



North Idaho College

Coeur d'Alene · Business · Computer Information Technology

Linux Essentials

CITE-155

Spring 2023 Section 100 3 Credits 01/09/2023 to 05/11/2023 Modified 01/13/2023

Contact Information

Professor: Robert "Bob" Quant

Office: Hedlund Building 224 F

Office Phone: (208) 929-4036

Email: robert.quant@nic.edu

Office Hours:

Monday through Thursday 1 PM to 4 PM

Additional office hours available by appointment

Meeting Times

Hedlund Building, Room 224 B, Monday and Wednesday

CITE 155-101 11 to 11:50 AM

Credit Hours: 3 credits lecture Hybrid format- for 17 weeks.

This is a face-to-face course.

Description

This course will provide students with the fundamental concepts of Linux operating systems. The course covers such topics as the Linux file system, commands, utilities, text editing, shell programming, and text processing utilities. Students will learn command line syntax and features of the popular Linux shells, including filename generation, redirection, pipes, and quoting mechanisms. The course is designed to help students prepare for professional careers in the information technology and cybersecurity fields. It also helps prepare individuals seeking to pass Linux-based industry certification.

Materials

Online Course Material: This course content is online through Cisco Networking Academy (NetAcad) and NDG. NIC Canvas will be used for this course assignments and grades.

To access the course materials:

1. go to the *Cisco Networking Academy* at the URL <https://www.netacad.com/> (<https://www.netacad.com/>).
2. using your existing CISCO NETWORKING ACADEMY account log into the *Cisco Networking Academy*.
3. The name for the Cisco Networking Academy course is **SP2023_CITE-155-100: Linux Essentials**.

Online Course Material: *Cisco Networking Academy*

<https://www.netacad.com/>

Authors and Publisher: NDG

Title: : NDG Linux I

Copyright: 2021

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](#)

[.\(http://coursecontent.nic.edu/IT/KnowledgeBaseArticles/MicrosoftOfficeInstall.pdf\)](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:

- Customize and utilize both GUI (Graphical User Interface) and CLI (Command Line Interface).
- Set general and advance permissions on files and directories.
- Use filename generation standards and best practices.
- Use pipes and redirection along with input output helper commands.
- Control processes locally and remotely via network.
- Customize basic and advanced networking and software management.
- Utilize command line search, utilities, file system management, and configuration modification.

- Identify basics of security and administration related topics such as user/group management, working on the command line, and permissions

* Course Policies

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.

Attendance

Students are expected to attend, in person, all classes as scheduled:

- * Students who are absent because of illness or emergency should personally contact their instructor as soon as practical.
- * 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. If attendance drops below 80% you will be "Dropped for Non-Attendance" from the course. Which will result in you being dropped from the CITE/NSA program and you will need to re-apply to re-enter the program the following Fall term.

Course Expectations

1. Complete required preparation for class which includes reading course material before attending class and other assigned tasks.

2. Attend all class meetings.
3. Complete course assignments and submit by specified deadlines.
4. Take the final examination for the course.
5. Practice in the campus learning lab to develop ability to perform technical skills taught in the course.
6. Cell phones will not be used during class and must be put on vibrate or powered down during class time.

Course Requirements

1. Each CITE course must be passed with a grade of C- or better for progression to the next CITE course.
2. Last days to withdraw:
 - January 25th for a full tuition refund.
 - March 24th to post a "W" on transcript.

Acceptable Computer Use Policy

The computing hardware, software, and other technologies, utilized in our programs 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.

Do not use any learned technologies, procedures, "hacks" or applications against ANY computing system, not authorized to do so by your current CITE instructor, while in this program.

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

Week	Start	Topics	Module Content & Readings	Assignments	Quizzes and Exams

1	Jan 9	Introduction to Linux	1	Syllabus Agreement	Ch 1 Exam
2	Jan 16	Operating Systems	2	Install VBox Install Ubuntu	Ch 2 Exam
3	Jan 23	Working in Linux	3		Ch 3 Exam
4	Jan 30	Open Source Software & Licensing	4		Ch 4 Exam
5	Feb 6	Command Line Skills	5	LAB 05	Ch 5 Exam
6	Feb 13	Getting Help	6	LAB 06	CH 6 Exam
7	Feb 20	Navigating the File System	7	LAB 07	Ch 7 Exam
8	Feb 27	Managing Files & Directories	8	LAB 08	Ch 8 Exam
9	Mar 6	Archiving and Compression	9	LAB 09	Ch 9 Exam
10	Mar 13	Midterm Exam & Working with Text	10	LAB 10	Midterm Exam CH 10 Exam
11	Mar 20	Basic Scripting	11	LAB 11	CH 11 Exam
	3/27 to 4/2	Spring Break			

12	Apr 3	Ch 12 Understanding Computer Hardware Ch 13 Where is Data Stored	12 & 13	LAB 12 LAB 13	Ch 12 Exam Ch 13 Exam
13	Apr 10	Network Configuration	14	LAB 14	Ch 14 Exam
14	Apr 17	System and User Security	15	LAB 15	Ch 15 Exam
15	Apr 24	Ch 16 Creating Users and Groups Ch 17 Ownership and Permissions	16 17	LAB 16 LAB 17	Ch 16 Exam Ch 17 Exam
16	May 1	Special Directories and Files	18	LAB 18	Ch 18 Exam Mod 10-18 Exam
17	May 8	Finals Week			End of Course Feedback Final Comprehensive Exam

All work is due by 11:59 pm each Sunday, unless otherwise stated by instructor.

