

## U.S. Air Force Academy: Historical and Contemporary Information Resources - Transcript

Please stand by for realtime captions.

Good afternoon. This is Joe with GPO just doing a sound check. Started to.

This is Joe. And just doing another sound check. We will get started in about five minutes.

This is Joe again. We will be getting started in two minutes.

That afternoon. Welcome to the FDLP Academy my name is Joe

. We have another terrific webinar for you today. It is entitled U.S. Air Force Academy historical and contemporary information resources. Our presenter today as per Chapman. We have more coming in the future so much calendar for those Bert is the government history and political science librarian. Before I get started I will go through some housekeeping reminders. If you have any questions that you would like to ask or if you have any technical questions, please feel free to use the chat box. It is located in the bottom right-hand corner of your screen. I am keeping track of all questions that come in and at the end of the presentation Bert will respond to each of them. We are also recording today's session and will email the link to everybody who registered for this webinar. We will be sending you a certificate of participation using your email that you used to register for the webinar. If anybody needs additional certificates if there are multiple people watching the webinar please email us and include the title into this webinar for the names and email addresses for the names of those that attended. Desktop computer or laptop users may zoom in on the slides. To exit full-screen mode [Indiscernible] then click on the return button to get back. At the end of the session we will be sharing a webinar satisfaction survey with you. We will let you know when it is available in the chat box. We very much appreciate your feedback and comments on the presentation. I do not think this will happen but if started sharing his screen he would not be able to see the chat box so in that case if you want to ask questions just mouse over the blue bar at the top and the menu drops down you can enable the chat box. With that, I will hand it over to Bert and he will take it from there.

Thank you and good afternoon or good morning to everyone. I would like to introduce you to the information resources produced by the U.S. Air Force Academy. Since the Air Force Academy is not as historically around as long as the military naval Academy it will not quite the the depth. There are still a lot of valuable things you can learn about the Academy both in terms of historical activities, contemporary operations as well as emerging directions it might take. The Academy website is right here. This is the undergraduate professional military institution for the U.S. Air Force. As is true with other educational institutions, the Academy has been having to deal with the coronavirus. A public health emergency was declared by the installation Commander on March 23 of last year and it extended until at least today. I do not know what the future status might be. Faculty and staff are on campus and responsibly maintaining safety. About 750 students and staff are randomly tested each week and they found this is effectively controlling the virus spread. They are using the Pfizer vaccine. There are 4400 cadets at the Academy and they are using hybrid learning and outdoor classes. They are also using small virtual labs and coursework. Gatherings are limited to 50 people and masks and physical distancing are being required for the planetarium was closed to outside visitors and it remains to be seen how that will evolve as summer and fall proceed. The Academy is located in Colorado Springs, Colorado. They educate, train, and inspire men and women to become officers of character in the U.S. Air Force and National Service. [Indiscernible] for cadets include being nominated by congressional representative senators and the vice president there's a maximum of five nominees for each member of Congress. Want to graduate you were commissioned as a second lieutenant in the Air Force. All graduates served at least five years of active duty in three years of an active duty in the Air Force. Graduates who complete pilot training have longer service commitments which is currently 10 years. The education it provides for cadets

is taxpayer-funded and is valued at \$416,000. Here are a few demographics. One is an acceptance rate of 64% of the cadets apply and there are other breakdowns provided. During 2019 the bachelor's degrees were the highest area and general business administration management and the behavioral sciences with aeronautical, aerospace, and aeronautic engineering and they have a 94% retention rate these are photos of the current Academy leadership. You can go to the website and click on the profile for these individuals for more information about them.

