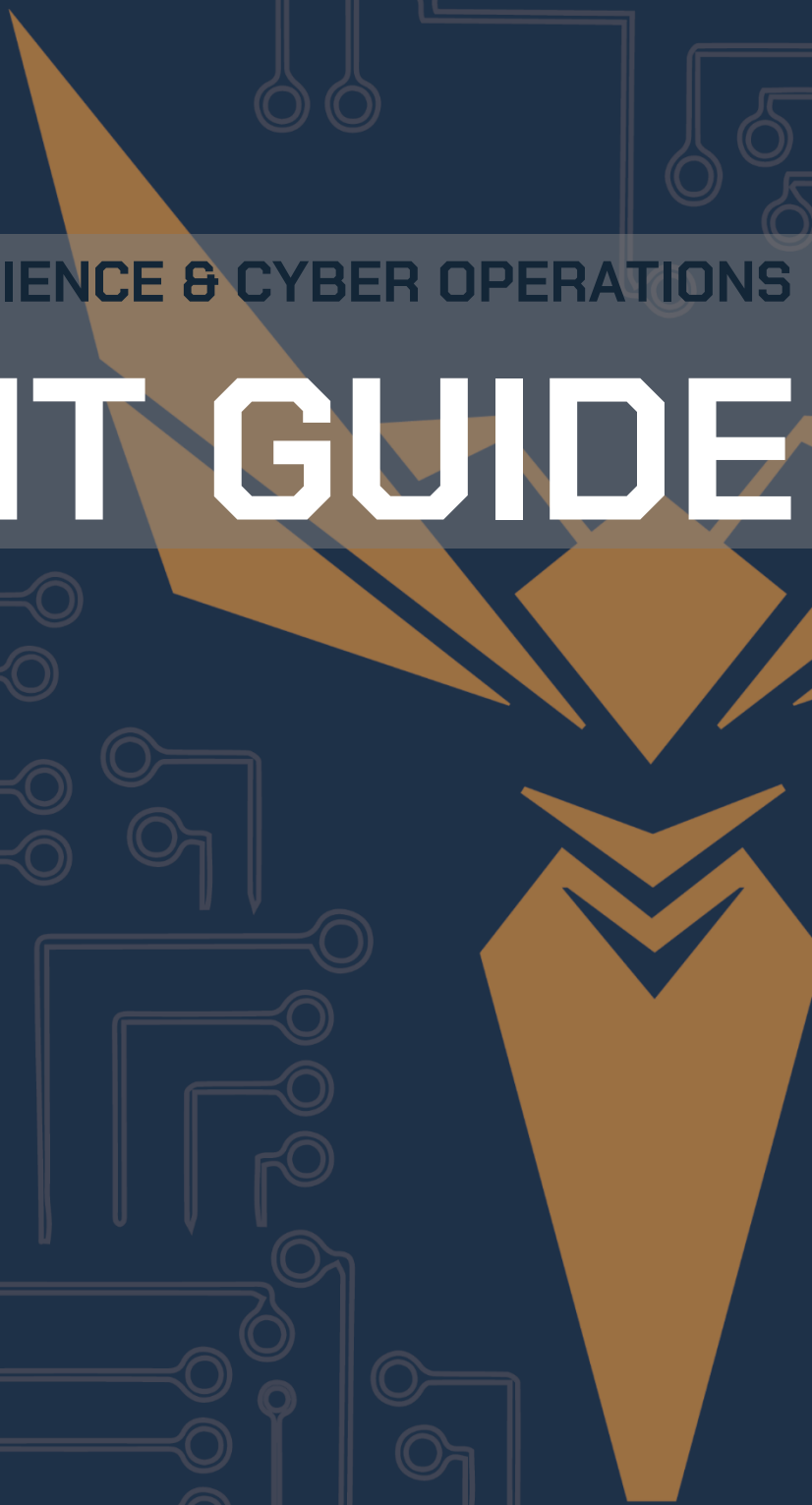


CEDARVILLE COMPUTER SCIENCE & CYBER OPERATIONS

STUDENT GUIDE





School of
**ENGINEERING and
COMPUTER SCIENCE**

CEDARVILLE UNIVERSITY



Proverbs 22:29 CSB

Do you see a person skilled in his work? He will stand in the presence of kings.

