



Cybersecurity Program

About the Cybersecurity Program

Cybersecurity refers to the measures taken to protect computer systems, networks, and data from unauthorized access, cyberattacks, and breaches that can lead to disruption or damage. It involves not only technical solutions but also policies, procedures, and awareness to mitigate risks and ensure confidentiality, integrity, and availability of information.

In today's interconnected digital world, cybersecurity stands as the cornerstone of safeguarding sensitive data, infrastructure, and systems from malicious cyber threats. It encompasses a broad range of practices, technologies, and strategies designed to protect networks, devices, and data from unauthorized access, attacks, and damage.

The relevance of cybersecurity in today's world cannot be overstated. As our reliance on digital technologies continues to grow across industries, so does the sophistication and frequency of cyber threats. Organizations of all sizes and sectors are increasingly vulnerable to attacks that can result in financial loss, reputational damage, legal consequences, and compromise of sensitive information.

Why Get Specialized in Cybersecurity?

A certificate in cybersecurity, focusing on tracks such as Ethical Hacking, Cybersecurity Management and Compliance, and Cybersecurity Auditing and Risk Management, is crucial for several reasons:

1. **Specialized Knowledge and Skills:** Each track provides specialized knowledge and practical skills necessary to tackle specific cybersecurity challenges. Ethical Hacking equips professionals with the ability to identify and rectify vulnerabilities before they are exploited. Cybersecurity Management and Compliance ensures adherence to regulatory requirements and industry standards, crucial for organizational resilience. Cybersecurity Auditing and Risk Management enables proactive assessment and mitigation of risks.
2. **Career Advancement:** As cybersecurity threats evolve, so does the demand for skilled professionals who can protect systems and data. A certificate demonstrates competency and commitment to the field, enhancing career prospects and opening doors to new opportunities.
3. **Organizational Security:** Trained professionals are essential for maintaining robust cybersecurity defenses within organizations. By earning a certificate, individuals contribute to strengthening overall cybersecurity posture, thereby safeguarding critical assets and fostering a culture of security awareness.
4. **Addressing Industry Needs:** Certificates tailored to specific tracks meet industry demands for specialized skills, helping organizations fulfill regulatory requirements, prevent cyber incidents, and respond effectively to breaches.

Program Audience

- **Current IT Professionals:** Those already working in IT roles who want to specialize in cybersecurity and gain skills to proactively test and secure systems.
- **Cybersecurity Enthusiasts:** People with a strong interest in understanding hacking techniques and security defenses, and who are keen on applying this knowledge in a legal and ethical manner.
- **Students with Technical Backgrounds:** Those with a background in computer science, IT, or related fields who have a solid understanding of networking and programming.

Program Overview

Upon completing the required courses, students have the opportunity to specialize in one of the following tracks, Ethical Hacking, Cybersecurity Management and Compliance, and Cybersecurity Auditing and Risk Management. These tracks are not only relevant but essential in today's interconnected digital landscape. Each track equips individuals with the knowledge, skills, and credentials needed to protect against evolving cyber threats, advance their careers, and contribute to organizational resilience.

Program Benefits

The core courses provide essential understanding of key cybersecurity concepts, threats, and defensive mechanisms. This foundation is crucial for ethical hackers who need to know what they are testing for and how various vulnerabilities might be exploited. Students grasp the types of attacks they might simulate, such as malware, phishing, and SQL injection, and learn the methodologies to combat these threats. These core courses collectively build a strong foundation in cybersecurity principles, network security, and policy

governance, preparing students for the specific demands of the Ethical Hacking, Cybersecurity Management and Compliance, and Cybersecurity Auditing and Risk Assessment tracks.

Each track of the Cybersecurity program delivers targeted expertise and hands-on skills essential for addressing cybersecurity issues.

- The Ethical Hacking track empowers professionals to detect and address vulnerabilities before they can be exploited.
- The Cybersecurity Management and Compliance track focuses on ensuring compliance with regulatory standards and industry norms, which is vital for maintaining organizational resilience.
- The Cybersecurity Auditing and Risk Management track facilitates proactive evaluation and reduction of risks.

