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Link to ULI 101 wiki page: <https://wiki.cdot.senecacollege.ca/wiki/ULI101>

Link to the ULI 101 weekly schedule wiki: <https://wiki.cdot.senecacollege.ca/wiki/ULI101_Weekly_Schedule>

# Course Addendum

Semester**: Summer 2023** Subject Code: **ULI101** Section**: ZDD**

Subject Title: **Introduction to Unix/Linux and the Internet**

Professor: Jithin Sebastian

E-mail: Jithin.sebastian@senecacollege.ca

Office Hours**: Available by email**

Approved by:

Kathy Dumanski, Chair, School of Software Design and Data Science

Please read this addendum to the general course outline carefully. It is your guide to the course requirements and activities.

Please refer to the course outline for learning outcomes, course description and text and materials.

Please also visit <https://students.senecacollege.ca/spaces/14/school-of-information-technology-administration-security/home> for key information on courses, graduation requirements, transfer credit, and more from the School of Information Technology Administration and Security.

**Assessment Summary**

|  |  |
| --- | --- |
| Tutorials | 30% |
| * Weekly Tutorial with due dates 11@2% | 22% |
| * Interactive Review tutorials | 8% |
| Quizzes (best 6 marks of 9 quizzes) | 30% |
| Tests (2 at 20% each) | 40% |

## Course Policies

To obtain a credit in this subject, a student must:

* Achieve an average of 50% or better for the two tests.
* Achieve a grade of 50% or better on the overall course.

**Academic Policies:**

<http://www.senecacollege.ca/about/policies/academics-and-student-services.html>

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**TENTATIVE WEEKLY SCHEDULE – SUMMER 2023**