This student guide introduces students to Cedarville University's nationally acclaimed Computer Science and Cyber Operations academic program.

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Welcome from the Dean

To our new computer science (CS) and cyber operations (CY) majors we say WELCOME! As the Dean of the School of Engineering and Computer Science, it is my joy to have you as part of our incoming class. The growth of CS and CY programs across all of higher education has been astounding. My fellow deans have discussed this phenomenon on multiple occasions at meetings and conferences. By keeping ahead of the workload required to achieve a CS or CY degree, you will become some of the most heavily recruited students for both internships and full-time jobs. May the Lord bless you as you enjoy your 1000 days at Cedarville!

- Dean Robert Chasnov

Welcome from the Head of Program for CS & CY

Welcome to our incoming Computer Science and Cyber Operations students! We are excited you are here, and we consider it our ministry to ensure you have a great experience here at Cedarville. We want your time at Cedarville to be a time of growth in your faith and your love for the Lord. We want it to be a time when you further develop a love for others and a passion for ministry. But we also want this to be a time where you prepare yourself academically, so that you can better honor our Lord out in the workplace. We are here to serve you in any way we can, so please come see me if there is anything I can assist you with. Again, welcome!

- Dr. David Gallagher

Welcome from the Cyber Center Director

Welcome! We are so glad that the Lord led you to Cedarville. We are all blessed to be part of this unique community that seeks to honor God in all we do and to live in Christian fellowship with one another. The Lord continues to bring us outstanding young men and women like yourself who desire to grow in their faith and take their academic studies seriously. The faculty are humbled by the stewardship entrusted to us—you! The Center for the Advancement of Cybersecurity exists to advance cybersecurity in our nation with the ultimate goal of advancing God's kingdom. We invite all of you to become involved with the activities of the Center, including cyber competitions and outreach opportunities, whether you are majoring in Computer Science or Cyber Operations (or both!).

- Dr. Seth Hamman

Meet the Faculty



David Gallagher, Ph.D. | Lt Col, USAF, Ret.

*Head of Program for Computer Science & Cyber Ops.
Senior Professor of Computer Science*

Dr. Gallagher (aka "Dr. G") joined the faculty at Cedarville University in August 2000 following a 22-year career in the United States Air Force. During his Air Force career, he flew the F-4G Wild Weasel, served as the Harm Block IV Test Manager, and was a member of the faculty for the Air Force Institute of Technology.

Word of Encouragement:

A career in Computer Science (CS) or Cyber Operations (CY) is a great way to earn a living and serve God. These fields desperately need the influence of a Christian worldview. The CS and CY majors are tough and require a great deal of time and effort in order to be successful. But it's not impossible, and there is a lot of support to help you. Your professors love students and really want you to be successful. They want you to come visit them in their offices. Take advantage of other assistance as well, such as the Cove and the CS lab aides. When times get tough, just remember that there are a lot of people who very much want you to succeed and are praying for you. And remember that your strongest supporter is Jesus; He's pulling for you as well!

Top Piece of Advice for Freshmen:

- Determine to honor God in the way you conduct yourself at Cedarville, including your academics (Col 3:23-24).
- Determine to prepare yourself while at Cedarville so that you will be salt & light in your career.
- Sleep is a weapon; food is a weapon. Sleep at night, not during the day. Don't skip meals!

Classes Taught:

- CS-2210: Data Structures Using Java
- CS-3410: Algorithms
- CS-3510: Compiler Theory and Practice
- EGCP-4210: Advanced Computer Architecture



Keith Shomper, Ph.D. | Lt Col, USAF, Ret.

Cyber Center Faculty Fellow

Senior Professor of Computer Science and Cyber Ops.

Dr. Shomper joined the faculty at Cedarville in 2003 after serving a 20-year career in the U.S. Air Force. His research interests include computer science education, programming environments, and computer graphics.

Word of Encouragement:

I am thankful for the students studying at Cedarville. I hope they'll take time to think about and appreciate the incredible blessing God has given them to be part of a program that has helped hundreds of young men and women launch their careers in computing. I also hope they'll fully realize how much their professors want them to grow and prosper in both Christian faith and technical ability during their Cedarville career so that they may join us as colleagues in a mission and profession we thoroughly enjoy.