Program Details

Prerequisites

Students with little to no networking experience are encouraged to take the course [CSE-41395 Fundamental of Networking](#) prior to enrolling in [CSE-41363 Cybersecurity Fundamentals](#). Those who have the required background knowledge may skip the prerequisite without a department waiver. Please note that the prerequisite course does not count towards the certificate. For any questions, please contact infotech@ucsd.edu

Requirements

Three required courses and two elective courses. Each course will consist of 3.0 units and 30 hours of instruction. To complete a track and earn their certificate, students will need to complete 3 required courses and both elective courses in track 1, 2, or 3 at 3.0 units per course for a total of 15.0 units at a total of 150 credit hours. For students who need the prerequisite course, the program can be completed in 18 months, taking 1 course per quarter.

Certificate Course Matrix

Prerequisite For students with little to no programming experience. Not required to complete this program. No department waiver necessary.					
TITLE & COURSE NUMBER	UNITS	FALL	WINTER	SPRING	SUMMER
Fundamentals of Networking CSE-41395	3.0	Online	Online	Online	Online
Required Courses All three (3) required.					
TITLE & COURSE NUMBER	UNITS	FALL	WINTER	SPRING	SUMMER
Cybersecurity Fundamentals CSE-41363	3.0	Online	Online	Online	Online
Linux Networking CSE-41365	3.0	Online		Online	
Linux System Administration CSE-41364	3.0		Online		Online
Track I: Ethical Hacking both courses required to complete this track.					
TITLE & COURSE NUMBER	UNITS	FALL	WINTER	SPRING	SUMMER
Ethical Hacking CSE-41362	3.0	Online		Online	
Penetration Testing CSE-41360	3.0		Online		Online
Track II: Cybersecurity Management and Compliance both courses required to complete this track.					
TITLE & COURSE NUMBER	UNITS	FALL	WINTER	SPRING	SUMMER
Information Security Management CSE-41359	3.0	Online		Online	
Governance of Enterprise IT CSE-41361	3.0		Online		Online
Track III: Cybersecurity Auditing and Risk Assessment both courses required to complete this track.					
TITLE & COURSE NUMBER	UNITS	FALL	WINTER	SPRING	SUMMER
Information Systems Auditing CSE-41367	3.0	Online		Online	
Risk and Information Systems Control CSE-41368	3.0		Online		Online

Length

Students can complete the program in 15 months or 5 quarters. Additional time may be required if taking the prerequisite course.

Students have 20 quarters or approximately 5 years to complete the requirements to obtain the certificate starting from the first course taken towards the certificate or enrolling in the program, whichever came first.

Cost

Each course fee is currently \$745. The total cost of the program is \$3,820.00, which includes the \$95 certificate fee. For students who need the Fundamental of Networking course will add an addition of \$745 To the cost of the program for a total of \$4,565.00 Please note that all fees are subject to change and do not include textbooks/materials.

Electives

Students need to complete 2 of the elective courses from one of these tracks, Ethical Hacking, Cybersecurity Management and Compliance, Cybersecurity Auditing and Risk Management.

Frequently Asked Questions

About the Certificate

How do I apply to the certificate Program?

STEP 1: If you have a My Extension account, skip to Step 2. If you do not have a My Extension account, go to myextension.ucsd.edu, click “Create an account” on the right side of the page, and follow the instructions to create an account. Once you have a My Extension account, continue to Step 2.

STEP 2: Click on the “Apply Now” button on the [certificate page](#). Complete the required fields on the application. Then click Save Your Work button. Once you have saved the application, the “Submit” button will appear. Click the “Submit” button to submit your application for review and consideration. Once submitted, your application cannot be changed. You can track the progress of your application at [My Extension](#).

Is there an application fee for the certificate program?

Current application or certificate fees, if any, are listed under the “Apply Now” button on the [certificate page](#) on our website.

Is this program in-class or online?

The courses in this program are offered in online format only. For online classes, all assignments and test/quizzes are completed online and submitted through Canvas, our online learning management system.

Can the prerequisite be waived if I have taken a Networking or Cybersecurity course elsewhere or have equivalent working knowledge?

