



North Idaho College

Coeur d'Alene · Business · Computer Information Technology

Networking Essentials

CITE-152

Fall 2023 Section 100 3 Credits 08/21/2023 to 12/14/2023 Modified 08/21/2023

Contact Information

Instructor: Bob Quant

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Phone: 208.929.4036

Office: Hedlund Building Room 224 F

Office Hours: see schedule posted to the left of my office door

Meeting Times

This is a face to face course.

We will meet on Mondays and Wednesdays in HED 224 B from 10am to 10:50am.

Description

This course provides instruction in the fundamentals of networking and allows a student to develop a foundational understanding of network's high-level architecture and operational capacity. Topics explore various ways to interface with networks, including how to build, configure, test, name, and troubleshoot them. Students will learn how devices communicate on a network, and the services they can provide.

Materials

There are no required text books for this course.

CISCO NETWORKING ACADEMY LMS (e-Book)

To access the course: - NIC Canvas will not be used for this course

1. www.netcad.com
2. You will use your CISCO NETWORKING ACADEMY account.
3. You will have received an email from Cisco informing you of the creation of the course and instructions on how to access it and change your password if necessary.

Office Software

[Office 365 \(https://1drv.ms/x/s!AlcQsaSeOFpCgbNSJ1Rs_fWNrXAJsw\)](https://1drv.ms/x/s!AlcQsaSeOFpCgbNSJ1Rs_fWNrXAJsw)

Office 365 (including Word) is available for free for NIC students, staff and faculty. Here is a link to the information regarding how to download the full desktop version of Office to your computer:

[Microsoft Office Install.pdf](#)

<http://coursecontent.nic.edu/IT/KnowledgeBaseArticles/MicrosoftOfficeInstall.pdf>

The Office 365 Manual on the link above has step-by-step instructions regarding the free installation procedure.

If you have any trouble, contact the NIC Help Desk helpdesk@nic.edu

Outcomes

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

1. Explain the concept of network communication.
2. Explain the DHCP address assignment process.
3. Explain the principles of IPv4 and IPv6 address management.
4. Configure an integrated wireless router and wireless client to connect securely to the internet.
5. Explain how to use security best practices to mitigate attacks.
6. Configure basic network security.
7. Build a simple computer network.
8. Troubleshoot basic network connectivity issues.

Assessment

Professionalism:

Work **completed on time**, criteria for this is reading course material and using all curriculum modalities to aid in your understanding of the course concepts, efficiently manage course responsibilities which include turning in assignments and turning them in on time, having a **contingency plan** for equipment failure and home Internet outages, avoiding procrastinating so that when crisis occurs you are not at the 11 hour for

work to be turned in, maintaining effective communications with instructor and peers, demonstrating a growing aptitude of problem solving and troubleshooting skills, fostering an overall positive demeanor, demonstrating soft skills.

Soft Skills:

<http://www.techrepublic.com/blog/10things/10-highly-valued-soft-skills-for-it-pros/3353>

http://en.wikipedia.org/wiki/Soft_skills

Module Pretests:—5%

16 Weekly chapter quizzes and assignments will provide an opportunity for students to assess the knowledge attained through class readings.

CITE 152 Labs —25% Assessment to determine a student's ability to apply the course material.

CITE 152 Module Exams —20% - 6 module exams consisting of multiple-choice, drag and drop, and possible PT with MC questions covering designated curriculum modules.

CITE 152 Online Final Exam—25% - The Online Final Exam is a comprehensive assessment of the student's understanding of course material covered throughout the semester. The online Final Exam is a proctored exam. To pass the course you will need to earn a 75% or higher on the exam.

CITE 152 Skills-Based Final Exam—25% - The Skills-Based Final Exam is a comprehensive assessment of the student's ability to apply the content of course material covered throughout the semester. The Skills-Based Final Exam is a proctored exam.

Please Note: Late work is not accepted

Grade Assigned By Overall Course Percentage:

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Equivalency	92.00 – 100.00%	90.00 – 91.99%	88.00 – 89.99%	82.00 – 87.99%	80.00 – 81.99%	78.00 – 79.99%	72.00 – 77.99%	70.00 – 71.99%	68.00 – 69.99%	62.00 – 67.99%	60.00 – 61.99%	0 – 59.99

An overall course grade of C- (70%) is needed to pass the course and move to the next semester in the CITE program. You must also earn a 75% or higher to be marked as completed in Cisco Networking Academy course.