# ULI101 Weekly Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Objectives and Tasks** | | **Reference** | **Evaluation** |
| **Week 1:**  (May 8-12) | **Objectives:**   * Course introduction * Course Resources/Evaluation/Policies * Unix/Linux Background * Open source philosophy * Linux GUI and the terminal * The Matrix server * Accessing your Matrix Account * Using your Matrix Account | | **Week 1 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-1.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-1.1.pptx) **Week 1 Lecture 2 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-1.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-1.2.pptx)  **Tutorials:**   * [Tutorial 1: Using Your Matrix Account](https://wiki.cdot.senecacollege.ca/wiki/Tutorial_1:_Using_Your_Matrix_Server_Account) * [Connect to Seneca's Student VPN](https://students.senecacollege.ca/spaces/186/it-services/wiki/view/1025/student-vpn) * [HOWTO: Access Your Matrix Account](https://wiki.cdot.senecacollege.ca/wiki/HOWTO:_Access_Your_Matrix_Account) (Platforms: Windows, Linux, Mac OSX) * [Using a Linux Desktop](https://wiki.cdot.senecacollege.ca/wiki/Using_a_Linux_Desktop)   **Links to Windows SSH clients** (Access Matrix from home):   * [SSH/SFTP](https://www.sfsu.edu/ftp/win/ssh/SSHSecureShellClient-3.2.9.exe) | [Putty](https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html) | [Bitvise SSH Client](https://www.bitvise.com/ssh-client-download) | [MovaXterm](https://mobaxterm.mobatek.net/download-home-edition.html) | **Tutorial 1: Worth 2% (Due Week 2: Friday @ midnight)**   * INVESTIGATION 1: Accessing Your Matrix Linux Account * INVESTIGATION 2: Using The Linux Shell |
| **Week 2:**  (May 15-19) | | **Objectives:**   * Unix file system * File types and file naming * Basic file system commands:  (pwd,cd,tree,ls,mkdir,rmdir,mv,cp,rm, man) * Text editing * Common file utilities:  (cat,more,less,touch,file,find) | **Week 2 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-2.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-2.1.pptx) **Week 2 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-2.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-2.2.pptx) **Tutorials:**   * [Tutorial 2: Unix / Linux File Management](https://wiki.cdot.senecacollege.ca/wiki/Tutorial2:_Unix_/_Linux_File_Management)   **Reference Sheets:**   * [Nano Reference Sheet (PDF)](http://www.cheat-sheets.org/saved-copy/Nano_Cheat_Sheet.pdf) * [Vi Reference Sheet (PDF)](https://www.smashingmagazine.com/2010/05/vi-editor-linux-terminal-cheat-sheet-pdf/)   **YouTube Videos:**   * [Linux File System, Basic Navigation:  (ls, cd, pwd, tree),Absolute and Relative Paths](https://www.youtube.com/watch?v=3wZmZOKLllk&list=PLU1b1f-2Oe90TuYfifnWulINjMv_Wr16N&index=2) * [Basic File Actions  (touch, ls -l, cp, cp -r, mv, mkdir, mkdir -p, rm, rmdir, rm -r), Relative-to-home Paths](https://www.youtube.com/watch?v=UfAFAipked0&list=PLU1b1f-2Oe90TuYfifnWulINjMv_Wr16N&index=3) * [Reading/Writing to Files:  (cat, more, less, man, date, diff, diff -y, find, wc)](https://www.youtube.com/watch?v=ocU34PcYn2U&list=PLU1b1f-2Oe90TuYfifnWulINjMv_Wr16N&index=4) * [Introduction to Vi](https://youtu.be/munrDI_gm4w) | **Tutorial 1 Due Friday @ Midnight**  **Tutorial 2: Worth 2% (Due Week 3: Friday @ midnight)**   * INVESTIGATION 1: Creating & Managing Directories * INVESTIGATION 2: Managing Text Files |
| **Week 3:**  (May 22-26) | **Objectives:**   * Absolute and relative pathnames * File name expansion * Shell basics * Command execution in detail * Command History * Recalling and editing previous commands * Quoting | | **Week 3 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-3.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-3.1.pptx) **Week 3 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-3.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-3.2.pptx) **Tutorials:**   * [Tutorial 3: Advanced File Management / Quoting Special Characters](https://wiki.cdot.senecacollege.ca/wiki/Tutorial3:_Advanced_File_Management_/_Quoting_Special_Characters)   **YouTube Videos:**   * [Filename Expansions](https://youtu.be/5FQnehwzwSM) * [Relative, Absolute, and Relative-to-Home Filepaths](https://youtu.be/3quKLqUFGHo) * [Quoting Special Characters](https://www.youtube.com/watch?v=mzgfE6-ZtUY) | **Tutorial 2 Due Friday @ Midnight**  **Tutorial 3: Worth 2% (Due Week 4: Friday @ midnight)**   * INVESTIGATION 1: Absolute / Relative / Relative-To-Home Pathnames * INVESTIGATION 2: Filename Expansion * INVESTIGATION 3: Quoting Special Characters |
