R·I·T	Rochester Institute of Technology Golisano College of Computing and Information Sciences School of Information

NSSA 241-04 - Introduction to Routing and Switching
Spring Term (2225) Course Syllabus

REMINDER: The information in this syllabus is subject to expansion, change, or modification during the semester.

Instructor: Peter Willis Office: Remote – Zoom only Office Hours: By appointment via Calendly https://calendly.com/pjw7904/officehours	Lecture: Tuesdays 5:00pm – 6:50pm in GOL-2455 Lab: Thursdays 5:00pm - 6:50pm in GOL-2160 Email: pjw7904@rit.edu Course Info: https://mycourses.rit.edu/

Course Description:
This course is an introduction to wired network infrastructures, topologies, technologies, and the protocols required for effective end-to-end communication. Basic security concepts for local area network communication are also introduced. Networking layers 1, 2, and 3 are examined in-depth using the International Standards Organization's Open Systems Interconnection and TCP/IP models. Topics focus on the TCP/IP protocol suite, the Ethernet LAN protocol, switching, routed and routing protocols common in local area networks. The lab exercises will explore and demonstrate these various aspects of network communications protocols.

Course Prerequisites:
- CSEC-101 Fundamentals of Computing Security or
  CSEC-140 Introduction to Cyber Security for CSEC students
- CSCI-250 Concepts of Computer Systems or NACT-151 Windows Operating System or NSSA-102 Computer System Concepts for CIT and other students

Required Course Texts:
1. "Packet Guide to Core Network Protocols" by Bruce Hartpence, O'Reilly, ISBN 978-1-449-30653-3
2. "Packet Guide to Routing and Switching" by Bruce Hartpence, O'Reilly, ISBN 978-1-449-30655-7

These texts are also available to you (at not additional cost) via RIT's O'Reilly subscription, which can be accessed here: https://library.rit.edu/dbfinder/index.php?query=oreilly

Required Equipment:
A flash drive for lab data backups.

Important RIT Dates:

Last day of add/drop	January 24, 2023
Spring Break	March 12 – March 19, 2023
Last day to withdraw	April 7, 2023
Reading Day	May 2, 2023
Final Exam	Check SIS

Grades:

Component	Weight
Attendance & Participation	5%
Homework	15%
Module Reading Quizzes	9%
Lab Assignments (9 lab reports)	36%
Midterm Exam	15%
Final Experience (Exam/Project)	20%

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<60

Final course grades will be determined by matching the letter grade to the numerical weighted average of all graded assignments.

myCourses will be used for everything including:

- course content
- course schedule (weekly topics, activities, assignments, exams and readings)
- assignment submission (be sure to look for a confirmation email!)
- quizzes, exams, online discussions, or questions
- gradebook (please see the syllabus for grading details and weights)
- email/communication
    - *Professor- to-Student Communication:* You are responsible for checking your RIT email and the MyCourses conference for this course on a daily basis. If you forward email to another account you are responsible for making sure email forwarding continues to work throughout the term.
    - *Student-to-Professor Communication:* I will endeavor to respond to student queries made during the school week within a day. I will respond to any weekend queries on Monday. To separate email from spam, put "241-YOUR section number…" in the subject line. Email should be sent from your RIT account or from myCourses to avoid being deleted as spam.
- Should problems exist with any aspect of myCourses, contact the myCourses helpdesk at 585-475-4357(HELP), or email them at helpdesk@rit.edu and copy your instructor.

Class Attendance:

It is your responsibility to attend class and lab regularly in order to learn to course material. Absences do not relieve you of your responsibility for doing your work in a timely manner (RIT Policy D4.0).

Lecture Preparation:

Prior to the lecture each week, you are required to complete the required reading for that week's content.

Lecture Class:

We will meet once a week in-person (meeting location and time at the top of page 1) to discuss, review, and practice course content. Attendance is required.

Labs:

The weekly 2-hour lab component of the course is essential to achieving mastery of the course material.

The lab experiences will be completed by you using the equipment provided in the lab (meeting location and time at the top of page 1). You will be required to attend lab sessions so you can receive assistance while working on the lab assignment. Additional details will be provided as needed.

Lab Preparation:

Beyond attending lectures, certain labs will require additional preparation. You are required to read or watch that prep material prior to the start of the lab.

