COSS-271: Network Security Fundamentals

# Section: 73747

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| **Course Meetings** |  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** |
| This class is online only | | | | | | |
|  |  |  |  |  |  |  |  |
| **Location** |  | Still online | | | | | |

**Course Description:** Formerly CBIS 271. Network Security Fundamentals provides a comprehensive overview of network security and prepares students to take the CompTIA Security + Certification Exam. This course covers general security concepts, communication network security, infrastructure security, cryptography basics, operational/organizational security, and computer forensics. Students should have completed the COSN 10 and COSS 270 courses or equivalent as preparation for this course.

# Course Materials and Resources

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| **LabSim** | LabSim Security Pro  Purchase instructions posted to Canvas (about $100) |
| (required) |
| **Canvas** | <https://lbcc.instructure.com> |

# Where does this course fit?

COSS-271 is a required class for both the **Networking and Cyber Security (AA) degree** and to transfer to the **Computer Technology Information Security degree at Cal State Dominguez Hills**. It is also necessary preparation for most advanced security classes including COSS-272 (Digital Forensics) and COSS-273 (Ethical Hacking). Those three courses form the core of the **Information Security** certificate.

# Garrett Whelan

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| **Contact Info** | |  | **Office Hours** | | | | |
| **Email:** | gwhelan@lbcc.edu |  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **Office Phone:** | (562) 938-4949, x6124 |  | By apt. | 5-8 PCC | 5-6 LAC | 5-6 LAC | By apt. |
| **Cell Phone:** | (213) 254-5683 |  |  |  |  |  |  |
| **Office Location** | LAC M-120  PCC AA-206E |  |  |  |  |  |  |

# Bio

# I am a higher educational professional specializing in

# Computer Science

# Programming

# Information Technology

# Information Security

# Networking

# Linux/UNIX

# Windows Administration

# From 2010-2013 I was the Chair of the School of IT for ITT Tech in Torrance, CA. From 2013 until the present I have been a full time faculty member at Long Beach City College.

I have both a Master’s and Bachelor’s degree in Computer Science from Michigan Technological University. In addition I currently hold the following certifications:

* **Linux**
  + Linux Professional Institute Certification-1
  + Novel Suse Linus Administrator
  + CompTIA Linux+
* **Networking**
  + CCNA: Routing and Switching
  + CCENT
  + CompTIA Network+
  + Microsoft Technology Associate: Networking Fundamentals
* **Security**
  + CompTIA Security+
  + Microsoft Technology Associate: Security Fundamentals
* **Windows**
  + Microsoft Certified Technical Specialist
  + MCTS: Windows 7 Configuration
* **Computer Hardware**
  + CompTIA A+

# Philosophy of Education

I believe that students learn best when the learning is real to them. Toward that goal I try my best to make class sessions and assignments:

* Interactive
* Related to the field
* Related to other courses

That is my responsibility as a teacher. If what we are doing isn’t making sense to you or you don’t understand why we are learning something, you need to stop class and make sure I help you to understand. That is your responsibility as a student.

# Email

Please make sure any email you send me has the following information included:

* Student Name
* Student ID
* Course Number
* Section Number
* If pertinent:
  + Attach any files you’re asking about
  + Attach screenshots and a URL of any website you’re asking about
  + Attach screenshots to document any procedure you’re asking about
  + A list of actions that you’ve already taken to resolve the issue
  + A list of computers you’ve attempted to use to resolve the issue

If your email does not include all this information is will be sent back without reading.

# Policies

### Attendance

Attendance is vital to the successful completion of the course and is the dominant factor in your participation grade. You must attend the *majority* of the classtime to be considered present. If you cannot attend class make sure you inform me. If you notify me of your absence *ahead of time* you will be allowed to make up quizzes and participation.

### Withdrawal

I reserve the right to withdraw you from the course in any of the following cases:

* 10 days without contact
* 14 days without work submission
* Missing 5 class sessions (or 15%)

### Academic Integrity

I consider your academic integrity to be of the utmost importance. Students who plagiarize or cheat *may fail the class for a single infraction* and will be referred to the appropriate authority for discipline. If you have any questions or doubts as to what constitutes appropriate behavior ask me immediately.

### Mobile Devices

Unless you have a pregnant spouse or are an on-call physician, no. If you do have a pregnant spouse or are an on-call physician, let me know ahead of time.

### Computer Use

Computers are for LBCC coursework only. No tweeting your facebooks.

### Food and drink

Water bottles with a screw-tight cap only.

### Punctuality

Doors lock 5 minutes after class starts unless you have notified me that you will be late in advance of class.

### Assistance and Disabilities

If you would choose to identify yourself as having a disability and requiring accommodations, please notify your instructor as soon as possible. If you would like to be evaluated for accommodations you must contact the LBCC Disabled Students Programs and Services (DSPS) office either by phone or you can see them in person without an appointment.

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| **Campus** | **Phone** | **Office** | **Hours** |
| **LAC** | (562) 938-4558 | A-1134 | 8-6 Mon-Th and 8-12 on Fri |
| **PCC** | (562) 938-3921 | LL-206 | 8-6 Mon-Th and 8-12 on Fri |

# Disciplinary Action

*The instructor has the right to take disciplinary action if a student does not comply with the classroom policies or instructions. Appropriate penalties may include the following:*

* Verbal warning
* Dismissal from that day’s class session
* Referral to the Dean of Student Affairs for disciplinary action as warranted

# Student Learning

### Outcomes

At the end of the course, a student is expected be able to:

1. Examine general security concepts and communication security.
2. Analyze infrastructure security and cryptography basics.
3. Appraise operational/organizational security.

The Assessment questions will be changed by the end of the semester to reflect this as well as the official outline.

### Objectives

* Describe the challenges of securing information
* Define information security and explain why it is important
* Identify types of attackers that are common today
* Describe the five steps of defense
* Describe vulnerability assessment and explain why it is important
* List techniques of mitigating and deterring attacks
* Define cryptography
* Describe hash, symmetric, and asymmetric cryptographic algorithms

# Grading

### Grade Reporting

I will update grades bi-weekly on the course web site. Checking your grades there will indicate credit earned on each assignment and which assignments have not been turned in.

The cut-off for passing will be posted as an announcement every month; any students below the cut-off are required to have a meeting with me to discuss their success in the class.

### Late work

Work is not accepted after the posted due date without prior approval.

### Points

In this course your grades will measured in points. At this time I do not have a point total calculated, but the following is an approximation (subject to change):

### Final Grades

Final grades will be calculated along the following scale:

|  |  |
| --- | --- |
| Grade | Percentage |
| A | 100-90 |
| B | 89-80 |
| C | 79-70 |
| D | 69-60 |
| F | 59-0 |
|  |  |
| P | 100-70 |
| nP | 69-0 |

# Disclaimer

This syllabus is subject to change at the instructor’s discretion. It is a roadmap for the course that will be followed in spirit but in no way constitutes a guarantee of anything contained herein.