Top Piece of Advice for Freshmen:

We have great students in the CS/CY programs. Because many of them were the best students in their high school class, they didn't often need to ask questions or get additional help in class. However, college courses can be more daunting, because the pace of the course is faster than in high school and the subject matter is more difficult. So, I advise all students, and especially freshmen, to have the boldness (or courage) to ask the professor questions before, during, and after class. Timely questions are not only a help to the one asking, but they help other students who may be too shy to ask the same question themselves. Questions are also a help to the professor, because they give him/her feedback on whether or not he/she is communicating the course material in an understandable manner.

Classes Taught:

- CS-1220: Object-Oriented Programming Using C++
- CY-3320: Linux System Programming
- CS-3410: Algorithms
- CS-4810/CS-4820: Although I no longer teach this class, I have a part in it as a faculty advisor each year for one (or two) of the senior design team(s).



Seth Hamman, Ph.D.

Cyber Center Director

Associate Professor of Cyber Ops. and Computer Science

Dr. Hamman joined the faculty at Cedarville in 2012. He brings real-world experience to the classroom from having worked in the tech industry, both as an employee of a startup dotcom and as a consultant. During his first four years at Cedarville, he earned his Ph.D. while studying cybersecurity at the Air Force's graduate school, the Air Force Institute of Technology, located at nearby Wright-Patterson Air Force Base. He and his wife were college sweethearts at Duke University, and they have 4 children.

Word of Encouragement:

Determine to honor Jesus in all things and leave the results up to Him. He will take your efforts and use them for His glory. Whatever you do, work at it with all your heart, as working for the Lord (Col 3:23).

Top Piece of Advice for Freshmen:

Stay organized! Success at college requires staying on top of things. Nobody is here to remind you what to do and when to do it – it is all up to you now! Pay close attention to details in all your courses, like when assignments are due and what the requirements are. Turning in assignments late or not at all is the quickest way to torpedo your grades.

Classes Taught:

- CY-1000: Intro to Cybersecurity
- CY-3420: Cyber Defense



Patrick Dudenhofer, M.S.

Cyber Center Faculty Fellow

Assistant Professor of Computer Science and Cyber Ops.

Professor Patrick Dudenhofer (aka "Prof Dude") joined the faculty at Cedarville University in 2014 after spending a decade at the Air Force Research Laboratory researching human-computer interfaces for effective supervision of autonomous systems. His academic interests and research include software reverse engineering, human-computer interaction, cognitive modeling, and cybersecurity.

Word of Encouragement:

With technology advancing and changing so quickly, you will have incredible opportunities to honor the Lord and serve others through the disciplines of computer science and cyber operations. The knowledge, skills, and wisdom you acquire and hone at Cedarville will equip you to be a bold ambassador for Christ and an effective practitioner in whatever technical vocation the Lord leads you toward. Be a faithful student and servant for Christ - and enjoy the adventure the Lord has in store for you.

Top Piece of Advice for Freshmen:

Don't be a church hopper or skipper. Quickly find a local church to attend and serve the Lord there!

Classes Taught:

- CS-3210: Programming Language Survey
- CS-3310: Operating Systems
- CS-3610: Database Organization & Design
- CY-4330: Software Security



George Landon, Ph.D.

Professor of Computer Science

Dr. Landon joined the Cedarville faculty in 2019. He has extensive experience in Computer Vision and Computer Graphics with specific applications in 3D scanning and document scanning. He has been involved in scanning projects in the United Kingdom, Puerto Rico, and other U.S. sites. Dr. Landon has also been active in multiple game development projects and actively participates in both global and regional video game conferences.

Word of Encouragement:

Our fields of Computer Science/Cyber Operations/Software Engineering are full of people that have entered the field for the money/job security and to solve problems. As Christians, we know that Jesus has provided the perfect solution to our most pressing problem. Focus on course projects and work hard to support team projects, but don't take your eyes off Christ. We get to "work heartily, as for the Lord," for God's glory not for His approval.

Top Piece of Advice for Freshmen:

You are in a unique situation where you are around nearly 200 Christians who are interested in Computer Science and Cyber Operations. It is very unlikely that this will be the case in your future careers. Here, your classmates are your brothers and sisters in Christ, so don't forget to "encourage one another and build one another up" (1 Thess. 5:11). Get to know each of your classmates, talk to them, and develop relationships.