Lab Personnel Roles and Responsibilities:

1. Teaching Assistant/Lab Tutors – will have assigned hours when TAs and tutors are available to assist with the lab or course material. Their hours are posted on the iSchool Lab website and on the monitors outside the lab.
2. Lab Instructors – The course instructor will be available during your scheduled lab hours to assist you as you perform the lab experiments.

Lab Instructions and Reports:

Lab instructions will be posted below the drop box of each lab assignment in the Assignments tab of the myCourses course shell. It is your responsibility to read the instructions and questions prior to the lab class and to bring a copy of the lab instructions to lab class (paper or digital device). Each lab has associated report questions which must be completed on the report template and submitted by the specified due date. Lab reports:

- Must include your name on the first page where indicated
- Must be submitted as a .docx or .pdf using the **associated lab report template**. Other formats will not be graded and will result in a grade of zero.
- Must have questions accurately and completely answered. -- "yes" and "no" answers are not acceptable (unless specifically outlined as such) because they do not demonstrate your understanding of the material.
- Must insert fully explained answers to the questions posed in the lab report template immediately after the question in a **different color and/or bolded font**.
- Must contain only computer-generated diagrams using Visio or equivalent software. **Free-hand drawn diagrams will not be accepted and will be graded as a zero for that question.** Visio is available in all iSchool labs for the creation of diagrams. To be inserted, Visio diagrams they must first be converted to .jpeg format and pasted into the MS Word lab report. A popular (and free + web-based) alternative to Visio is LucidChart.
- **Must be done individually**. You may discuss the data you collect and the concepts explored in the assignment with class mates, but you must write the lab report individually.
- Must be submitted to the appropriate myCourses assignment drop box by the specified MyCourses deadline. No late or email submissions can be accepted.

Exams:

Exams and quizzes will be given via the MyCourses quizzing system. The final exam time is scheduled by the registrar's office and is posted on SIS. The final exam will be comprehensive in order to assess your understanding of the materials covered during the entire term.

Homeworks and Practice Exercises:

There will be homework assignments and practice exercises during the term to reinforce key concepts that cannot easily be practiced in the lab.

Projects:

Networking projects that involve network configuration and analysis **may** be included as part of an exam. Additional details will be presented closer to the exam period.

Late work:

If you encounter an emergency or difficulties understanding an assignment you may contact your instructor before the due date to request an extension. An extension may or may not be possible depending on the situation. No extensions are possible after the fact unless there is a medical emergency. Work not submitted by its due will be graded as a zero. Exams cannot be made up or rescheduled unless approved in advance, which includes utilizing any potential exam accommodations you have.

Extra Credit:

Each week throughout the term there is some combination of lab reports, homework assignments, practice exercises, and quizzes for you to complete. Given the amount of regularly scheduled work there is for you to complete, there will only be one bonus lab at the end of the semester. No other extra credit will be offered.

Notices of Accommodation (NOA):

Please contact me regarding your NOA during the first week on class so that we can figure out the best way to be sure you have what you need.

Challenging the final course grade:

School of Information policy states that a student has one term to challenge a course grade. After that, grades challenges will not be entertained.

RIT Academic Integrity Policy:

You are responsible for understanding the RIT policy on Academic Integrity. It is policy D08.0 and can be found in the RIT policy manual at http://www.rit.edu/~w-policy/sectionD/D8.html.

Academic Dishonesty:

"A breach of student academic integrity falls into three basic areas: cheating, duplicate submission and plagiarism." The definition of each of these can be found in policy D08.0 Section IV. The policy on dishonesty is simple**: Anyone breaching academic integrity will receive an "F" as a course grade, is removed from the section, and a letter detailing the incident is placed into his or her folder and sent to the Dean's Office for submission to the Office of Student Conduct.** This action will not be taken until the evidence is verified and will withstand an appeal.

Acceptable Use of RIT Computer and Network Resources:

Students are bound by the Acceptable Computer Use policy located at http://www.rit.edu/academicaffairs/policiesmanual/sectionC/C82.html

Finally...

Any or all of the previous information, *except the Academic Integrity and Acceptable Computer Use policies*, are subject to change or modification during the term.