

CYBERSECURITY (CYBR)

CYBR 100 F Cyber Hygiene **3 Units**

54 hours lecture per term. This course introduces the student to computer security topics on personal computers and on general Internet Security. Students will learn how to protect their own personal devices from malicious software to include trojans, malware, adware, viruses, and other dangerous exploitation software. Understand current hacking TTP's and approaches. Students will also learn to protect their personally identifiable information (PII) on the Internet, what regulation are for PII and CCPA, and how to securely send and protect data. (Degree Credit) (CSU)

CYBR 106 F Introduction to Cybersecurity **3 Units**

54 hours lecture per term. This course introduces students to the complex world of cyber security and technology. Students will analyze security problems and practice simulated security activities. Topics will address technologies and security related topics progressing from individual computers to more complex Internet-based systems. (Degree Credit) (CSU)

CYBR 206 F Ethical Hacking **3 Units**

Advisory: Basic knowledge of cybersecurity and networking concepts.

54 hours lecture per term. This course is an introduction to hacking tools, techniques, and incident handling. Areas of instruction include the evolution of hacking and penetration testing; the basics of cryptology for information security; footprinting; vulnerability scanning and exploit; wireless, web, and database attacks; malware and system exploit; traffic analysis; incident response; and defensive technologies and controls. (Degree Credit) (CSU)

CYBR 210 F Network Security **3 Units**

Advisory: CIS 107 F and CIS 180 F.

54 hours lecture per term. This course is designed to provide students with an overview of network security, and covers terminology, technology, and software to secure networks. Students will learn about communication security, infrastructure security and remote access. (Degree Credit) (CSU)

CYBR 220 F Introduction to Incident Response **3 Units**

Advisory: Possess a basic knowledge of networking concepts.

54 hours lecture per term. This course teaches the student how to conduct incident response techniques and tools to investigate and reconstruct network-based data. Students learn the basic operation and structure of a computer network, the various network devices and their operation, and the tools used to investigate a network. Topics include trapping network data, retrieving and analyzing email, tracing network packets, and other security and forensic topics. (Degree Credit) (CSU)

CYBR 230 F Scripting Fundamentals **3 Units**

54 hours lecture per term. This course introduces selected scripting languages that automate many tasks in the cybersecurity, systems administration, and digital forensics field by including basic data types, control structures, regular expressions, input/output, and textual analysis. (Degree Credit) (CSU)

CYBR 233 F Application Security **3 Units**

54 hours lecture per term. This course introduces the concepts and best practices when securing applications starting with the Open Web Application Security Project (OWASP) top 10 vulnerabilities for websites and web applications. Development, Security, and IT Operations (DevSecOps) concepts will explore key components when identifying vulnerabilities. Hands-on exercises using industry-recognized tools for application security audit and assessment will help students develop skills in this area.

CYBR 260 F Cloud Security **3 Units**

54 hours lecture per term. This course prepares students to design secure solutions for Infrastructure as a Service (IaaS) architectures by provisioning computing instances, establishing virtual private networks, managing databases, and storage within a secure online cloud platform environment. Students produce secure solutions responsive to Zero Trust and computing technology workloads with on-demand pay-as-you-go pricing allowing flexibility for small business, entrepreneurship, and enterprise adoption. (Degree Credit) (CSU)

CYBR 290 F Management of Info Security **3 Units**

54 hours lecture per term. This course teaches students the organizational components and introduction into the overall management and communities of interest in the field of information security. (Degree Credit) (CSU)