Classes Taught:

- CS-1210: C++ Programming
- EGCP-4310: Computer Networks
- CS-4430: Machine Learning for Intelligent Agents
- CS-4710: Computer Graphics
- CS-4730: Virtual Reality Applications



Nick Parry, M.S.

Cyber Center Deputy Director

Assistant Professor of Cyber Operations

Professor Nick Parry joined the faculty at Cedarville University in 2022 after 14 years as a software engineer in the cybersecurity industry. He has been employed at Northrop Grumman Xetron, Tenable Network Security, and CrowdStrike. His focus has been on secure cyber systems for the Department of Defense and other government agencies, as well as commercial tools for vulnerability management and endpoint protection.

Word of Encouragement:

Welcome to Cedarville's CS/CY program! You are undertaking a rigorous program that will prepare you for a myriad of opportunities across a wide variety of professional fields. Computer science and cybersecurity have never been more important than they are today. At Cedarville, we want you to not just gain head knowledge in your classes but for you to be immersed in our vibrant culture. You'll find a variety of extracurricular activities that you can be involved in, from tech talks to programming and cybersecurity competitions. Additionally, and most importantly, your peers and faculty mentors want you to grow in your faith and understand how we use our professions to glorify God in our world. So, jump in with both feet and be prepared to learn! We're so glad you're here!

Top Piece of Advice for Freshmen:

“Therefore, do not be anxious.... But seek first the kingdom of God, and his righteousness, and all these things will be added to you” (Matthew 6:25, 33).

Classes Taught:

- CS-1220: Object Oriented Design with C++
- CS-2210: Data Structures Using Java
- CY-2310: Cyber Forensics
- CY-4310: Cyber Operations



Eric Knoerr, B.S.

Assistant Professor of Computer Science

Professor Eric Knoerr joined the faculty at Cedarville University in 2022. He received his BS in Computer Science from Michigan Technological University and is currently pursuing his MS in Cyber Security from Georgia Institute of Technology. He enjoys reading, hiking, board games, and spending time with his wife, Erika, and their six children.

Word of Encouragement:

You are not alone. Whether it's family, childhood friends, fellow church members, CU classmates, staff and professors, or ultimately the Lord Jesus Christ Himself, there is always someone to share in your joys and your sorrows, in your accomplishments and your failures. Seek out those relationships because although Cedarville (or your church or your family) is definitely not perfect, there are many opportunities to build lifelong relationships that God will use to strengthen you for the task at hand. Which also means that you need to strive to be a friend to those around you. So follow Jesus's command, "love one another as I [Jesus] have loved you. Greater love has no one than this, that someone lay down his life for his friends" (John 15:12b-13).

Top Piece of Advice for Freshmen:

"Therefore, my beloved brothers (and sisters), be steadfast, immovable, always abounding in the work of the Lord, knowing that in the Lord your labor is not in vain" (1 Cor 15:58). Our world is constantly changing around us. As people whom God has called to use our gifts in the realm of computers, it appears that we are sometimes put at the forefront of that change. We need to remind ourselves that "we are His workmanship, created in Christ Jesus for good works, which God prepared beforehand, that we should walk in them" (Eph 2:10). Thus, we continue to focus on the truth that God is Sovereign and that we need to remain firmly rooted in Christ Jesus our Lord and let Him work through us in the works for which He has already designed us to do.

Classes Taught:

- CS-1210: C++ Programming
- CS-3220: Web Applications
- CS-4810/4820: Software Engineering I/II
- CY-4810/4820: Secure Software Engineering I/II

Curriculum

Linked below are the flow chart diagrams for each academic major. Official curriculum requirements are also found in the [course catalog](#).

[Computer Science \(CS\)](#)

[Cyber Operations \(CY\)](#)

[CS & CY Double Major](#)

[CS with CY Track](#)

The Double Major

What is the difference between a double major in CS and CY and simply majoring in one of them? A double major requires 10 more credit hours than a single major.

What classes are different between Computer Science with Cyber Track and Cyber Operations?