All activities for this class are submitted through Cisco Networking Academy (www.netacad.com) with **weekly deadlines**.

Please be aware:

- **ALL** assignments must be completed by the due date and time.
- Late work is not accepted.
- Make-up work may be accepted with prior permission.
- A minimum of 80% attendance is required

- Attendance is based on class **meeting attendance**.

* Course Policies

SYLLABUS CHANGES:

The instructor and institution reserve the right to make any changes to the syllabus. The changes will be communicated to students via announcement in the Learning Management System (LMS-Canvas/NetAcad) or in class.

Campus Diversity

North Idaho College is committed to its core theme of diversity, defined as a "learning environment that celebrates the uniqueness of all individuals and encourages cultural competency." To support this value, the Diversity Council was formed to develop diversity initiatives campus-wide. The council works to foster a campus climate that is safe, inclusive, and equitable, as well as to provide support for diverse populations. For more information, contact Brian Seguin (blseguin@nic.edu), Jo Lien (jmlien@nic.edu), or Graydon Stanley (gastanley@nic.edu).

Academic Integrity Information

"Violations of academic integrity may result in failure of an assignment, failure of the course, or more serious sanctions."

Incompletes

An incomplete is assigned only if the student has been in attendance and has done satisfactory work to within three weeks of the end of the semester (or proportional length of time for a course of less than a semester in length). Incompletes are issued only in cases of extenuating circumstances, such as severe illness or injury. Incompletes are not issued in cases in which the student is simply unable to complete his/her work within the specified semester or session. If a final grade of "I" is recorded, the instructor will indicate in writing to the Registrar what the student must do to make up the deficiency. The instructor will indicate in the written statement what permanent grade should be entered if the Incomplete is not removed by the deadline.

All incomplete grades must be removed within six weeks after the first class day of the following term, excluding the summer session. If the Incomplete is not removed by that date, the grade reverts to the grade indicated by the instructor's written statement authorizing the incomplete.

Course Expectations

1. Complete required preparation for class which includes reading course material before attending class and other assigned tasks.
2. Attend all classes.
3. Complete course assignments and submit by specified deadlines.
4. Take the Section Exams along with the final examination for the course.

Attendance

Students are expected to attend all classes:

- * Students who are absent because of illness or emergency should personally contact their instructor.
- * Illness and emergency related absences do not relieve students from the responsibility of making up any missed work.
- * It is the responsibility of the student to obtain information concerning missed work and to see that it is completed and turned in.

A minimum of 80% course attendance is required in order to receive course credit.

Course Requirements

1. Achieve a 70% or better on the online final exam to pass the course.
2. Each CITE course must be passed with a grade of C- or better for progression to the next CITE course and for retention in the entire CITE Program.

Acceptable Computer Use Policy

The computing hardware, software, and other technologies, utilized during this course are intended solely to support learning and the course objectives. Please do not modify, install, or remove any hardware, software, or modify the computers configuration in any way, unless directed to do so by your instructor.

Playing computer games is not allowed at any time in the classroom or lab.

Acceptable Internet Use Policy

Internet access, when available, is provided solely to support classroom learning and course objectives.

Acceptable Food and Drink Use Policy

Food is not allowed at the computer work area at any time. Drinks are allowed in non-spill containers and provided you pick up after yourself and keep your work area clean.