The recommended prerequisite is not required to complete the certificate. However, it serves as a guideline to students as to the level of knowledge required for students enrolling into the course [CSE-41363 Cybersecurity Fundamentals](#) in this program. Those with little to no programming experience are encouraged to take [CSE-41395 Fundamental of Networking](#) course prior to enrolling in the first required course of the program . Those who wish to skip the prerequisite may do so without a department waiver. Please email infotech@ucsd.edu if you would like to see the syllabus of the prerequisite course.

Can I substitute a course from a specialization track with a course from another track?

Students cannot substitute courses from a specialization track with courses from another track. Both courses in the selected specialization track must be completed to obtain the Cybersecurity certificate.

Is financial aid available?

- UC San Diego Division of Extended Studies offers continuing education loans through UC Approved Lenders. Each institution offers low competitive interest rates and flexible payment options. You are also encouraged to contact your personal financial institution about possible lending solutions. Direct links to UC Approved Lenders can be found on our website's [Financial Resources](#) page. The Employment Development Department (EDD) provides a comprehensive range of employment and training services in partnership with state and local agencies/organizations. More information is available on their website at edd.ca.gov.
- Career Centers Located throughout San Diego County offer their communities comprehensive employment and training services benefiting both business and job seekers. More information is available on their website at workforce.org.
- Please click [here](#) for information about Veteran's Benefits.
- Free Application for Federal Student Aid (FAFSA) funds are limited to degree programs only and cannot be used for courses or certificate fees at UC San Diego Division of Extended Studies.

Is this certificate program open to non-California residents?

Yes, the program is open to non-California residents, including non-US residents. The tuition is the same for all students. If you have questions about how enrolling in courses may or may not affect your visa status, please contact our International Department at ipinfo@ucsd.edu or (858) 534-6784.

If I work full-time, will I still be able to complete this program?

Yes. Our programs are designed to be working-student friendly and most of our students are working professionals. The courses are typically three units, which amounts to approximately 27-30 hours of class time.

Will I get any hands-on experience in the program?

Most courses combine theory with hands-on exercises.

Is the program accredited?

UC San Diego is accredited by the Western Association of Schools and Colleges (WASC). UC San Diego Division of Extended Studies — like all other UC San Diego schools, colleges, and departments — is accredited by WASC through the University. All courses and certificate programs offered by UC San Diego Division of Extended Studies have been developed and are administered in accordance with Division of Extended Studies policy and the regulations of the Academic Senate of the University of California.

Will this program prepare me for a certification exam?

[CSE-41363 Cybersecurity Fundamentals](#) course of this program prepares students for the [CompTIA Security+](#) certification exam. Additionally, [CSE-41360 Penetration Testing](#) course prepares students for the [ComTIA PenTest+](#) certification exam.

Do you provide job or internship placement?

Unfortunately, we do not currently offer job placement assistance, internships, or career services assistance.

About the Courses

When does course enrollment open for each quarter?

Our classes post to our website and become open for enrollment approximately two months prior to the new quarter starting. If you would like to receive an email reminder, you can sign up for our newsletter(s) in [My Extension](#), under the “Preferences” tab.

When should I enroll in a course?

We recommend enrolling as soon as possible, as occasionally classes will reach capacity.

Once I have enrolled in a course, when will I get online access to it?

If you have enrolled at least three days before the course begins, you will have access starting on the first day of class. You should receive an email from Student Services with instructions for how to login to the course. If you have enrolled on or after the start date of the course, you will have access to the course within one business day.

How are the online courses formatted?

Online courses are asynchronous with prerecorded lectures, corresponding PowerPoints, and subsequent materials as provided by the instructor. They have a start and end date, but all the lessons are uploaded to our Learning Management System, so that you can learn at your own pace. However, please be aware that you may have weekly assignments, quizzes and/or tests that are due on specific dates. To access your online course, first login to your [My Extension](#) account, next select “My Courses” from the menu. From your list of courses, select the course you would like to access, and click the link that appears in the “Location” section. You will then be redirected to the Learning Management System (LMS) where your course is located.

We are currently using Canvas as our (LMS) for all our online courses. While students do not get access to their respective courses until the first day of the course, we encourage students who are new to Canvas to click on the following link to Canvas and: [Take the free tour of Canvas](#).

For online courses, will I ever need to attend in person?