- To double from Computer Science with a Cyber Track, the following must be taken:
 - CY-2310: Cyber Forensics
 - EGCP-2120: Microcontrollers
 - PHYS-2120: General Physics II (cannot use BIO-1115 Biology I: Cell Biology)
 - One of the following CY Interdisciplinary Electives:
 - HIST-3080: History and Politics of Russia and Eastern Europe
 - HIST-3220: History and Politics of the Middle East
 - ITM-3450: IT Security and Risk Management
 - CRJU-4160: International and Domestic Terrorism
 - CRJU-4320: Criminal Investigation
 - HIST-4500: Seminar Warfare Ancient and Modern
 - Other Courses with pre-approval of school dean
- To double from Cyber Operations, the following must be taken:
 - One of the following 3 credit hour courses. Note that 2 of the below courses will already be taken as a CY major so only 1 course is actually added.
 - CS-3220: Web Applications
 - CS-3510: Compiler Theory and Practice
 - CS-3610: Database Organization and Design
 - 6.5 additional credit hours from:
 - CS-3210: Programming Language Survey
 - PHYS-2120: Physics II

Where To Get Help

Computer Science (CS) Lab

Located at ENS 242, the CS Lab is a great place to work on projects. Instead of spending hours debugging code on your own, you can ask the lab tutors for help. They are very knowledgeable and can point you in the right direction. See the [CS Lab Assistant Schedule](#).

Office Hours

Office hours are your best friend. Your professors are always willing to help and want to see you succeed. This is an excellent time to receive help on assignments while getting to know your professors better.

Classmates

Do not be a lone wolf; find a group of people and learn together. Proverbs 27:17 says, "As iron sharpens iron, so one person sharpens another." Do not use study groups as an excuse to slack off but as an opportunity to grow in knowledge and community.

Online Searching

While web browsing can be helpful, it can also waste time and potentially make a class more confusing. Visiting the CS Lab and attending office hours will save you so much more time. Your professors and the lab tutors know your assignments far better than Google or ChatGPT.

WiCyS (Women in Cybersecurity)

Computer Science and Cyber Operations women can join the WiCyS GroupMe to ask each other questions. The WiCyS leadership uses GroupMe to announce events like coffee dates, group study sessions, and special speaker events.

Career Advice

For career advice, students can consult their professors and Cedarville's [Career Services](#) office. It is recommended that students meet with Career Services early to establish a working relationship with them. They offer many [resources](#). No matter the application, always be sure to **start early and submit early**. Most organizations start recruitment in the fall. Early is best. On-time is late.

1. Resume

While everyone knows that job hunting requires a well-crafted resume, students may not know that some extracurricular activities like cyber competitions also require a resume for participation. This is why freshmen should create their resume early as it can be easily updated with each new experience. Career Services uses [Handshake](#), which is similar to LinkedIn, to review resumes and schedule appointments. Professors and recruiters can provide feedback on resumes as well.

Remember to optimize your resume for the different filtering stages:

1. You want your resume to escape the tall pile of other resumes sitting on the employer's desk. This means matching a keyword search. For example, if applying to pizza jobs, then you want to include keywords relating to pizza making. The resume reviewers, whether persons or an Applicant Tracking System (ATS), are not technical experts. Therefore, you must match their keyword search to survive the first screening phase.
2. Once you have made it through the immediate weed out process, the employer must decide who to talk to out of this new pile of resumes. You want to first ensure that there are no typos or errors. Then, place your most relevant experience up front so it grabs the attention of the prospective employer.
3. In the final step, the employer will have selected a handful of interesting resumes, so this is where details matter. You will want to focus on what you did specifically and how it contributed to the overall mission or goal you were assigned. Numbers are always a good idea here.
 - o CS – Coding projects and GitHub repositories are excellent resume boosters. [LeetCode](#) provides many coding challenges to help you prepare for interviews.
 - o CY – Cyber competitions look fantastic on resumes and are great learning opportunities to prepare you for work in the field.

2. Network Building

Creating a LinkedIn and Handshake profile can help with career networking by serving as a contact book while also advertising one's skills. You will want to highlight any experience, skills, coursework, honors, and extracurricular activities that make you competitive. A course's catalog description can also be helpful for determining what to write.

On LinkedIn and Handshake, find companies you want to work at or professionals you want to be like and examine what they have done to succeed. You may even message them to introduce yourself and learn more about what they do. You never know when someone will recommend you or refer you to a recruiter.