Schedule

**** Schedule is subject to change and students will be notified accordingly ****

CITE-152 Course Schedule - Fall 2023		Due by Sunday 11:59 PM
Reading	Assignments	Due by Sunday 11:59 PM
Module Group 1: Modules 1 - 4		

Week-1 (8-21)	Course Introduction: Module 1 - Communications in a Connected World	Module Group 1: Pretest Exam Quiz: Syllabus Quiz Sign Syllabus Agreement	Due 8-27
Week-2 (8-28)	Module 2 -Online Connections	1.5.4 - Lab - My Local Network 2.2.7 - Lab - Determine the IP Address Configuration of a Computer	Due 9-4
Week-3 (9-5)	<i>Labor Day</i> Module 3 -Explore Networks with Packet Tracer	3.3.3 - Packet Tracer - Deploy Devices 3.3.4 - Packet Tracer - Deploy and Cable Devices 3.4.3 - Packet Tracer - Configure End Devices	Due 9-10
Week-4 (9-11)	Module 4 - Build a Simple Network	3.5.1 - Packet Tracer - Create a Simple Network 4.5.8 - Lab - Trace a Route Module Group 1: Modules 1 - 4 Exam	Due 9-17
Module Group 2: Modules 5 - 8			

Week-5 (9-18)	Module 5 - Communication Principles Module 6 - Network Design and the Access Layer	Module Group 2: Pretest Exam 4.5.7 - Lab - Build a Simple Network 6.2.4 - Lab - View Wireless and Wired NIC Information	Due 9-24
Week-6 (9-25)	Module 7 - Routing Between Networks Module 8 - The Internet Protocol	7.1.4 - Lab - IPv4 Addresses and Network Communication 7.3.4 - Lab - Connect to a Wireless Router 8.1.2 - Packet Tracer - Connect to a Web Server TBD - Subnetting Labs Module Group 2: Modules 5 - 8 Exam	Due 10-1
Module Group 3: Modules 9 - 12			
Week-7 (10-2)	Module 9 - Dynamic Addressing with DHCP Module 10 - IPv4 and IPv6 Address Management	Module Group 3: Pretest Exam 9.2.5 - Packet Tracer - Configure DHCP on a Wireless Router 10.2.3 - Packet Tracer - Examine NAT on a Wireless Router 10.4.7 - Lab - Identify IPv6 Addresses	Due 10-8

Week-8 (10-9)	Module 11 - Transport Layer Services Module 12 - Application Layer Services	11.1.6 - Packet Tracer - The Client Interaction 12.4.4 - Packet Tracer - Use FTP Services 12.5.4 - Packet Tracer - Use Telnet and SSH Module Group 3: Modules 9 - 12 Group Exam	Due 10-15 NO Midterm
Module Group 4: Modules 13 - 16			
Week-9 (10-16)	Module 13 - Build a Home Network Module 14 - Connect to the Internet	Module Group 4: Pretest Exam 14.2.13 - Lab - Install Linux in a Virtual Machine and Explore the GUI	Due 10-22
Week-10 (10-23)	Module 15 - Security Considerations Module 16 - Configure Network and Device Security	15.2.3 - Lab - Social Engineering Module Group 4: Modules 13 - 16 Group Exam	Due 10-29
Module Group 5: Modules 17 - 20			
Week-11 (10-30)	Module 17 - Cisco Switches and Routers	Module Group 5: Pretest Exam 17.5.1 - Packet Tracer - Compare In-Band and Out-of-Band Management Access	Due 11-5

Week-12 (11-6)	Module 18 - The Cisco IOS Command Line	18.2.6 - Packet Tracer - Navigate the IOS 18.3.3 - Packet Tracer - Use Cisco IOS Show Commands	Due 11-12
Week-13 (11-13)	Module 19 - Build a Small Cisco Network	19.3.6 - Packet Tracer - Configure SSH 19.4.4 - Packet Tracer - Build a Switch and Router Network	Due 11-19
Week-14 (11-20)	Thanksgiving Holiday!	Begin Review for Final Exams	Due 11-26
Week-15 (11-27)	Module 20 - Troubleshoot Common Network Problems	20.3.12 - Lab - Troubleshoot Using Network Utilities 20.4.3 - Packet Tracer - Troubleshoot a Wireless Connection	Due 12-3
Week-16 (12-4)	Module 20 - Troubleshoot Common Network Problems	20.7.1 - Packet Tracer - Skills Integration Challenge Module Group 5: Modules 17 - 20 Group Exam	Due 12-10

Final 12/12- 12/14	Final Exam Final Skills Exam	

ADDITIONAL SCHEDULE NOTES:

Week 1 (8-21)	Fall Semester begins
Week-3 (9-6)	Labor Day. Campus closed 9/4 Drop for non-attendance of Fall Semester course sections. 9/5 Last day to receive 100 percent refund for Fall Semester 9/5 Fall Semester course drops with a grade of W begins 9/6
Week-8 (10-11)	Fall Semester midterm exams 10/9 - 10/13
Week-10 (10-25)	Advising Day in class
Week-11 (11-3)	Last day to withdraw from full-length Fall Semester courses or college. 11/3
Week-14 (11-22)	Thanksgiving Holiday. Campus closed. 11/22 – 11/24
Week-17 (12-13)	Last day of regular Fall Semester classes.
Week-17 (12-12)	Final exams. 12/11 and 12/13 (Fall Semester ends 12/14 for CITE courses)

Additional Items

Computer and Internet Access:

This course is online (Internet). To be successful with this course students are required to have readily available access to a reliable computer with dependable high speed Internet access.

Acceptable Computer Use Policy:

The computing hardware, software, and other tools, utilized during this course are intended solely to support learning and the course objectives. Do not modify, install, or remove any hardware, software, change the wallpaper, or add/change any other configurations, unless directed to do so by your instructor. *Computer gaming is not allowed in the lab at any time.*

Acceptable Internet Use Policy:

Internet access, when available, is provided solely to support classroom learning and the course objectives.

Flexibility for Syllabus Changes Statement

The instructor and institution reserve the right to make any changes to the syllabus when necessary and with notification. The instructor reserves the right to revise class calendar, modify content, and/or substitute assignments in response to institutional, weather, or class situations. Students will be held responsible for all changes." The changes will be communicated to students via announcement in the Learning Management System (LMS- Canvas) and/or during online class meetings.

Academic Integrity Information

"Violations of academic integrity may result in failure of an assignment, failure of the course, or more serious sanctions."

Incompletes

An incomplete is assigned only if the student has been in attendance and has done satisfactory work to within three weeks of the end of the semester (or proportional length of time for a course of less than a semester in length). Incompletes are issued only in cases of extenuating circumstances, such as severe illness or injury. Incompletes are not issued in cases in which the student is simply unable to complete his/her work within the specified semester or session. If a final grade of "I" is recorded, the instructor will indicate in writing to the Registrar what the student must do to make up the deficiency. The instructor will indicate in the written statement what permanent grade should be entered if the Incomplete is not removed by the deadline.

All incomplete grades must be removed within six weeks after the first class day of the following term, excluding the summer session. If the Incomplete is not removed by that date, the grade reverts to the grade indicated by the instructor's written statement authorizing the incomplete.

Student Responsibility

As outlined in the Student Code of Conduct, all North Idaho College students have both rights and responsibilities: Please access www.nic.edu/ferpa.StudentCode/index.htm for complete information that pertains to this subject. For a complete explanation of the North Idaho College Statement on [Academic Honesty & Academic Integrity](#) (<http://www.nic.edu/modules/images/websites/121/file/section5/5.06.01policy.pdf>) please refer to Policy 5.06 & Procedure 5.06.01:

Academic Integrity

Disruptive behavior in the class is not tolerated. To quote from the NIC "Student Code of Conduct," Article II, (found in the Student Handbook):

In order to carry out North Idaho College's Mission and to create a community of learners, the students, faculty, staff, and administrators must share common principles or values. These values – which include honesty, trust, fairness, respect, and responsibility – make up academic integrity.

Violations of academic integrity may result in failure of an assignment, failure of the course, or more serious sanctions.

Institutional Policies

Academic Dishonesty

Violations of academic integrity involve using or attempting to use any method that enables an individual to misrepresent the quality or integrity of his or her work at North Idaho College. These violations include the following:

- Cheating: using or attempting to use unauthorized materials, information, or study in any academic exercise.
- Fabrication: falsifying or inventing any information or citation in an academic exercise.
- Plagiarism: knowingly representing the words or ideas of another as one's own in an academic exercise.
- Violation of Intellectual Property: stealing, altering, or destroying the academic work of other members of the community or the educational resources, materials, or official documents of the college.
- Facilitating Academic Dishonesty: knowingly helping another to attempt to violate any provisions of this policy.