| **Week 4:**  (May 29 – Jun 2) | **Objectives:**   * Data Representation:  (Binary, octal, decimal,  and hexadecimal number systems) * Number conversions * Unix file permissions | | **Week 4 Lecture 1 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-4.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-4.1.pptx) **Week 4 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-4.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-4.2.pptx) **Tutorials:**   * [Tutorial 4: Data Representation / Numbering Conversion / File Permissions](https://wiki.cdot.senecacollege.ca/wiki/Tutorial4:_Data_Representation_/_Numbering_Conversion_/_File_Permissions)   **YouTube Videos:**   * [Permissions, chmod, umask](https://youtu.be/MzQ5kcffvpc) | **Tutorial 3 Due Friday @ Midnight**  **Tutorial 4: Worth 2% (Due Week 5: Friday @ midnight)**   * INVESTIGATION 1: Numbering Conversions * INVESTIGATION 2: File Permissions |
| **Week 5:**  (Jun 5-9) | **Objectives:**   * stdin, stdout, stderr * Simple filter commands:  (head,tail,cut,sort,tr,wc) * grep utility Redirection and piping * /dev/null file | | **Week 5 Lecture 1 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-5.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-5.1.pptx) **Week 5 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-5.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-5.2.pptx) **Tutorials:**   * [Tutorial 5: Redirection](https://wiki.cdot.senecacollege.ca/wiki/Tutorial5:_Redirection)   **YouTube Videos:**   * [Reading/Writing to Files  (stdin, stdout, stderr, >, >>, 2>)](https://www.youtube.com/watch?v=ocU34PcYn2U&list=PLU1b1f-2Oe90TuYfifnWulINjMv_Wr16N&index=4) | **Tutorial 4 Due Friday @ Midnight**  **Tutorial 5: Worth 2% (Due Week 6: Friday @ midnight)**   * INVESTIGATION 1: Basics Of Redirections * INVESTIGATION 2: Redirection Using Pipeline Commands * INVESTIGATION 3: Issuing Multiple Unix/Linux Commands |
| **Week 6:**  (Jun 12 -16) | **Objectives:**   * scp and sftp utilities * Sending email from command line * Command History | | **Week 6 Lecture 1 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-6.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-6.1.pptx) **Tutorials:**   * [Tutorial 6: File Transfer / Sending Email](https://wiki.cdot.senecacollege.ca/wiki/Tutorial6:_File_Transfer_/_Sending_Email_Messages)   **YouTube Videos:**   * [SSH, SCP and Other Network Tools](https://youtu.be/-Le-7U8tEOA) | **Tutorial 5 Due Friday @ Midnight**  **Tutorial 6: Worth 2% (Due Week 8: Friday @ midnight)**   * INVESTIGATION 1: File Transfer (Secure Copy) * INVESTIGATION 2: File Transfer (Secure FTP) * INVESTIGATION 3: File Transfer (Email) |
| **Week 7:**  (Jun 19-23) | **Objectives:**   * Course Review   **Evaluation:**   * Midterm Test (20%) | |  | **Midterm Test (20%)** |
| **Study Week:**  (Jun 26 – 30) | **Objectives:**   * No scheduled classes | |  | |
| **Week 8:**  (Jul 3-7) | **Objectives:**   * Filesystem links * Hard and symbolic links * Process management * Aliases * Command History | | **Week 8 Lecture 1 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-8.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-8.1.pptx) **Week 8 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-8.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-8.2.pptx) **Tutorials:**   * [Tutorial 8: Linking Files / Managing Process / Aliases and Command History](https://wiki.cdot.senecacollege.ca/wiki/Tutorial8:_Links_/_Process_Management)   **YouTube Videos:**   * [Changing Resolution in Knoppix](https://www.youtube.com/watch?v=aNKMOyRYWfM&feature=youtu.be) * [Processes and Jobs](https://youtu.be/q93POTgH-aQ) * [Aliases](https://youtu.be/PVnELIbilrg) * [Links](https://youtu.be/tZ94-qH9unM) | **Tutorial 6 Due Friday @ Midnight**  **Tutorial 8: Worth 2% (Due Week 9: Friday @ midnight)**   * INVESTIGATION 1: Linking Files * INVESTIGATION 2: Managing Processes * INVESTIGATION 3: Aliases / Command History |
