

COMPUTER NETWORKING

Curriculum Guide for Academic Year 2014-2015

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Students planning to **transfer** to a four-year college or university should refer to the ASSIST web site at <u>www.assist.org</u> and **consult a counselor** before beginning a program of study. Please call (562)938-4561 (LAC) or (562) 938-3920 (PCC) to schedule a counseling appointment. Students may also wish to visit the Transfer Center on either campus.

schedule a counseling appointment. Students may also wish to visit the Transfer Center on either campus.								
Program of study leading to:								
Associate in Science (A.S.) Degree								
COMPUTER NETWORKING	REQUIRED COURSES:	UNITS	In Progress	Completed Grade				
BCOM 15 OR	Business Communications OR	3 OR						
† BCOM 20	Business Writing	3						
COSA 50	Introduction to IT Concepts & Applications	4						
COSN 5	Computer Technician Hardware Basics	4						
COSN 10	Networking Fundamentals	4						
COSN 200	Wireless Communications	2						
COSP 36 COSS 271	System Analysis and Design Networking Security Fundamentals	4 3						
0033 27 1								
IN ADDITION	Subtotal Uni	ts 24						
IN ADDITION, complete ONE	or the following tracks:							
UNIX/LINUX TRACK								
CHALITOX TRACK			In	Completed				
REQUIRED COURSES		UNITS	Progress	Grade				
COSN 205	Unix/Linux Fundamentals	4						
COSN 210	LINUX Server Administration	4						
COSN 215	LINUX Networking and Security	4						
	Subtotal Uni	ts 12						
	UNIX/LINUX TRACK TOTAL UNIT	'S 36						
			F					
MICROSOFT TRACK								
DECLUDED 65			_ In	Completed				
REQUIRED COURSES		UNITS	Progress	Grade				
COSN 225	Windows OS Admin Fundamentals	3						
COSN 230	Windows Server Admin Fundamentals	4		<u> </u>				
	Subtotal Uni			<u> </u>				
	MICROSOFT TRACK TOTAL UNIT	S 31						
CYPER SECURITY TRACK								
CYBER SECURITY TRACK			In	Completed				
REQUIRED COURSES		UNITS	Progress	Grade				
COSS 272	Computer Forensics and Investigation	4	. 109.000	0.000				
COSS 272 COSS 273	Ethical Hacking and Countermeasures	4						
0000270	Subtotal Uni	-						
Accorde Dogress requirement	TOTAL UNIT	o 32						
Associate Degree requirement	из сопшнией оп пехт раде.			l				

COMPUTER NETWORKING 2014-2015

A.S. = 2125; C-ACH = 3125

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Departmental Phone: 562-938-4904 Web Site: http://www.lbcc.edu/cos

Associate Degree requirements continued from previous page.

For graduation with an Associate in Science (A.S.) Degree with a major in Computer Networking:

1. Minimum Unit Requirements: §Any course that appears on a curriculum guide and the General Education Pattern (Plan A) may fulfill both major and general education requirements (Approved by College Curriculum Committee Spring 2012). For this degree, complete a minimum of 60 units in courses numbered 1-599. Please note that additional elective units may be required to meet this minimum based upon courses selected to fulfill General Education for the Associate Degree.

Computer Networking: Unix/Linux Track 36 Units

General Education § 19 Units

Computer Networking: Microsoft Track 31 Units

General Education § 19 Units

Computer Networking: Cyber Security Track 32 Units

General Education § 19 Units

- Scholarship: Maintain an overall grade point average (GPA) of 2.0 ("C" average) based on all accredited college
 work applied to the degree, no matter where completed. For this field of concentration, complete each course
 above with a grade of "C" or better, or "P" if course is graded on a P/NP basis.
- 3. **Residence for the Degree:** Complete at least 30 units of the required 60 in residence at LBCC, or complete in residence at LBCC at least 20 units within the last 30 units of work applied to the degree.
- 4. Residence for the Field of Concentration: Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at least 18 units of the required 36 units (UNIX/LINUX Track) or at least 15.5 units of the required 31 units (Microsoft Track) or at least 16 units of the required 32 units (Cyber Security Track) must be completed at Long Beach City College. Credit earned by exam, where applicable, may be included.
- 5. **General Education and Proficiency Requirements:** Complete the required A.A./A.S. General Education and Proficiency requirements*, otherwise known as "Plan A". For Plan A requirements, refer to the general catalog or view it online at http://osca.lbcc.edu.
- 6. Complete and submit the degree application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at http://admissions.lbcc.edu/. Refer to the Schedule of Classes (http://schedule.lbcc.edu/ and click the "Important Dates" link to view the actual deadline for each semester.