Additionally, interact with campus event speakers after their presentation. Ask about skills you can develop to be competitive in their field and what internship opportunities exist at their company. Oftentimes they will ask for resumes. You can also ask for a business card or email address to follow up with them after the event. In finding a job, it is not what you know, but who you know. By networking with likeminded professionals, you open doors you did not know existed.

Special Caveat: If you are interested in interning and/or working for a government agency, then it is recommended that you do **not** follow them on social media. Some intelligence agencies will terminate your application upon discovering your social media connection with them.

3. Freshmen Internships

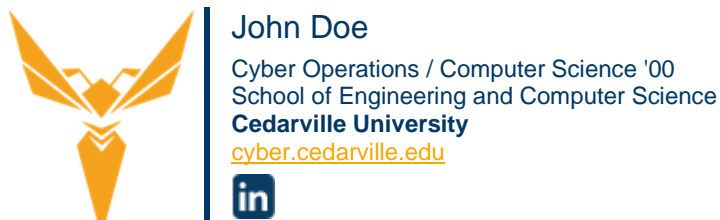
Internships are a phenomenal way to gain real world experience while discovering if you like the kind of work you are doing. Some internships may be limited to upperclassmen while others are open to any grade level. Especially for government internships, freshmen can often apply. That said, freshmen sometimes do not receive an internship. If that happens to you, do not be discouraged. Instead, use that summer to advance your education through some [cyber resources](#).

4. Security Clearances

Some of the cyber positions students and graduates seek require a security clearance and/or U.S. citizenship. It is important to note that the security clearance process is often long and fraught with frustration. Sometimes students do not know if they have the job until very close to the start date. Keep this in mind if you are in the security clearance process or considering it.

Email Signature Block

All cyber students are encouraged to use the below [signature block](#) for their student email, updating the necessary features and resizing the images to match the below.



Private Sector Internships

Cedarville hosts many companies every year at the career fair. They offer a variety of internship opportunities for students, many of which can lead to attractive full-time employment after graduation. Some have locations nationwide, while others are only in the Dayton area.

The best advice for receiving internship offers is to apply everywhere and focus on crafting an excellent resume. Additionally, manage your expectations and do not be disappointed if you do not receive offers. There are plenty of ways to develop skills outside of an internship.

Private Companies

SonSet Solutions [Internships](#)

Defense Contractors

Boeing [Internships](#)

Caesar Creek Software [Internships](#)

Cryptic Vector [Internships](#)

KBR [Internships](#)

Lockheed Martin [Internships](#)

Northrop Grumman [Careers Portal](#)

Radianc Technologies [Careers Portal](#)

Raytheon Technologies [Internships](#)

U.S. Government Internships

Government work can be very rewarding because it is an opportunity to serve the country. Additionally, outside of penetration testing, the only careers that involve legally hacking computers are in government agencies (white hat hacking). By interning for the government, you gain valuable experience and become an attractive candidate for commercial and government positions alike.

Some internship programs do not have their own site but instead post their opportunities to [USAJobs](#). You can search for internships there or for specific internships below.

National Security Agency (NSA) [Internships](#)

- [Detailed Internship Program Descriptions](#) (same programs but more information)
- Cedarville students have historically interned with CAE-CO, CSIP, & SIP/IA.

Defense Intelligence Agency (DIA) [Internships](#)

Air Force Research Labs (AFRL) [Internships](#)

- [AFRL Scholars Program](#)
- [LEGACY Junior Apprentice Program](#)

Department of Homeland Security (DHS) [Cybersecurity Internship Program](#)

[Army Educational Outreach Program \(AEOP\)](#)

Navy Internship Programs

- [Office of Naval Intelligence Student Internship Program](#)
- [Naval Research Enterprise Internship Program \(NREIP\)](#)

NASA STEM Gateway [Internships](#)

Additional DoD Internships

- [DoD STEM Internship Database](#)
- [DoD Civilian Careers Internship Listings](#)

Pathways Internships

- [Cybersecurity and Infrastructure Security Agency Pathways Program](#)
- [Department of State Pathways Program](#)
- [Department of the Treasury Pathways Program](#)
- [NASA Pathways Program](#)

U.S. Government Scholarships

Scholarship-for-Service (SFS) programs pay for certain years of college tuition in return for certain years spent working for the government postgraduation. While these programs are highly competitive, multiple Cedarville students have received these scholarships.

