

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: CIS 192		Number of Credits: 4 Course credit policy (105)															
Course Full Title: Introduction to Networking Course Short Title: <i>(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)</i>																	
Faculty: Faculty of Professional Studies		Department (or program if no department): Computer Information Systems															
Calendar Description: Data network fundamentals including OSI reference model, TCP/IP protocol suite, design, physical topologies, media, infrastructure cabling standards, routers and switches. IP addressing designs are developed and implemented for small internetworks. Simple routing protocols are configured, analyzed, and tested.																	
Prerequisites (or NONE):		CIS 190, or eight credits of CIS and/or COMP.															
Corequisites (if applicable, or NONE):																	
Pre/corequisites (if applicable, or NONE):																	
Antirequisite Courses <i>(Cannot be taken for additional credit.)</i> Former course code/number: CIS 191/CIS 195 Cross-listed with: Dual-listed with: Equivalent course(s): <i>(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)</i>		Special Topics <i>(Double-click on boxes to select.)</i> This course is offered with different topics: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, topic will be recorded when offered.)</i>															
		Independent Study If offered as an Independent Study course, this course may be repeated for further credit: <i>(If yes, topic will be recorded.)</i> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit															
		Transfer Credit Transfer credit already exists: <i>(See bctransferguide.ca.)</i> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Submit outline for (re)articulation: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, fill in transfer credit form.)</i>															
Typical Structure of Instructional Hours <table border="1"> <tr> <td>Lecture/seminar hours</td> <td>45</td> </tr> <tr> <td>Tutorials/workshops</td> <td></td> </tr> <tr> <td>Laboratory hours (instructor led)</td> <td>15</td> </tr> <tr> <td>Experiential (field experience, practicum, internship, etc.)</td> <td></td> </tr> <tr> <td>Supervised online activities</td> <td></td> </tr> <tr> <td>Other contact hours:</td> <td></td> </tr> <tr> <td>Total hours</td> <td>60</td> </tr> </table>		Lecture/seminar hours	45	Tutorials/workshops		Laboratory hours (instructor led)	15	Experiential (field experience, practicum, internship, etc.)		Supervised online activities		Other contact hours:		Total hours	60	Grading System <input checked="" type="checkbox"/> Letter Grades <input type="checkbox"/> Credit/No Credit	
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Labs to be scheduled independent of lecture hours: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		Maximum enrolment (for information only): 35 Expected Frequency of Course Offerings: Every Fall and Winter <i>(Every semester, Fall only, annually, etc.)</i>															
Department / Program Head or Director: Edward Lo		Date approved: December 20, 2018															
Faculty Council approval		Date approved: March 15, 2019															
Dean/Associate VP: Tracy Ryder Glass		Date approved: March 15, 2019															
Campus-Wide Consultation (CWC)		Date of posting: June 21, 2019															
Undergraduate Education Committee (UEC) approval		Date of meeting: October 25, 2019															

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- Identify common network equipment including switches and routers
- Recommend network topologies based on best industry practices
- Follow infrastructure cabling standards
- Explain LAN technology, architecture and protocol.
- Discuss the OSI reference model and its layers
- Describe TCP/IP applications, transport and network protocols.
- Identify the main topics of concerns in a modern office environment.
- Design different types of IPv4 and IPv6 addressing schemes
- Configure simple static routes and dynamic routing protocols
- Construct a small, complete, workable and tested LAN

Prior Learning Assessment and Recognition (PLAR)

☒ Yes ☐ No, PLAR cannot be awarded for this course because

Typical Instructional Methods (*Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.*)
Lectures and labs.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (*If more space is required, download Supplemental Texts and Resource Materials form.*)

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. Cisco Networking Academy	Introduction to Networks v6 Companion Guide	<input checked="" type="checkbox"/>	Cisco Press	2017
2. Cisco Networking Academy	Introduction to Networks v6 Labs & Study Guide	<input checked="" type="checkbox"/>	Cisco Press	2017
3.				
4.				
5.				

Required Additional Supplies and Materials (*Software, hardware, tools, specialized clothing, etc.*)

Lab Book

Typical Evaluation Methods and Weighting

Final exam (Lab + Written):	40%	Assignments:	%	Field experience:	%	Portfolio:	%
Midterm exam:	20%	Project:	%	Practicum:	%	Class Participation:	10%
Quizzes/tests:	20%	Lab work:	10%	Shop work:	%	Total:	100%

Details (if necessary):**Typical Course Content and Topics**

The OSI Reference Model and the seven layers.

Data communications transmission methods

The concept of Encapsulation and de-encapsulation

Ethernet and Wifi LANs, and switches

IP addressing and address design including IPv4, IPv6, CIDR

Introduction to routing protocols and implementation

Topology and network addressing schemes

TCP/IP transport Protocols including TCP and UDP

TCP/IP application protocols including HTTP, FTP, Telnet and SMTP

TCP/IP network layer protocols including IP, ARP, ICMP

Routing protocols including static routing and dynamic routing with RIP