COMP-1035G-WAB - Networking Essentials

Course Syllabus

Course Description
Network systems interconnect computer related resources, services and users. Students gain fundamental knowledge of networking concepts and technologies. There is a strong emphasis on terminology, protocols, error detection/correction and network security. Students develop the necessary skills to plan and implement small networks across a range of applications.

Faculty Information
Eric Frohmann   Office: A155B
(Lecture)   Phone: 705-728-1968, ext. 1160 (office)
                                         Email: EFrohman@LakeheadU.ca
                                         Office Hours: arrange appointments via email

Course Learning Outcomes
Upon successful completion of this course, the student will have reliably demonstrated the ability to:
- explain and use data communications terminology
- describe the process of designing and building data communications networks
- evaluate data communication hardware and software products that are available through the public carriers and the private sector
- explain the concepts in the layered approach to the movement of data in a LAN
- use Cisco routers and switches for basic LAN requirements
- explain the different protocols necessary to route traffic through an Internetwork

Program information is on the *myCourselink (Desire to Learn (D2L)*) Lakehead University-Georgian College partnership course shell. Students are encouraged to review the program information.

Class Schedule
Lecture   Thursdays   3:00-5:50   B230 (Barrie Campus)

No classes on: February 20 - 24, 2023 (Study Week)
                      April 12 - 13, 2023 (Winter Exam Study Break)
                      April 7, 2023 (Good Friday)
                      April 10, 2023 (Easter Monday)

Exam Period runs April 14 - 24, 2023 (11 days), with Tuesday, April 25, 2023 as a contingency date. This course will have an assigned time period for an exam. Further details to be released.

Evaluation/List of Assessments

This course is composed of tests, assignments and module exams. Grading criteria will be provided with each assignment's instructions.

Tests – see Sequence of Topics for due dates
 	
• Module Exam Groups (25%)
    o 6 exams scheduled during course
• Final Skills Exam (25%)
    o Scheduled during Week 12
• Final Exam (25%)
    o Scheduled during exam period
    o Addresses entire course
	75%

Assignments - see Sequence of Topics for due dates • Assignments are weighted proportionally	25%

Course Resources

https://mycourselink.lakeheadu.ca/d2l/home

No textbook required. Supplementary curriculum will be provided via the Cisco Network Academy website: https://www.netacad.com

Sequence of Topics

This is a tentative schedule of topics and is subject to change. The faculty reserves the right to change/alter the schedule of topics from time to time.

Week / Date	Lesson	Delivery	Assessment
1 / Jan. 12	Outline, Syllabus, Expectations for Success / Introduction to Packet Tracer	In-Class	Assign#1
2 / Jan. 19	Module 1 – Networking Today / Module 2 - Basic Switch and End Device Config	In-Class	Assign#2
3 / Jan. 26	Module 3 - Protocols and Models	In-Class	Assign#3 / Exam Module 1 – 3
4 / Feb. 2	Module 4 - Physical Layer Module 5 – Number Systems	In-Class	Assign#4
5 / Feb. 9	Module 6 - Data Link Layer / Module 7 – Ethernet Switching	Online-Synchronous	Assign#5 / Exam Module 4 – 7
6 / Feb. 16	Module – 8 Network Layer / Module – 9 Address Resolution	Online-Synchronous	Assign#6
7 / Feb. 23	Module – 10 Basic Router Config	Online-Synchronous	Exam Module 8 – 10
Study Week: Feb. 28 – Mar. 3			
8 / Mar. 9	Module 11 – Ipv4 Addressing	In-Class	Assign#7
9 / Mar. 16	Module 12 - IPv6 Addressing / Module 13 - ICMP	In-Class	Assign#8 / Exam Module 11 – 13
10 / Mar. 23	Module 14 - Transport Layer / Module 15 - Application Layer	Online-Synchronous	Assign#9 / Exam Module 14 – 15
11 / Mar. 30	Module 16 - Network Security Fundamentals / Module 17 – Build A Small Network	Online-Synchronous	Assign#10 / Exam Module 16 - 17
12 / Apr. 6	Test Review / netacad Final Skills Assessment	In-Class	Final Skills Exam (netacad)
Winter Exam Study Break: Apr. 12 - 13			
13 / Exam Period Apr. 14-24	**Final Exam (Wk. 1-12): Apr. 20**	**In-Class**	**Final Exam IN-CLASS**

Final day of classes (Lakehead University Academic Schedule) is Tuesday, April 11, 2023.

Expectations for Successful Participation

1. Attend every class (and if you cannot, ask a learning partner to help you catch up).
2. Check myCourselink regularly for announcements, reading and work assignments and course updates.
3. Use the **Discussion** section in myCourseLink to ask questions regarding assignment issues
4. Ask questions if you need clarification (in class; via email; or by telephone). Email will receive a speedier response to questions than leaving a voicemail message. Please ensure that you "sign" your email with your name and course number.
5. Keep up with your course work. Read the designated material and complete the assigned homework so that you can come to class prepared to discuss the issues and concepts during class time.
6. Submit your assignments by the deadline! You are strongly advised not to wait until the last minute to submit your assignments in case you have computer problems.