Cyber Scholarship Program (CySP)

- CySP is administered by the DoD. Applications are accepted starting in the fall from sophomores and juniors attending accredited universities majoring in technical fields such as computer science and cyber operations.
- Benefits:
 - Pays in full the cost of tuition, fees, and required books.
 - Pays for a one-time computer purchase.
 - Provides travel support to attend a cyber-related conference.
 - Provides a \$27,000 stipend (as of 2023).
 - Provides a summer internship beginning the year after acceptance.
 - Provides government employment upon graduation.
- Requirements:
 - Full-time enrollment at a NCAE-C school in a cyber-related bachelor's program (CY or CS with cyber operations specialization only).
 - U.S. Citizenship
 - Ability to obtain a security clearance.
 - Completed scholarship application (see [here](#)).

SMART

- Administered by the DoD, SMART is a widely acclaimed SFS program. The application period opens in the winter to sophomores and juniors.
- Benefits:
 - Pays in full the cost of tuition, fees, and required books.
 - Provides a \$25,000-\$38,000 stipend dependent on degree level.
 - Provides \$1,200 health insurance allowance per academic year.
 - Provides a \$1,000 miscellaneous allowance per academic year.
 - Provides a summer internship beginning the year after acceptance.
 - Provides government employment upon graduation.
- Requirements:
 - Full-time enrollment for a bachelor's degree in a STEM field (CS or CY).
 - Citizen of the U.S., Australia, Canada, New Zealand, or United Kingdom.
 - Ability to obtain a security clearance (not necessary but can disqualify agencies).
 - GPA above 3.0 (on a 4.0 scale).
 - Completed scholarship application.

Cyber Program Structure

All cyber students, whether from the Cyber Operations or the Computer Science with Cyber specialization majors, are the focal point of the Cedarville's nationally acclaimed cyber program. The goal of the cyber program is to develop its students into skilled cyber operators. Cedarville does this through many enriching opportunities not traditionally found in other disciplines.

Center for the Advancement of Cybersecurity

Established in 2018, the [Cyber Center](#) serves as the headquarters of the cyber program and houses various Fellows. Cyber faculty members, including the Director and Deputy Director, are Faculty Fellows. Our occasional hackers-in-residence are considered Visiting Fellows. Cyber students who assist in the day-to-day operations of the Center are Student Fellows.

Cyber Operations Directorate

The [Cyber Operations Directorate](#) is the core of all student cyber activities. The Directorate is designed to mimic the structure and operations of an intelligence agency, so students are more familiar with that environment, regardless of whether they go on to work in the public or private sector. This includes competition teams, awareness events, support groups, and much more. Most if not all these initiatives are student-led, either through Student Fellows or Cyber Officers. While all Student Fellows are Cyber Officers, some Cyber Officers are not Student Fellows. Cyber Officers are students serving in a specific leadership capacity, often as competition team leaders.

Cyber Maneuvers

Students can enroll in evening seminars that provide practical cybersecurity training like Basic Cyber Maneuvers offered during the Fall semester and Advanced Cyber Maneuvers offered during the Spring semester. This allows students to become familiar with such things as the Linux command line and other tool sets much earlier in their academic progression. Graduates receive their respective key tags as seen below.



Challenge Coins

What is a challenge coin?

A challenge coin is a small medallion that fits within the palm of the hand. It dates back to the military custom of soldiers scoring their unit's insignia onto a token and distributing copies of the token amongst their fellow soldiers as a way to identify who was in their respective unit. This symbol proved lifesaving when a soldier was on the run and questioned or challenged by friendly forces about his allegiance. Since then, the memento has survived to the present day and is a de facto standard for encouraging morale and awarding excellence not only in military units and government agencies but also in commercial ventures and private organizations.

How does Cedarville relate to this tradition?

Cedarville's cyber program prepares students for highly sophisticated, nation-state level cyber operations. Many of our graduates go on to serve in the cyber warfare and military intelligence worlds. As cyberspace has become increasingly vital to national security, many elite cyber operations units have created their own insignia and adopted the challenge coin custom. Thus, challenge coins have become a regular part of cyber culture. Yellow Jacket cyber has its own coins, building esprit de corps among its members and commending excellence and achievement.