The online courses in this program are offered entirely online. All course requirements, including lectures, tests, quizzes, and assignments will be completed online. You will not be required to attend in person.

What if I am having trouble with my Learning Management System or My Extension?

Please contact Student Services at (858) 534-3400 or unex-reg@ucsd.edu if you experience any issues logging in to any of our systems.

When does enrollment for a course close?

Enrollment in a course may be closed for one or more of the following reasons:

- The course is at capacity. If the course is at capacity, you will only be able to join the waitlist. If space becomes available in the course, students on the waitlist are contacted in the order they joined the waitlist.
- The course has progressed to a point where students will no longer be able to make-up missed work and be successful in the course.
- The course is cancelled due to low enrollments.

For all three of these reasons, we recommend students enroll early in their courses of interest.

When is the refund deadline for courses?

The refund deadline for courses in this program is typically one week after the start of the course. This allows you to enroll in a course and participate in the course for approximately one week to determine if the course is a good fit. Then, if needed, you may either transfer your enrollment to a different course or submit a drop request. The exact refund deadline for each section is listed in the section notes.

What are the grading options for courses?

You can take courses for one of three options: Letter Grade, Pass/No Pass, or Not for Credit. If you are taking a course towards a certificate, you *must* complete your courses for credit (i.e., Pass/No Pass or Letter Grade) and receive a C-/Pass or higher grade. Grades below a C-, No Pass, and Not for Credit will *not* count towards certificate requirements.

How will I receive my final grade?

Once the course is completed, the instructor has 10 working days to submit your grades. After the grades have been posted, you can view and print them via [MyExtension](#), your online education management portal. Please contact Student Services at 858-534-3400 or unex-reg@ucsd.edu if you experience any issues with logging in.

What kind of credit do I earn?

The courses in this program are post-baccalaureate, professional-level, credit bearing courses. Credit earned in these courses may lead to the award of a formal certificate by UC San Diego Division of Extended Studies or may be applied toward an academic degree or professional credential, *subject to the approval of the receiving institution*.

If you wish to transfer credit, it is your responsibility to confer with the receiving institution before enrolling, as each individual academic institution decides whether to accept Division of Extended Studies credits.

Are courses transferrable?

UC San Diego Division of Extended Studies is not a degree granting institution; however, many UC San Diego Division of Extended Studies courses can be transferred to other colleges or universities. The transferability of credit is determined solely by the *receiving* institution. You should discuss how your individual courses will transfer with the Office of the Registrar at the receiving institution *prior to enrolling*.

Can I take a course without registering for the certificate?

Yes, you may take any course in this program without registering for the certificate, provided you have fulfilled all prerequisites for the course.

How long is each course?

Three-unit courses run for approximately 8-10 weeks. For exact course dates of upcoming sections, visit the webpage of the course you are interested in taking on [our website](#).

When is each course offered?

Please visit the course page on [our website](#) to see when courses are typically offered. You can also see a full program schedule by clicking on the “View Schedule” button under the “Courses” section on [the certificate page](#)

How can I get more information on the specific courses?

Please email infotech@ucsd.edu to request specific course syllabi.

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How many hours can I expect to spend studying outside of class time?

Each student has their own learning style so this can vary greatly. As a rule of thumb, expect to spend an average of two hours studying for every hour you spend in-class.

What are the instructors' credentials?

The program courses are taught by seasoned professionals and overseen by an advisory board of leaders in the field. You can view the advisor list under the “Advisors” section on [the certificate page](#). You can find information about a course instructor, including a biography and credentials, on the course page.

What are the required textbooks for a course?

Instructors will post the current text requirements and recommendations on the course page on our website. Please note the textbooks requirements are subject to change every quarter and different instructor may require different books, even if they are teaching the same course in the same quarter, so be sure to check the textbook requirements *for the section in which you are enrolling*.

Will I be able to order the required textbooks before the class begins?

Yes, you can order the book(s) any time after enrolling in the course. You may order books through the campus bookstore or online retailers, such as Amazon.com.

For More information

For program specific questions, please visit [the certificate page](#) on our website or contact a program representative at infotech@ucsd.edu or (858) 534-9351. For administrative questions, please contact our Student Services Department at unex-reg@ucsd.edu or (858) 534-340.