This began just after World War II. In 1947 the U.S. Air Force was established as a separate military grant. There were approximately 580 sites in the states. Those that were tightly concerned were included out in Illinois. Finally, in 1954, Congress authorized that the Academy be established in its current location. Construction began in July of 1955 and the first class was sworn in at Lowery Air Force Base. They were ready for occupancy in 1958. As early as 1965 and astronomical engineering for the development of the space-age and the space program. In 1975 President Ford signed it into law that men's and women's service Academy. 157 women joined the can that wing in the first class future women on June 28, 1976. The architecture is modern in appearance and this is just a sample of the walkway onto the grounds and you can see the mountains in the background. This is kind of a panorama of some of the Academy physical structure. The chapel is the building on the back left. There is also an equestrian building and the blue you can see in front of the buildings are cadets marching information. You can also see what looks like the top of an airline in the right background. They have a virtual tour on the cadet website. There's a virtual visitor center. Barry Goldwater was a longtime senator from Arizona and a successful presidential candidate in 1964 and also a major player in the U.S. national security policy during his time in Congress. He served on the Senate armed services committee. This was made for him. So they seek to replicate global compact areas for them to examine and respond to. This one represents a wide variety of religious beliefs and this is a mockup of the city that enables the cadets to see how cyber attacks on cities impact critical infrastructure. They have a planetarium this is a sample of the dormitory. There is room for maybe three cadets in this room. This is the library. It is a federal library and this is in the D305 area. There have been a number of prominent Air Force graduates. In 1969 the only U.S. Air Force Academy Congressional medal of honor recipient shot down over North Vietnam and refused to divulge U.S. military secrets. Wilson was one of the early women who graduated. She served as secretary in the Air Force for a couple years during the Trump administration. There is a Rhodes scholar in 2018. 39th astronauts who have been Air Force Academy graduates and six Air Force Chief of Staff. The curriculum has a lot of different institutional outcomes

. This is in communication engineering and ethics and respect for the warrior ethos and leadership

. Examples of courses reflecting

these learning outcomes for each of the four years of a cadet's experience. They strive for critical thinking and what they want cadets to be able to accomplish in the application of engineering methods. We want to emphasize various agencies including systematic problem-solving methods. You might think as the Air Force Academy there just focused on the science. They are concerned with cultures and individuals so these are one of the desired learning competencies. There are a number of different majors he can take encompassing a wide variety of disciplines. In aeronautical engineering we mention that cadets study propulsion, mechanics, stability, control their crafts and various other things. This is either two course designed sequences or they get the chance to work on real-world design problems in the Aeronautics laboratory such as the wind tunnel. They can purchase some resource at universities and elsewhere. They mentioned some potential job assignments they can achieve from these both in the Air Force and outside the Air Force. That includes maintenance and test engineers. Science is becoming very common this is managing and analyzing and refrain from data. They also mentioned the military is critical to winning future wars.

Here are some potential job assignments from the backgrounds and data. They include intelligence, cyberspace operations, data engineers, operation analysts, we mentioned sample courses in areas such

as artificial intelligence. History is very important because we are now over a century into the aviation age. There are a lot of documentary evidence describing what has or has not worked in the aerospace and military combat. So understanding how history is important and you need to be able to get your thinking analysis and presentations as well as studying foreign cultures and analyzing technological and military history developments. Services different objectives in historical and modern context. So this is a winged defense. [Indiscernible] the military and strategic studies is another important educational emphasis. This was affecting the conduct of military operations. These are some potential job assignments. This is a remotely piloted aircraft pilot special tactics a nuclear missile operations officer cyberspace and military defense contractor. Space operations with the recent establishment of a space for us Academy is trying to incorporate necessary skills to these requirements. They mentioned some different things that can be involved here. These are intelligence pilots and understanding the threat to protect U.S. interests they were also research opportunities

. This is such as Geo 482 advanced imaging analysis. 370, 335 human spaceflight and various other. These are 27 research centers at the Air Force Academy. You can present research in conferences. They have to be able to make difficult decisions and best practices. So this tells you how many there are and how many cadets have participated in the summer research programs.