What do our coins look like?

The cyber program awards the following coins pictured below.

Cyber Center Challenge Coin (legacy)



Cyber Center Challenge Coin (new)



Director's Challenge Coin



Cyber Operations Graduation Challenge Coin



How can I earn one?

Challenge coins are awarded for a variety of reasons but most often for outstanding conduct whether in cyber competitions, leadership service, or anything else deemed commendable.

Cyber Center Challenge Coin – This coin represents the Center for the Advancement of Cybersecurity. The obverse bears the Cyber Center’s seal while the reverse bears the seal of the University. Both sides are emblazoned with gold to signify the recipient’s achievement.

Awarded by the Director or a Fellow with the Director’s approval to an individual who has performed a distinguished service or accomplished a noteworthy achievement for the cyber program. Distinguished visitors often receive this coin as well.

Director’s Commendation Coin – This coin represents the personal recognition of the Director for a specific deed done. It is similar to the above but has the cyber stinger on the reverse side enclosed by a circuited hexagon with two scrolls of text. The top scroll shows that the coin was presented by the Director personally, while the bottom alludes to Proverbs 22:29, demonstrating that continued exceptional work will propel one forward.

Awarded solely by the Director to personally recognize an individual who has performed exemplary service in advancing the cyber program.

Cyber Operations Graduation Coin – This coin represents a graduate of the Cyber Operations major. The seal of the graduate’s alma mater is on the obverse side. The reverse side shows the graduate’s major above a cyber yellow jacket bursting out of a hexagon, which is symbolic of the graduate’s commissioning to enter the workforce. At the base of the cyber stinger lies a gold block with a number inscribed. Each coin is sequentially stamped counting from zero upwards. The first graduate of the major with the alphabetically first name will be presented with the number one coin and the pattern will continue forward.

Awarded upon graduation from the University’s Cyber Operations major starting in May 2024.

Student Involvement

Cyber Competitions

There are numerous cyber operations teams which compete in annual exercises. These competitions challenge students and refine their skill sets outside of the classroom. Plus, they serve as a great resume booster. Be sure to attend the start of year cyber briefing for more information and check out our [Cyber Operations Home](#).

Some students may avoid cyber competitions because of lacking cybersecurity expertise. We recommend students get involved anyways and sign up for the Cyber Maneuvers courses to strengthen their skills and experience the many toolsets we use.

Ambassadors in Gold

CyberPatriot is a youth cyber-defense competition similar to Hivestorm. Some of our current cyber operators participated in this program during middle and high school. Mentoring CyberPatriot teams is a great way to get involved and share the love of Christ with younger students. If you want to shape the next generation of cyber patriots, we would love to have you.

Events & Speakers

There are numerous cyber awareness events on campus, including cyber-themed movie nights, campus scavenger hunts and challenges, the Cyber Speaker Series with talks from industry professionals, and various other cyber seminars. Be on the lookout for email announcements about these events. If you are interested in helping create these events, please reach out.

Jacket Works

Modeled after Lockheed Martin's Skunk Works and Boeing's Phantom Works, Jacket Works is the think tank, innovator, and special projects team the Cyber Center uses to accomplish unique cyber endeavors not undertaken before at the University.

Women in Cybersecurity (WiCyS)

The mission of the Women in CyberSecurity (WiCyS) student chapter at Cedarville is to provide a supportive community, mentorship, training and skill development, networking opportunities, and access to industry and academic leaders for females in the field of cybersecurity and computer science. Please email the WiCyS officers at wicys_org@cedarville.edu for more information.

Useful Websites

[Center for the Advancement of Cybersecurity](#) – Home of the Cyber Center.

[Cyber Instagram](#) – Follow the Center for the Advancement of Cybersecurity at @cucybercenter.

[Cyber Operations Home](#) – Home of Cedarville Cyber Operations.

[MyCU](#) – Student portal for all things Cedarville.

[Selecting a Computer](#) – Faculty recommendations for laptops.

[Cedarville VPN Guide](#) – How to connect to the Campus Area Network (CAN).

[Better Canvas](#) & [Tasks for Canvas](#) – Two browser extensions must-haves for Canvas.

[Cyber Visualizations](#) – University of Cincinnati resources for explaining Cyber Persistence Theory.