Academic and Student Code of Conduct Policies

- Academic and student policies and procedures for those enrolled in the Lakehead-Georgian programs can be found on the Lakehead-Georgian Student Portal.
- All Lakehead-Georgian programs will follow the Lakehead Regulations as list in the Lakehead University Academic Calendar (http://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&loaduseredits=False). The University Regulations include but are not limited to Registration, Examinations, Reappraisals and Academic Appeals, Special Examinations, Academic Misconduct, Withdrawal, and Timely Feedback. Additional Faculty Regulations may also apply. Please review the Academic Calendar.
- The Lakehead University Student Code of Conduct - Academic Integrity (https://www.lakeheadu.ca/students/student-life/student-conduct) will apply to all Lakehead-Georgian students regardless of campus of study.
- The Lakehead University Student Code of Conduct - Appeals (https://www.lakeheadu.ca/students/student-life/student-conduct) will apply to all Lakehead-Georgian students regardless of campus of study.
- The Georgian College Student Code of Conduct (http://www.georgiancollege.ca/student-code-of-conduct/) will apply to the Lakehead-Georgian students studying at the Barrie campus. Additional campus policies of Sexual Violence Procedure and Protocol (https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/sexual-violence), Alcohol, Drugs and Tobacco (https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/alcohol-drugs-and-tobacco), and Information Technology Acceptable Use Procedure

(http://www.georgiancollege.ca/wp-content/uploads/2-117IT-acceptable-use.pdf)also apply.

- The Lakehead University Student Code of Conduct – Non-Academic (https://www.lakeheadu.ca/students/student-life/student-conduct) will apply to the Lakehead-Georgian students studying at the Orillia campus.

Plagiarism and Academic Dishonesty

A breach of Academic Integrity is a serious offence. The principle of Academic Integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should view the Student Code of Conduct -Academic Integrity (https://www.lakeheadu.ca/students/student-life/student-conduct) for a full description of academic offences, procedures when Academic Integrity breaches are suspected and sanctions for breaches of Academic Integrity.

Course Policies

The expectation is that students will complete all assignments and tests in this course. The following guidelines for tests and assignments shall apply:

- All classes marked as **In-Class** indicate that the class will be delivered on campus in the specified classroom
    - o Attendance during the in-class session is required
- All classes marked as **Online-Synchronous** indicate that the class will be delivered remotely during regularly scheduled class time
    - o Presentation will be recorded and posted on myCourseLink
    - o Attendance during the remote session is not mandatory
    - o Classroom on campus will NOT be supervised
- All assignment due dates will be specified in myCourseLink
    - o Weekly assignments are generally due prior to the start of the next class
    - o In-class assignments are generally due before the end of the current class
        - ▪ In-class assignments may be assigned during any class without advance notice
    - o Late assignments will receive a grade of zero (0)
- All tests must be completed during the specified class time
    - o Unless otherwise specified, tests will be scheduled during regular class time
    - o Late entry during tests and exams will be denied

- o Lakehead University/Georgian College policy will apply for all other issues regarding tests and exams
- Questions/Issues regarding assignments will be posted in the Discussion Board within myCourseLink
  - o Forums for each assignment will be provided
  - o Thread titles must identify the specific Exercise and Step being discussed
- E-mail communications with the instructor will receive a reply within two (2) business days (Monday through Friday)
  - o Please identify this course with all communications (**1035G-Thu**)

Whom to Contact

STUDENT ADVISING (NON-ACADEMIC)	
Becca Allan Advisor, Accessibility and Academic Success Services	Tel: 705-728-1968, Ext. 5373 Becca.Allan@GeorgianCollege.ca (Georgian, Barrie) Room A143L

COMPUTER SCIENCE		
Lakehead University Department Chair	Dr. Vijay Mago	Tel: 807-343-8310 vmago@lakeheadu.ca (Lakehead, Thunder Bay) Room AT 5016
Georgian College Program Coordinator	Ross Bigelow	Tel: 705-728-1968, Ext. 5325 ross.bigelow@georgiancollege.ca (Georgian, Barrie) Room N211A
Lakehead University Professor and Student Advisor	Dr. Ruizhong Wei	rwei@lakeheadu.ca (Lakehead, Orillia)
Georgian College Program Assistant	Cheryl McWilliam	Tel: 705-728-1968, Ext. 1255 cheryl.mcwilliam@georgiancollege.ca (Georgian, Barrie) Room D125
Georgian College Lab Technician	Computer Science Help Desk	Tel: 705-728-1968, Ext. 1173 cstech@georgiancollege.ca (Georgian, Barrie) Room A155

COOP CONTACTS		
Georgian College *Co-op Consultant* *(Student Services for Computer Science-Computer Programmer; Course only for Electrical Engineering)*	Beth Salt	Tel: 705-728-1968, Ext. 1642 beth.salt@georgiancollege.ca (Georgian, Barrie) Room B110V

Student Services and Supports

Student Advisors (https://georgiancollege.sharepoint.com/sites/student/Student-Services/StudentAdvisors/SitePages/Home.aspx)

- Help students build both academic and personal resilience so that they can flourish at Georgian and beyond
- Provide individual, group and web-based advising sessions
- Are housed within the academic areas
- To book an appointment with your advisor go to the **Student Portal (preferred)** or call **705-728-1968 Ext. 1307**

Library (http://library.georgiancollege.ca/main)
Customer Service
- Off campus access

Research help
- Help finding books, articles and credible sources.
- Using specialty databases.
- Creating a search strategy.