*The requirements for general education/proficiency and the field of concentration (major) need to be from the same catalog year. This catalog year may be any year between the years of initial enrollment to the present, provided continuous enrollment is maintained throughout. See the catalog for definition of "continuous enrollment".

Program of study leading to: **Certificate of Achievement**

REQUIRED COURSES—Complete the units of required courses as listed in the Associate Degree requirements box.

UNIX/LINUX Track TOTAL UNITS	36	
Microsoft Track TOTAL UNITS	31	
yber Security Track TOTAL UNITS	32	

For graduation with a Computer Networking Certificate of Achievement:

- 1. Complete each of the REQUIRED COURSES listed above with a minimum grade of "C".
- Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at least 18 units of the required 36 units (UNIX/LINUX Track) or at least 15.5 units of the required 31 units (Microsoft Track) or at least 16 units of the required 32 units (Cyber Security Track) must be completed at Long Beach City College. Credit earned by exam, where applicable, may be included.
- 3. Complete and submit the certificate application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at http://admissions.lbcc.edu/. Refer to the Schedule of Classes (http://schedule.lbcc.edu) and click the "Important Dates" link to view the actual deadline for each semester.

Program of study leading to: <u>Certificates of Accomplishment</u>								
Certificate: Microsoft Will REQUIRED COURSES COSN 10 COSN 200 COSN 225 COSN 230	Networking Technician 4086 Networking Fundamentals Wireless Communications Windows OS Administration Fundamer Windows Server Administration Fundar	ntals	UNITS 4 2 3 3 12	In Progress	Completed Grade			
Certificate: Cyber Securi REQUIRED COURSES COSN 10 COSN 200 COSS 271 COSS 272 COSS 273	Networking Fundamentals Wireless Communications Network Security Fundamentals Computer Forensics and Investigation Ethical Hacking and Countermeasures	TOTAL UNITS	UNITS 4 2 4 3 4 17	In Progress	Completed Grade			
Certificate: Computer Ha REQUIRED COURSES COSN 3 COSN 5	Operating Systems: Software and Hard Computer Technician Hardware Basics		UNITS 4 4 8	In Progress	Completed Grade			
Certificate: Business Digital REQUIRED COURSES COSA 1	I Literacy 4130 Computer Information Competency	TOTAL UNITS	UNITS 1 [1 [In Progress	Completed Grade			
Certificate: Computer Netwood REQUIRED COURSES COSN 10 COSN 200	Network Fundamentals Wireless Communications	TOTAL UNITS	UNITS 4 2 6	In Progress	Completed Grade			

For graduation with a **Certificate of Accomplishment:**

- 1. Complete the above required courses with a minimum grade of "C", or "P" if course is graded on a P/NP basis.
- 2. Fifty percent (50%) or more of the required units must be completed in residence at LBCC.
- 3. Complete and submit the certificate application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at http://admissions.lbcc.edu.

Career Opportunities

This **Associate Degree or Certificate of Achievement** is a two-year program leading to the Associate in Science (A.S.) degree. It is designed to prepare students for employment in a variety of computer related fields. Students wishing a bachelor's degree (transfer program) should meet with a counselor to discuss transferability of courses.

Program Mission and Outcomes

The mission of the Computer Networking curriculum is to skillfully train students by providing strategically designed courses to meet their academia, transferable, and career needs.

Outcomes:

- Configure and install a firewall.
- Implement a secured translation for service hosting through a firewall.

Legend

† This course has a prerequisite. Prerequisite courses must be complete with at least a "C" or "P" grade. Refer to the General Catalog (http://www.lbcc.edu/cat/index.html), the Schedule of Classes (http://schedule.lbcc.edu/), or the online Credit Course Outline (http://wdb-asir.lbcc.edu/coursecurriculum/coursedetails/) for specific prerequisite information.