**(Prerequisite: CIS 106 or CIS 109 or CIS 110)**

**COURSE DESCRIPTION**

Covers the development and execution of structured shell programs including scripts, menus, I/O redirection, pipes, variables, and other UNIX and Windows commands. Operating systems administration techniques also are covered including electronic mail, editors, online help, and file and directory techniques.

**INSTRUCTIONAL MATERIALS**

**Required Resources**

uCertify. (2015). CompTIA Linux+ Powered by LPI Exam 1 & 2. uCertify.

**Note:** Students must purchase materials from the Strayer Bookstore: <http://www.strayerbookstore.com/>. Review the Notes section of the Course Guide for uCertify access and registration information.

**COURSE LEARNING OUTCOMES**

1. Examine the UNIX / Linux shell command line, and command-line utilities.
2. Manage and administer UNIX / Linux software.
3. List the UNIX file and directory permissions and explain how to modify each.
4. Examine the UNIX / Linux file system commands and structure.
5. Identify and create UNIX executable shell scripts.
6. Describe the manner in which hardware (hard disks, printers and network) is identified and managed by UNIX.
7. Describe basic Linux networking configurations.
8. Identify and create simple regular expressions.
9. Use technology and information resources to research issues in operating systems.
10. Write clearly and concisely about UNIX / Linux topics using proper writing mechanics and technical style conventions.

**WEEKLY COURSE SCHEDULE**

The standard requirement for a 4.5 credit hour course is for students to spend 13.5 hours in weekly work. This includes preparation and activities regardless of delivery mode.

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| **Week** | **Preparation, Activities, and Supplemental** |
| 1 | **Preparation**   * Reading(s)   + Lesson 2: Exploring Linux Command-Line Tools * uCertify Video(s)   + Using streams redirection and pipes (6 min 45 s)   + Using regular expressions (7 min 36 s)   **Activities**   * uCertify Assessment 1: Pre-Assessment (25 points) * uCertify Assessment 2: Quiz – Lesson 2 (25 points) * uCertify Lab 1 (40 points) * Discussion (20 points)   **Note:** uCertify submission instructions are located in the Student Center of your Blackboard online course. **Note:** You are encouraged to complete the Week 1 uCertify Assessments during the first week of class. However, you may submit the completion of the uCertify Assessments up to the end of Week 2. This extension is designed to allow for any issues you may have purchasing, registering for, and / or accessing required materials during the first week of class.  **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 2: Exploring Linux Command-Line Tools * Comprehensive Certification Discussion, located in the online course shell |
| 2 | **Preparation**   * Reading(s)   + Lesson 3: Managing Software * uCertify Video(s)   + Converting between package formats (15 min 25 s)   + Managing processes (6 min 31 s)   **Activities**   * uCertify Lab 2 (40 points) * uCertify Assessment 3: Quiz – Lesson 3 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 3: Managing Software * Comprehensive Certification Discussion, located in the online course shell |
| 3 | **Preparation**   * Reading(s)   + Lesson 4: Configuring Hardware * uCertify Video(s)   + Designing a hard disk layout (18 min 04 s)   + Mounting and unmounting file systems (15 min 30 s)   **Activities**   * uCertify Lab 3 (40 points) * uCertify Assessment 4: Quiz – Lesson 4 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 4: Configuring Hardware * Comprehensive Certification Discussion, located in the online course shell |
| 4 | **Preparation**   * Reading(s)   + Lesson 5: Managing Files * uCertify Video(s)   + Controlling Access to Files (15 min 37 s)   + Locating Files (6 min 53 s)   **Activities**   * uCertify Lab 4 (40 points) * uCertify Assessment 5: Quiz – Lesson 5 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 5: Managing Files * Comprehensive Certification Discussion, located in the online course shell |
| 5 | **Preparation**   * Reading(s)   + Lesson 6: Booting Linux and Editing Files * uCertify Video(s)   + Understanding the boot process (10 min 05 s)   + Editing files with vi (13 min 56 s)   **Activities**   * uCertify Lab 5 (40 points) * uCertify Assessment 6: Quiz – Lesson 6 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 6: Booting Linux and Editing Files * Comprehensive Certification Discussion, located in the online course shell |
| 6 | **Preparation**   * Reading(s)   + Lesson 8: Configuring the X Window System, Localization, and Printing * Video(s)   + X-accessibility (18 min 58 s)   + Configuring printing (8 min 23 s)   **Activities**   * Assignment 1: Linux GUI (50 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 8: Configuring the X Window System, Localization, and Printing * Comprehensive Certification Discussion, located in the online course shell |
| 7 | **Preparation**   * Reading(s)   + Lesson 9: Administering the System * Video(s)   + Managing users and groups (9 min 50 s)   + Running jobs in the future (10 min 35 s)   **Activities**   * uCertify Lab 6 (40 points) * uCertify Lab 7 (40 points) * uCertify Assessment 7: Quiz – Lesson 8 (25 points) * uCertify Assessment 8: Quiz – Lesson 9 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 9: Administering the System * Comprehensive Certification Discussion, located in the online course shell |
| 8 | **Preparation**   * Reading(s)   + Lesson 10: Configuring Basic Networking * Video(s)   + Diagnosing network connections (15 min 10 s)   **Activities**   * uCertify Lab 8 (40 points) * uCertify Assessment 9: Quiz – Lesson 10 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 10: Configuring Basic Networking * Comprehensive Certification Discussion, located in the online course shell |
| 9 | **Preparation**   * Reading(s)   + Lesson 11: Writing Scripts, Configuring Email, and Using Databases     - Topics: managing the shell environment; writing scripts; managing email; and managing data with SQL. * Video(s)   + Writing scripts (18 min 8 s)   + Managing data with SQL (9 min 18 s)   **Activities**   * Assignment 2: Composing and Using Regular Expressions (50 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 11: Writing Scripts, Configuring Email, and Using Databases * Comprehensive Certification Discussion, located in the online course shell |
| 10 | **Preparation**   * Reading(s)   + Lesson 12: Securing Your System * Video(s)   + Using GPG (19 min 35 s)   **Activities**   * uCertify Lab 9 (40 points) * uCertify Lab 10 (40 points) * uCertify Assessment 10: Quiz – Lesson 11 (25 points) * uCertify Assessment 11: Quiz – Lesson 12 (25 points) * Discussion (20 points)   **Optional Certification Readiness *(optional and not graded)***   * uCertify flashcards and exercise(s)   + Lesson 12: Securing Your System * Comprehensive Certification Discussion, located in the online course shell |
| 11 | **Preparation**   * Reading(s): None   **Activities**   * uCertify Assessment 12: Post-Assessment (25 points) * Discussion (0 points)   **Optional Certification Readiness *(optional and not graded)***   * Comprehensive Certification Discussion, located in the online course shell |