Academic Success (https://library.georgiancollege.ca/help/contact-academic-success)

Writing Centre (http://library.georgiancollege.ca/writing_centre)
- Improve your writing.
- Help with citing sources and laying out your paper.

Math Centre (http://library.georgiancollege.ca/math_centre)
- Make sense of math questions.
- Understand concepts and develop skills.

Tutors (http://library.georgiancollege.ca/tutoring)

- Further understand course content.

- Build your study practices.

Accessibility Services (https://www.georgiancollege.ca/student-life/student-services/accessibility-services/)

If you are a student experiencing a disability who may require academic accommodations and have not yet registered with Accessibility Services, please contact their office at 705-722-1523, email studentsuccess@georgiancollege.ca, or visit their offices in B110. You must be registered with Accessibility Services to access academic accommodations. Support for those students whose success at college may be affected by a disability include:
- Ongoing support from our Accessibility Advisors including arranging a confidential psychoeducational assessment where required
- Training in the use of specialized computer technology
- Classroom and test accommodations

Testing Services (http://www.georgiancollege.ca/student-life/student-services/testing/)

- Accommodated testing
- Missed/Makeup testing
- Proctoring services are also available for external and Ontario Learn exams

Counselling (http://www.georgiancollege.ca/student-life/student-services/counselling/)

- Free, confidential counselling is available to all students
- Walk in counselling is available on a daily basis Monday to Friday

Career Success (http://www.georgiancollege.ca/student-life/student-services/co-op-and-career-services/)

Career assessments and exploring options

- Job search workshops
- Labour market information
- Resume/cover letter help
- Interview practice
- Graduate employment information
  - Links to job postings and online resource

Campus Safety and Security Syllabus Addendum

Emergency Evacuation (https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/fire)

- Evacuate buildings when a fire alarm is activated or an official announcement is given. Review evacuation guidelines. (https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/fire)
- Students requiring assistance in emergency situations must inform their faculty during the first week of class.

- Familiarize yourself with all fire exit doors of classrooms and buildings you may occupy.
- Do not re-enter a building until instructions are given by the Fire Department or college personnel.

Lockdown (https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/lockdown)

- Lockdown is initiated when there is a potential or actual violent incident on campus that could result in a serious injury or threat to life.
- Students can download the new Safe@Georgian app to stay updated on Campus Safety and Security information including lockdown.
- Familiarize yourself with the College Lockdown procedure (https://www.georgiancollege.ca/wp-content/uploads/Lockdown.pdf)
- Lockdown tests occur each semester.

Resources:

- Get Out, Hide, Fight Lockdown Video (http://youtu.be/JA8cckMbVDk)
- Lockdown quick reference sheet (http://www.georgiancollege.ca/wp-content/uploads/COM-15-416_LockdownProcedure_Signage_FVR3_print.pdf)
- Lockdown Model – Get Out, Hide, Fight: Lockdown Tools and Tactics and FAQs.

Unscheduled Campus Closure (https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/campus-closures)

Resources:

- How to find out if your campus is closed (http://www.georgiancollege.ca/about-georgian/campus-safety-services/#how-to-find-out-if-your-campus-is-closed)
- Unscheduled Campus Closure Procedure (https://www.georgiancollege.ca/wp-content/uploads/2-102Unscheduled-college-closure-2018.02.10.pdf)

Timing of Closures/Notification:

Closure	Decision	Communication / Notification*	Notes
College has made the decision to close a campus or location <u>in the morning</u>:	6:00 a.m.	By 6:30 a.m.	If re-opening for noon or evening classes is being considered, this will be mentioned in the message
College closes a campus(s) in the morning and <u>expects to re-open by 12:00 noon</u>	9:30 a.m.	By 10:00 a.m.	Only affects classes beginning at 12 noon or later
Closure expected to continue <u>past 12:00 noon</u>	9:30 a.m.	By 10:00 a.m.	

College intends to <u>re-open</u> <u>for evening classes</u> which commence at 5 p.m. or later	2:30 p.m.	By 3:00 p.m.	
College intends to <u>NOT re-open for evening classes:</u>	2:30 p.m.	By 3:00 p.m.	

*Notification will be made via:

- Georgian social media (Facebook, Twitter)
- Safe@Georgian app
- Georgian website (homepage)
- Recorded message when you call into Barrie campus at 705-728-1968
- Student or employee portal
- Georgian email account
- Radio and television announcements through local and regional media

Note: We only announce the names of campuses that are closed. If your campus is not named in a closure, it's open.