Defense Distinguished Service Medal, the Air Force Distinguished Service Medal, the Defense Superior Service Medal, and the Legion of Merit. He was President of the Air Force Association from August 2015 to March 2019.

A strong CyberPatriot advocate both during and after his time leading AFA, General Spencer said, "I am grateful for this opportunity to continue my involvement in this important global STEM program. CyberPatriot offers outstanding opportunities to students of all ages and all backgrounds and its success is vital to our nation's security. I am eager to do my part to see it grow even more."