| **Week 9:**  (Jul 10-14) | **Objectives:**  Regular expressions basics:   * Literal matching * Character classes * . wildcard * \* repetition symbol * Anchoring | | **Week 9 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-9.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-9.1.pptx) **Week 9 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-9.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-9.2.pptx)  **Tutorials:**   * [Tutorial9: Regular Expressions](https://wiki.cdot.senecacollege.ca/wiki/Tutorial9:_Regular_Expressions) * [Linux Practice - Regular Expressions](https://matrix.senecacollege.ca/~chris.johnson/ULI101/uli101_command_practice_9.docx)   **YouTube Videos:**   * [Grep](https://youtu.be/-2pwLHcvCsU) * [Regex](https://youtu.be/5uRM8bh0ipU) * [Using df/du](https://youtu.be/fJmilSaB5Fs) | **Tutorial 8 Due Friday @ Midnight**  **Tutorial 9: Worth 2% (Due Week 10: Friday @ midnight)**   * INVESTIGATION 1: Simple & Complex Regular Expressions * INVESTIGATION 2: Extended Regular Expressions * INVESTIGATION 3: Other Commands Using Regular Expressions |
| **Week 10:**  (Jul 17 -21) | **Objectives:**  Text Manipulation:   * Using the sed Utility * Using the awk Utility | | **Week 10 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-10.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-10.1.pptx) **Week 10 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-10.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-10.2.pptx) **Tutorials:**   * [Tutorial10: Sed and Awk Utilities](https://wiki.cdot.senecacollege.ca/wiki/Tutorial10:_Sed_%26_Awk_Utilities)   **YouTube Videos:**   * [Sed](https://youtu.be/npU6S61AIko) * [Awk](https://youtu.be/OV3XzjDYgJo) | **Tutorial 9 Due Friday @ Midnight**  **Tutorial 10: Worth 2% (Due Week 11: Friday @ midnight)**   * INVESTIGATION 1: Using The SED Utility * INVESTIGATION 2: Using The AWK Utility |
| **Week 11:**  (Jul 24-28) | **Objectives:**  Introduction to Shell Scripting:   * Introduction to Shell Scripting * echo and read commands * Shell Variables * Positional Parameters * Command Substitution /  Math Operations * test statements * if / elif-else statements * for loop statements | | **Week 11 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-11.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-11.1.pptx) **Week 11 Lecture 2 Notes:**  [PDF](https://github.com/ULI101/slides/raw/main/ULI101-11.2.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-11.2.pptx) **Tutorials:**   * [Tutorial11: Shell Scripting (Part 1)](https://wiki.cdot.senecacollege.ca/wiki/Tutorial11:_Shell_Scripting_-_Part_1)   **YouTube Videos:**   * [Bash Shell Scripting I](https://www.youtube.com/watch?v=kxEP-KUhOSg&list=PLU1b1f-2Oe90TuYfifnWulINjMv_Wr16N&index=5) | **Tutorial 10 Due Friday @ Midnight**  **Tutorial 11: Worth 2% (Due Week 12: Friday @ midnight)**   * INVESTIGATION 1: Creating A Shell Script * INVESTIGATION 2: She-Bang Line / Variable / Parameters * INVESTIGATION 3: Command Substitution / Math Operations * INVESTIGATION 4: Control Flow Statements |
| **Week 12:**  (Jul 31 – Aug 4) | **Objectives:**  Additional Shell Scripting:   * if - elif - else statement * for loop revisited * while loop statement * Error-Checking with Loops * exit and break Statements * export Command * Start-up Files * Further Study | | **Week 12 Lecture 1 Notes:** [PDF](https://github.com/ULI101/slides/raw/main/ULI101-12.1.pdf) | [PPTX](https://github.com/ULI101/slides/raw/main/ULI101-12.1.pptx) **Tutorials:**   * [Tutorial12: Shell Scripting - Part 2](https://wiki.cdot.senecacollege.ca/wiki/Tutorial12:_Shell_Scripting_-_Part_2)   **YouTube Videos:**   * [Bash Shell Scripting II](https://www.youtube.com/watch?v=XVTwbINXnk4&list=PLU1b1f-2Oe90TuYfifnWulINjMv_Wr16N&index=6) | **Tutorial 11 Due Friday @ Midnight**  **Tutorial 12: Worth 2% (Due Week 13: Friday @ midnight)**   * INVESTIGATION 1: Additional Logic Statements * INVESTIGATION 2: Additional Looping Statements * INVESTIGATION 3: exit AND break Statements * INVESTIGATION 4: Using Start-Up Files |
| **Week 13:**  (Aug 7 -11) | **Objectives:**   * Interest Topic * Take up Review Questions | | **Interest Topic:**   * [Interest Topic: Graphical Linux via a Virtual Machine (VM)](https://wiki.cdot.senecacollege.ca/wiki/Interest_Topic:_Graphical_Linux_via_a_Virtual_Machine_(VM))   **Review Questions:**   * [Sample ULI101 Review Questions](https://github.com/ULI101/labs/raw/main/uli101_review_sample_questions.docx) | * **Tutorial 12 Due Friday @ Midnight** * **Review Tutorial Due Friday @ Midnight**   ' |
| **Week 14:**  (Aug 14-18) | **Evaluation Week**:   * Final Test (20%) | |  | **Final Test (20%)** |

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