Additional Items

Instructional Methodologies

This course teaches students through lectures, demonstrations, assignments and projects completed by students on both real and simulated networks. Students are expected to complete required reading assignments prior to each lecture. Students are expected to complete assigned homework during the week that follows that topic's lecture and to submit homework at the beginning of the following week's class.

The course curriculum is online in Netacad. The Netacad learning environment is an important part of the overall course experience. These online course materials include course text and related interactive media, Packet Tracer simulation activities, real equipment labs, remote access labs, and many different types of quizzes. All of these materials provide important feedback to help you assess your progress throughout the course.

E-doing is a design philosophy that applies the principle that people learn best by doing. The curriculum includes embedded, highly interactive e-doing activities to help stimulate learning, increase knowledge retention, and make the whole learning experience much richer – and that makes understanding the content much easier.

In a typical lesson, after learning about a topic for the first time, you will check your understanding with some interactive media items. If there are new commands to learn, you will practice them with the Syntax Checker before using the commands to configure or troubleshoot a network in Packet Tracer, the Networking Academy network simulation tool. You will also do practice activities on real equipment.

An important goal in education is to enrich you, the student, by expanding what you know and can do. It is important to realize, however, that the instructional materials and the instructor can only facilitate the process. **You must make the commitment yourself to learn new skills.**

Syllabus and Schedule Disclaimer

Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. The professor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes via email or the course Announcements. Please remember to check your NIC email and the course Announcements often.

Gateway Course Information:

This course is a designated Gateway course. Gateway courses are good early indicators of student readiness for further study. Successful completion of this course will provide a solid foundation for next steps in your studies so be sure to take every advantage of the available support and resources provided to you.

Academic Tutoring

FREE Academic Tutoring: Free, unlimited academic tutoring is available to all current NIC students. Stop by The Cardinal Learning Commons in LKH 118 to create an account or visit the Academic Tutoring website www.nic.edu/clc/tutoring to sign up for tutoring, view tutor schedules, set appointments, or to learn more about the tutoring program.

Division Policies

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: <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 \(http://www.nic.edu/websites/default.aspx?dpt=121&pageId=\)](http://www.nic.edu/websites/default.aspx?dpt=121&pageId=) (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](#)

(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 \(https://www.nic.edu/modules/images/websites/121/file/section5/5.04.02procedure.pdf\)](https://www.nic.edu/modules/images/websites/121/file/section5/5.04.02procedure.pdf).

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 Student Accounts \(http://www.nic.edu/websites/default.aspx?dpt=12&pageId=177\)](http://www.nic.edu/websites/default.aspx?dpt=12&pageId=177) website.

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: www.nic.edu/titleIX (<http://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.

SPECIAL STATEMENT ON COVID-19

Your safety, health, well-being, and that of our faculty and staff are our primary concerns. Everyone is expected to abide by college measures to mitigate the risk of spreading COVID. Circumstances can change rapidly, which may require a change in the delivery method of courses, for example a move from face-to-face to hybrid or online. Continue to visit the North Idaho College [COVID-19 webpage](#) for the latest information.

Students experiencing symptoms related to COVID-19 or that have tested positive for COVID-19 should not attend class and should call Rapid-Trace to self-report: (813) 699-3551. If you were in close contact with a COVID-19 positive case, please call Rapid-Trace to self-report. Rapid-Trace will confidentially notify NIC on your behalf and assist with information and resources for effective self-quarantine, if applicable.

Students in healthcare programs experiencing symptoms related to Covid-19 should not attend class and contact the Healthcare Programs Student COVID Response Team HPNstudentcovidreporting@nic.edu for further guidance.

Students enrolled in programs associated with healthcare may have different requirements for masking in the lab and clinical settings.

COVID-19 Absences

As with any absence from class, students will need to communicate with professors directly to establish a plan for keeping pace with course material and submission of assignments during a quarantine period.

COVID-19 Student Resources

This is a challenging time to meet your academic goals. Please use the [Student Resources](#) for information and resources on basic needs such as housing, food, financial aid, and medical and mental health.

Please also visit the [Access to Computers, Internet & E-Learning Support](#) webpage for information on the technology and resources you will need to be successful.

For general questions about technology, [contact the IT Help Desk](#) at helpdesk@nic.edu or 208.769.3280.

NIC leadership will continue to monitor CDC recommendations, engage in weekly discussions with Panhandle Health District, and track local indicators for changes in conditions that may lead to greater risk.