

## PROGRAM PAGE

### BACHELOR OF SCIENCE IN CYBERSECURITY

Credits: 120

#### Program Description

The Bachelor of Science in Cybersecurity provides students with the technical, analytical, and strategic competencies needed to protect digital assets and ensure the confidentiality, integrity, and availability of information systems. This program combines hands-on experience, applied research, and theoretical foundations to prepare students for today's cybersecurity environment. Students will explore critical areas including secure software development, systems and network defense, cyber risk management, ethical hacking, data analytics, cloud and mobile security, legal and regulatory compliance, and emerging threats such as those related to artificial intelligence and the Internet of Things (IoT). Through a curriculum grounded in both computing and security science, graduates will be prepared to design, implement, and manage robust security architectures, respond to incidents, and support strategic decision-making to mitigate cyber risks in enterprise and public sector environments.

#### Program Outcomes

1. Identify, evaluate, and mitigate cybersecurity risks to organizational systems, networks, and data using a variety of security frameworks and tools.
2. Design, implement, and assess secure computing systems using industry best practices in software, hardware, and network configurations.
3. Conduct digital forensics and ethical hacking investigations to uncover vulnerabilities and analyze threats in complex computing environments.
4. Apply data science and analytic methods to cybersecurity contexts, including intrusion detection, behavior analysis, and threat intelligence.
5. Evaluate legal, ethical, and regulatory requirements related to cybersecurity, privacy, and intellectual property in national and global scenarios.
6. Develop and implement security policies, awareness training, and incident response plans that support an organization's security operation and compliance.
7. Collaborate effectively within interdisciplinary teams and communicate technical concepts to diverse audiences including technical, managerial, and non-technical stakeholders.
8. Engage in lifelong learning and professional development to adapt to emerging cybersecurity challenges, technologies, and roles.

Program sequence will be available at the time of enrollment.

The language of instruction and program delivery modality are subject to availability.

## BACHELOR OF SCIENCE IN CYBERSECURITY

21 credits

QYLE 110 or FYIS 101	Attitude Development and University Adaptation or Induction Seminar to University Life	3	Must be taken in the 1st term of enrollment
<b>TOTAL</b>		<b>3</b>	
<b>General Education Courses</b>			
Course	Title	Credits	Prerequisites
Pick 1 GE* or SPAN 101 - 102 or SPAN 103 - 104 or SPAN 105 - 106	Pick one (1) of the Approved General Education Electives or Introduction to Spanish Language – Basic Level Introduction to Spanish Language – Intermediate Level Introduction to Spanish Language – Advanced Level	6	SPAN 101 for SPAN 102 SPAN 103 for SPAN 104 SPAN 105 for SPAN 106
ENGL 150 – 250 or ENGL 101 – 102 or ENGL 103 – 104 or ENGL 105 - 106	English Composition I and II or Introduction to English Language – Basic Level Introduction to English Language – Intermediate Level Introduction to English Language – Advanced Level	6	ENGL 150 for ENGL 250 ENGL 101 for ENGL 102 ENGL 103 for ENGL 104 ENGL 105 for ENGL 106
MATH 112ON	College Algebra	3	
SOSC 101	Introduction to Social Science I	3	
SCIE 111	Integrated Science I	3	
HUMA 101	World Cultures I	3	
HIST 101	Introduction to the Study of History	3	
ENGL 340 or SPAN 215	Research and Writing or Writing and Composition	3	ENGL 250 for ENGL 340 SPAN 102 or SPAN 104 or SPAN 106 for SPAN 215
<b>TOTAL</b>		<b>30</b>	
<b>Core/ Professional Courses</b>			
Course	Title	Credits	Prerequisites
MATH 222	Discrete Mathematics	3	MATH 112ON
MATH 305	Probability and Statistics	3	MATH 222
ENMA 101	Introduction to Business Development	3	
MANA 230	Organizational Behavior	3	
COIS 120	Principles of Computing	3	
COIS 121	Introduction to Programming	3	
COIS 205	Programming II	3	COIS 121
COIS 230	Computer Networks and Architecture	3	COIS 120, COIS 121
COIS 242	Operating Systems	3	COIS 230, COIS 205
COIS 250	Systems Analysis & Design	3	
COIS 330	Database management System	3	COIS 250
COIS 334	Legal and Ethical issues in Computing	3	CYBS 220
<b>TOTAL</b>		<b>42</b>	
<b>Major Courses</b>			
Course	Title	Credits	Prerequisites
CYBS 110	Introduction to Cybersecurity	3	
CYBS 210	Network Security	3	
CYBS 220	Cybercrime and Cyber Law	3	CYBS 230
CYBS 230	Linux System Administration and Security	3	COIS 120, COIS 121
CYBS 240	Cybersecurity Risk Management and Compliance	3	CYBS 230
CYBS 250	Digital Forensic and Incident Response	3	COIS 230, COIS 205
CYBS 260	Applied Cryptography	3	CYBS 230, CYBS 250, CYBS 220

CYBS 330	Software and System Security	3	CYBS 210
CYBS 350	Cybersecurity Operations	3	CYBS 410
CYBS 370	Cloud and Mobile Security	3	CYBS 410
CYBS 410	Offensive Security and Ethical Hacking	3	CYBS 230, CYBS 250, CYBS 220
CYBS 415	Malware Threat Analysis	3	CYBS 370
CYBS 420	Analytics & Data Science Methods for Cybersecurity	3	COIS 330, CYBS 350
CYBS 430	Cybersecurity Seminar	3	CYBS 420
CYBS 440	Cybersecurity Trends and Emerging Issues	3	CYBS 420
Choose two of the following:	Major Electives Choose two of the following:	6	
COIS 221	Data Analysis Tool		
COIS 320	Architecture Solutions		
COIS 421	Advanced SQL Programming		
<b>TOTAL</b>		<b>45</b>	
<b>TOTAL CREDITS</b>		<b>120</b>	

Approved General Education Electives*		
Course	Title	Credits
SPAN 110	Elementary Spanish	3
REIL 101	Research and Information Literacy	3
BIOL 150	General Biology I	3
BIOL 151	General Biology II	3
COMM 205	Communication Theory	3
COMM 210	Legal and Ethical Aspects of Communications	3
HIDE 100	History of Arts	3
HIDE 110	Representing Culture: Art & Artifact 1500-1850	3
HIST 273	History of the United States of America	3
Major Electives		
COIS 221	Data Analysis Tool	3
COIS 320	Architecture Solutions	3
COIS 421	Advanced SQL Programming	3

Notes:

1. This program may be offered in English, Bilingual mode (English-Spanish), or Spanish according to the demand. COMPLETING A COURSE OR PROGRAM IN A LANGUAGE OTHER THAN ENGLISH MAY REDUCE EMPLOYABILITY WHERE ENGLISH IS REQUIRED.
2. Graduation GPA: 2.00