Violations of academic integrity may result in failure of an assignment, failure of the course, or more serious sanctions.

For a complete explanation of the North Idaho College Statement on Academic Honesty & Academic Integrity please refer to Policy 5.06 & Procedure 5.06.01 in the [NIC Policy Manual](http://www.nic.edu/policy/) (<http://www.nic.edu/policy/>).

Student Code of Conduct

The Student Code of Conduct applies to any student enrolled at North Idaho College. This includes, but is not limited to, face-to-face classes and Internet classes.

NIC shall maintain a Student Code of Conduct that specifically addresses prohibited behavior and assures due process for alleged violations. The Code of Conduct shall make clear possible sanctions for such actions. [Policy Manual \(https://www.nic.edu/policy/all/506/\)](https://www.nic.edu/policy/all/506/) (See 5.06)

Disability Support Services and the Americans with Disabilities Act (ADA)

In compliance with the Americans with Disabilities Act of 1990 and Section 504/508 of the Rehabilitation Act of 1973, North Idaho College provides accommodations to eligible students who experience barriers in the educational setting due to learning, emotional / mental, physical, visual, or hearing disabilities. Instructors will provide accommodations to students only after having received a Letter of Accommodation from Disability Support Services (DSS).

If a student would like to request accommodations, he or she must contact DSS so that a Letter of Accommodation may be sent to the instructor. Students requesting accommodations should contact DSS as early in the semester as possible to avoid delay of accommodation due to student load. Accommodations are not retroactive. DSS provides academic accommodations, access, assistance and services at NIC and at the North Idaho Consortium of Higher Education campus.

Contact:

[Disability Support Services Website \(https://www.nic.edu/dss/\)](https://www.nic.edu/dss/)

(208) 769-5947

Withdrawal

Please check the [NIC Calendar \(https://www.nic.edu/calendar/\)](https://www.nic.edu/calendar/) for the last day students can withdraw from courses.

Instructor-Initiated Withdrawal: An instructor has the right to withdraw a student for academic reasons. For more information, see the [Instructor-Initiated Withdrawal Procedure \(https://www.nic.edu/policy/all/50402/\)](https://www.nic.edu/policy/all/50402/).

Financial Aid Satisfactory Progress (SAP): Federal Regulations require North Idaho College to establish Satisfactory Academic Progress standards (SAP) for all financial aid recipients. The purpose of SAP standards are meant to ensure that students and academic institutions are held accountable to the taxpayer-funded federal student aid programs while students complete their academic goals in a timely manner. This process monitors student performance in all terms of enrollment, including terms in which the student did not receive financial aid. For more information, see the [Financial Aid Satisfactory Progress \(http://www.nic.edu/websites/default.aspx?dpt=29&pageId=3025\)](http://www.nic.edu/websites/default.aspx?dpt=29&pageId=3025) website.

For more information on withdrawals, see the [NIC Catalog \(https://www.nic.edu/catalog/\)](https://www.nic.edu/catalog/).

Title IX

North Idaho College seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment/misconduct/assault we encourage you to report this. If you report this to any college employee, (except for a licensed counselor or health care professional) she

or he must notify our college's Title IX coordinator about the basic facts of the incident (you may choose whether you or anyone involved is identified by name). For more information about your options at NIC, please go to: [NIC Title IX - Sexual Assault, Discrimination, and Harassment \(https://www.nic.edu/titleix/\)](https://www.nic.edu/titleix/), or call (208) 676-7156

Removal From Class For Non-Attendance

Attendance is based on your participation in this class. Failure to attend will result in your being removed from this class and may result in your financial aid award being reduced. You are responsible for confirming the accuracy of your attendance record.

Student Questions and Concerns

NIC instructors are a great resource for course related questions as well as general questions regarding your field of study and career. In addition, your instructor is your first point of contact if you have a question or concern about this course. Instructor office hours are posted here on the syllabus as well as in the campus directory. Division chairs are an additional resource you may contact if you are unable to resolve your question or concern with your instructor. The most current contact information for the division chair can be found here. [Office of Instruction - Division Chairs \(https://www.nic.edu/instruction/deans-and-division-chairs/\)](https://www.nic.edu/instruction/deans-and-division-chairs/).