

# INFORMATION TECHNOLOGY CYBERSECURITY - ASSOCIATE IN SCIENCE

Plan Code: 2105

This program combines systems administration fundamentals with the requisite security concepts and effective practices required to implement, administer, and harden operating systems.

## Program Student Learning Outcomes

- Demonstrate the ability to attain the Institutional Student Learning Outcomes (ISLOs).
- Demonstrate the ability to install, configure, manage and troubleshoot a small office or home office network (wired or wireless).
- Demonstrate the ability to secure wired and wireless networks.
- Demonstrate the ability to install, configure and manage client and server operating systems.
- Demonstrate the ability to harden servers against intrusion.

## Program Requirements

This degree requires the completion of General Education coursework plus the following:

Code Number	Course Title	Units
<b>REQUIRED COURSES</b>		
COSN 5	Computer Hardware Fundamentals	4
COSN 10	Networking Fundamentals	3
COSN 205	UNIX/LINUX Fundamentals	4
COSN 206	Scripting Fundamentals	3
COSN 253	Security in Amazon Web Services	3
COSS 71	Network Security Fundamentals	3
COSS 272	Computer Forensics and Investigation	3
COSS 273	Ethical Hacking and Countermeasures	4
<b>Required Subtotal</b>		<b>27</b>
Complete one of the following <sup>1</sup>		19-39
LBCC General Education (Plan A) ( <a href="https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-a/">https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-a/</a> )		
CSU GE Breadth (Plan B) ( <a href="https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-b/">https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-b/</a> )		
IGETC Pattern (Plan C) ( <a href="https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-c/">https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-c/</a> )		
Electives (as needed to reach 60 degree-applicable units) <sup>2</sup>		
<b>Minimum Degree Total</b>		<b>60</b>

<sup>1</sup> Units for the major may be double-counted for LBCC GE, CSU GE, or IGETC; see counselor for limitations.

<sup>2</sup> Elective units from course(s) numbered 1-599, if needed, to reach 60 degree-applicable units

# INFORMATION TECHNOLOGY CYBERSECURITY - CERTIFICATE OF ACHIEVEMENT

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Plan Code: 3105

This program combines systems administration fundamentals with the requisite security concepts and effective practices required to implement, administer, and harden operating systems.

## Program Student Learning Outcomes

- Demonstrate the ability to install, configure, manage and troubleshoot a small office or home office network (wired or wireless).
- Demonstrate the ability to secure wired and wireless networks.
- Demonstrate the ability to install, configure and manage client and server operating systems.
- Demonstrate the ability to harden servers against intrusion.

## Program Requirements

Code Number	Course Title	Units
<b>REQUIRED COURSES</b>		
COSN 5	Computer Hardware Fundamentals	4
COSN 10	Networking Fundamentals	3
COSN 205	UNIX/LINUX Fundamentals	4
COSN 206	Scripting Fundamentals	3
COSN 253	Security in Amazon Web Services	3
COSS 71	Network Security Fundamentals	3
COSS 272	Computer Forensics and Investigation	3
COSS 273	Ethical Hacking and Countermeasures	4
<b>Total Units</b>		<b>27</b>

# UNIX NETWORK ADMINISTRATOR - CERTIFICATE OF ACHIEVEMENT

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Plan Code: 3139

This certificate prepares students with no prior experience for an entry-level job installing, configuring, and securing a UNIX/LINUX network server.

## Program Student Learning Outcomes

- Demonstrate the ability to install, configure, and secure a Linux server.
- Demonstrate the ability to install, configure and secure a Linux network and services.
- Demonstrate the ability to describe and document a Linux network in relation to the OSI model.

## Program Requirements

Code Number	Course Title	Units
<b>REQUIRED COURSES</b>		
COSN 10	Networking Fundamentals	3
COSN 205	UNIX/LINUX Fundamentals	4
COSN 210	LINUX Server Administration	4
COSN 215	LINUX Networking and Security	4
<b>Total Units</b>		<b>15</b>

# CYBER SECURITY - CERTIFICATE OF ACHIEVEMENT

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Plan Code: 3106

Students will learn the skills to investigate cyber-attacks or stop them before they even begin.

## Program Student Learning Outcomes

- Demonstrate the ability to install, configure, manage and troubleshoot a small office or home office network (wired or wireless).
- Demonstrate the ability to collect, handle, store, and search digital evidence using modern forensic tools.
- Demonstrate the ability to install, configure, and manage client and server operating systems.
- Demonstrate the ability to harden servers against intrusion.

## Program Requirements

Code Number	Course Title	Units
<b>REQUIRED COURSES</b>		
COSN 5	Computer Hardware Fundamentals	4
COSN 10	Networking Fundamentals	3
COSS 71	Network Security Fundamentals	3
COSS 272	Computer Forensics and Investigation	3
COSS 273	Ethical Hacking and Countermeasures	4
<b>Total Units</b>		<b>17</b>