These are the long-term PhD's that are awarded. This has been done by cadets. These are different areas of research. Here is one that is telling us [Indiscernible] the cadet first class prepared this project so this is the field demonstration of colloidal silica with the airflow payments that is very important for the Air Force engineers for a problem for the Air Force ability to execute safely and effectively. This was prepared before last November election. Here is a mixed reality post flight debrief. This is using a holographic projection of a terrain over which the nation was flown. This will exercise the pilot of various speeds for flight maneuvers as well as enemy behaviors. Here is while I am exploring the robotics and coding with elementary school children and this is a multimember project and they are wanting to inspire children to become more interested in various stem areas of study. They have things like robot interactive games and other things. Here is a historically oriented project called chasing antiquities. It is talking about various congressional leaders in the past understood antiquity particularly coming out of Italy and Greece. We mention this was during the time that was technologically and culturally inferior to the contemporaries in Western Europe. There is a hypersonic vehicle simulation instituted that tries to collaborate between energy and various academic and industry hypersonic research to improve the quality of hypersonic becoming very important in a lot of military and planning. This tells about what they want to accomplish and one of the first projects was developing turbulence models for using in hypersonic flight simulators. They give you

contact information for the faculty leader of this program. There's also a center for aircraft structural licenses extension that wants to support aging structures and material degradation. Often these are used out of these materials and these are just some of the four competencies that they are focusing on such as material degradation, fracking, structural teardown and root cause analysis and structural impact analysis and various other categories. This first one has the national security use that has been around since 1992 and examines strategic security for arms-control on a current and emerging matters of interest

. They have a number of reports available for the structural change in Europe the implications for strategic ability. Some of these may be done by the Air Force Academy, some may be done by outside contractors. This is the summary that they are talking about, Russian activities in areas such as the Ukraine and Georgia,

Russia, the Western institutions and potential threat to Russian national interests. And how Russia is trying to respond to what it sees as threats. Here is another for the future of nuclear arms control agenda potentially implicated through the airports.

This has the table of contents for that. There is a strategy and warfare Center that wants to develop agile air and space through education for all domain operations across all levels of war. They emphasize research and experience. Here is an example of a research agenda through the emergence of great power computation and defense institutional effectiveness also engaging in wargaming exercises. There are a lot of different reports that were prepared by Academy cadets or other members. This was a report called hamburger and national security, food security and American power. This was August of last year. You can leave a comment to the author if you want. This is telling you about what the author is trying to accomplish. They are concerned with the medical cost of healthy military personnel. They have other horizons talking about how this warfare is affecting international relations with Alan they expect you to take it to read it. This is an example of a faculty publication in the Journal of defense studies this year. It is called military advising and assistance. The Academy faculty are participating in ongoing discussions in a variety of disciplines. This is named for president Eisenhower. He was the first president to establish the national policy for military and peaceful purposes.. There is also a cyber format is a one-day conference together experts from the cyber security and space communities to discuss policy issues. The journal called space and defense archives comes out every year. Here is the winter of 2021 issue there are different articles here. Here is one written by. This is the conclusion that they have made. That includes their ability to accurately predict artificial intelligence that adversaries might take. Icarus has been published since 1965 so these are some of the categories you can find things on here like visualize, poetry, short fiction, multimedia. This shows you a little bit more about creative essays and this is a letter written by a cadet describing her opinion on various things. You can actually watch a YouTube video of somebody singing and here is an example of some of the artwork there is a family dog. The Air Force Academy sports teams are called the falcon. They have the falconry program since 1956 they are trying to [Indiscernible] many spectators so this is an example of one of the Falcons this is a special collection session. Here is one on meteorology. So this is the manuscript correction. This is the aeronautical collection containing about 24,000 items. This tells you about some of the different things that are some of the different browsers that you can use. They have a lot of historic printed books and letters and here is an example of them early aircraft from the Prince collection. There are also some collections which is a prison camp run by [Indiscernible] they received a lot of donations from people who are part of the P.O.W. camp.

