COMPUTER NETWORKING

Curriculum Guide for Academic Year 2013-2014

LONG BEACH CITY COLLEGE

Table of Contents

Students planning to **transfer** to a four-year college or university should refer to the ASSIST web site at www.assist.org 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.

Program of study leading to:
Associate in Science (A.S.) Degree

COMPUTER NETWORKING REQUIRED COURSES:

Course	Title	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	3		
COSN 200	Wireless Communications	2		
COSP 36	System Analysis and Design	4		
COSS 271	Networking Security Fundamentals	3		
	Subtotal Units	**23**		

IN ADDITION, complete ONE of the following tracks:

UNIX/LINUX TRACK

REQUIRED COURSES

Course	Title	UNITS	In Progress	Completed Grade
COSN 205	Unix/Linux Fundamentals	4		
COSN 210	LINUX Server Administration	4		
COSN 215	LINUX Networking and Security	4		
	Subtotal Units	12		
	TOTAL UNITS	**35**		

MICROSOFT TRACK

REQUIRED COURSES

Course	Title	UNITS	In Progress	Completed Grade
COSN 225	Microsoft Windows Server OS	2.5		
COSN 230	Microsoft Windows Networking	2.5		
COSN 235	Microsoft Windows Directory Services	2.5		
COSN 240	Microsoft Windows Client OS	2.5		
	Subtotal Units	10		
	TOTAL UNITS	**33**		

Associate Degree requirements continued from previous page.

COMPUTER NETWORKING 2013-2014
A.S. = 2125; C-ACH = 3125
Departmental Phone: 562-938-4904 Web Site: http://www.lbcc.edu/cos
Page 1 of 4
Published: 4/22/13
Information on this sheet is subject to change without notice. Any updates to this guide are posted at http://osca.lbcc.edu .

CYBER SECURITY TRACK

REQUIRED COURSES		UNITS	In Progress	Completed Grade
COSS 272	Forensics Digital Analysis and Validation	4		
COSS 273	Computer Forensics and Analysis	4		
	Subtotal Units	**8**		
	TOTAL UNITS	**31**		

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	35 Units
General Education **§**	19 Units
Computer Networking: Microsoft Track	33 Units
General Education **§**	19 Units
Computer Networking: Cyber Security Track	31 Units
General Education **§**	19 Units

2. **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 17.5 units** of the required 35 units **(UNIX/LINUS Track)** or at **least 16.5 units** of the required 33 units **(Microsoft Track)** or at **least 15.5 units** of the required 31 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	**35**		
Microsoft Track TOTAL UNITS	**33**		
Cyber Security Track TOTAL UNITS	**31**		

For graduation with a **Computer Networking Certificate of Achievement:**
1. Complete each of the **REQUIRED COURSES** listed above with a **minimum grade of** "**C**".
2. Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 17.5 units** of the required 35 units **(UNIX/LINUS Track)** or at **least 16.5 units** of the required 33 units **(Microsoft Track)** or at **least 15.5 units** of the required 31 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.

COMPUTER NETWORKING 2013-2014
A.S. = 2125; C-ACH = 3125
Departmental Phone: 562-938-4904 Web Site: http://www.lbcc.edu/cos
Information on this sheet is subject to change without notice. Any updates to this guide are posted at http://osca.lbcc.edu .
Page 2 of 4
Published: 4/22/13

Program of study leading to:
Certificates of Accomplishment

Certificate: Windows Network Administrator 4086

REQUIRED COURSES		UNITS	In Progress	Completed Grade
COSN 3	Operating Systems: Software and Hardware	4		
COSN 10	Networking Fundamentals	4		
COSN 200	Wireless Communications	2		
COSN 225	Microsoft Windows Server OS	2.5		
COSN 230	Microsoft Windows Networking	2.5		
COSN 235	Microsoft Windows Directory Services	2.5		
	TOTAL UNITS	**17.5**		

Certificate: Microsoft Windows System Administration 4107

REQUIRED COURSES		UNITS	In Progress	Completed Grade
COSN 225	Microsoft Windows Server OS	2.5		
COSN 230	Microsoft Windows Networking	2.5		
COSN 235	Microsoft Windows Directory Services	2.5		
COSN 240	Microsoft Windows Client OS	2.5		
	TOTAL UNITS	**10**		

Certificate: Information Security 4106

REQUIRED COURSES		UNITS	In Progress	Completed Grade
COSN 10	Networking Fundamentals	4		
COSS 270	Information Security Fundamentals	1		
COSS 271	Network Security Fundamentals	3		
COSS 272	Forensics Digital Analysis and Validation	4		
COSS 273	Computer Forensics and Analysis	4		
	TOTAL UNITS	**16**		

Certificate: Computer Technician A+ 4126

REQUIRED COURSES		UNITS	In Progress	Completed Grade
COSN 3	Operating Systems: Software and Hardware	4		
COSN 5	Computer Technician Hardware Basics	4		
	TOTAL UNITS	**8**		

Certificate: Business Digital Literacy 4130

REQUIRED COURSES		UNITS	In Progress	Completed Grade
COSA 1 **OR**	Computer Information Competency **OR**	1 **OR**		
COSA 30 **OR**	Introduction to Computers **OR**	3 **OR**		
COSA 50	Introduction to IT Concepts & Applications	4		
	TOTAL UNITS	**1-4**		

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.

COMPUTER NETWORKING 2013-2014
A.S. = 2125; C-ACH = 3125
Departmental Phone: 562-938-4904 Web Site: http://www.lbcc.edu/cos
Page 3 of 4
Published: 4/22/13
Information on this sheet is subject to change without notice. Any updates to this guide are posted at http://osca.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.

COMPUTER NETWORKING 2013-2014
A.S. = 2125; C-ACH = 3125
Departmental Phone: 562-938-4904 Web Site: http://www.lbcc.edu/cos
Information on this sheet is subject to change without notice. Any updates to this guide are posted at http://osca.lbcc.edu .
Page 4 of 4
Published: 4/22/13