There is an additional humanities website that looks like it got started talking about these attempted escapes in March 1994 they have the videos they have a donation of a lot of personal papers over the development of aviation Aeronautics one of the individuals they have materials on was she was a graduate of West Point he became the general of the Army Air Force and the first general of the Air Force a year before he died. In terms of sports, the Academy participates in different men's and women's sports in the NCAA Division I. They are a member of the Mountain West conference and this is a picture of the stadium. You can see the mountains in the background. The football team has often had success. In 2019 they were 11-2.

They beat Washington state in the cheese it will. They finished fifth in the final ranking and Air Force Academy teams compete with other academies for the commander-in-chief. Another component is the San Antonio Spurs basketball coach Greg Popovich who graduated in 1970. There are a number of benefits for this resource including learning about the Academy current evolution developments learning about the instructional research activities. Learning about prominent individuals and learning about aeronautical and astronomical developments. Learning about the collections and history. Gaining some understanding in history with the Air Force and space force and the responsibility that they will have in future civilian activities. That, I am ready for your questions.

Great presentation. Any questions for Bert. Is this a screenshot of a virtual tour? There was one earlier in the presentation.

When did they begin information on cyber security.

I'm not sure about that. My guess would be the last couple decades.

How much of the publications are in the FDLP?

There are some. I would have to check and see . If you see something that is not there that you think should be let us know.

Yes. You can check that list of classes on their.

Lovonya -- in that order. Is the Academy partnering with other institutions to encourage stem/steam interest.

Steam means arts along with science technology engineering and math. I would think that they would particularly work with schools in the Colorado Springs area

If not part of the FDLP Summit research/reports .

I don't know how to answer that. You can look at the information center on the website. I'm sure that there are some research that is classified there.

Somebody was explaining and expressing surprise that [Indiscernible] Kelly just put the satisfaction survey in the chat box. If you could also put that other information about links and they should probably pretty much all be in there so you can search and find this webinar trying to schedule out some webinars. I had a couple of questions myself. Space force , will that be linked with the Academy formally or informally?

That is a good question. Air Force University in Alabama will probably also have some ties with the space force. I am not sure how that would be worked out. They are probably both the Air Force Academy and your university.

In the U.S. there's a lot of military institutions that impulse can be powerful. I would not be surprised if there was a separate space force Academy.

I was going to ask you about that and you just mentioned that. That is good. The blending of the services. My father was in the Army Air Force and I guess they had something after that

Up until when the Air Force was created in 1947, the Air Force was part of the Army but there was also a naval aviation Marine Corps and they still have aviation.

That is interesting. The instructors, I imagine they have a blend of civilian and military personnel.

Right.

Did you mention earlier. There's some kind of science degree.

Many of them after they do that military service requirement may go into some kind of business like aerospace and commercial space. There are a lot of skills they can learn that they can apply to this and all kinds of areas.

We get back to the audience questions here. Angela says, thank you. We were starting the stem problem that my college and it would be very informative to our students to know that Stan can lead you to the Air Force Academy. Jenny says I am interested in the history of aviation because so many history day students study at especially women in aviation.

That's why asked about what the public could access. How many, what percentage do you know who are flying?

I am not sure about that. I would imagine a significant number are. I could not estimate a particular.

, Does that is a requirement to learn to fly.

I think that they would. As I mentioned in one slide, graduates become pilots in the Air Force. They have a longer service requirement. That can include being a pilot or an operator for an unmanned system

.

Don't most of the commercial [Indiscernible-low volume] don't most of them come from the military?

It is possible.

They have great intelligence in the military webinars to go back into the archive and you will see. I scheduled this for 45 minutes and we are getting close to that you still have time for a question. Thank you for another great webinar. We are planning future webinars so please keep watching your calendar. Don't forget we have five more webinars scheduled for me and even more than we have done before. This is on May 11. If I can plug a webinar that I am hosting with the importance of tangible publications. Tune into the webinar and we will discuss. Kelly put the link and for the other archives . This webinar will be up in a day or two and the closed captioning will be there also we have about one minute left. We look forward to future webinars. Thank you.

Any other last questions [Indiscernible-overlapping speakers]  
thank you to everybody for attending. Goodbye.  
[Event Concluded]