**GRADING SCALE – UNDERGRADUATE**

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| **Assignment** | **Total Points** | **% of**  **Grade** |
| uCertify Assessments (12 assessments worth 25 points apiece) | 300 | 30% |
| uCertify Labs (10 labs worth 40 points apiece) | 400 | 40% |
| Assignment 1: Linux GUI | 50 | 5% |
| Assignment 2: Composing and Using Regular Expressions | 50 | 5% |
| Participation (10 discussions worth 20 points apiece)  **Note:** Week 11 discussion is not graded. | 200 | 20% |
| Totals | 1,000 | 100% |

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| **Points** | **Percentage** | **Grade** |
| 900 – 1,000 | 90% – 100% | A |
| 800 – 899 | 80% – 89% | B |
| 700 – 799 | 70% – 79% | C |
| 600 – 699 | 60% – 69% | D |
| Below 600 | Below 60% | F |

**Writing Assignments**

The objective of the School of Information Systems and Technology’s writing assignments is to promote attitudes and skills that will improve a student’s ability to communicate in writing, develop research skills and documentation techniques, and encourage critical analysis of data and conclusions specific to the course learning outcomes in the information systems and technology domain.

**uCertify Assessments**

12 uCertify assessments worth 25 points apiece

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| **Week Due** | **Title** |
| 1 | uCertify Assessment 1: Pre-Assessment (30 items)  uCertify Assessment 2: Quiz – Lesson 2 (21 items)  **Note**: You are encouraged to complete the Week 1 uCertify Assessments during the first week of class. However, you may submit the completion of the Week 1 uCertify Assessments up to the end of Week 2. This extension is designed to allow for any issues you may have purchasing, registering for, and / or accessing required materials during the first week of class. |
| 2 | uCertify Assessment 3: Quiz – Lesson 3 (30 items) |
| 3 | uCertify Assessment 4: Quiz – Lesson 4 (20 items) |
| 4 | uCertify Assessment 5: Quiz – Lesson 5 (23 items) |
| 5 | uCertify Assessment 6: Quiz – Lesson 6 (13 items) |
| 6 | None |
| 7 | uCertify Assessment 7: Quiz – Lesson 8 (19 items)  uCertify Assessment 8: Quiz – Lesson 9 (25 items) |
| 8 | uCertify Assessment 9: Quiz – Lesson 10 (10 items) |
| 9 | None |
| 10 | uCertify Assessment 10: Quiz – Lesson 11 (12 items)  uCertify Assessment 11: Quiz – Lesson 12 (7 items) |
| 11 | uCertify Assessment 12: Post-Assessment (60 items) |

**Note**: Students are allotted 90 minutes to complete each uCertify Assessment.

For help on utilizing uCertify, please review the walk-through video located in the online course shell.

Grading of uCertify assessments is based on student participation and is not scored on the objective performance of the actual test results. Review the **setup requirements**, **submission requirements,** and **grading rubric** below for additional grading details.

uCertify Setup Requirements

* uCertify Assessments
  + You must use the preset test options for the graded submission of the pre-assessment, quizzes, and post-assessment.   
    **Note:** You are encouraged to submit the results of your first attempt at completing the assessment(s).

uCertify Submission Requirements

1. Complete the assessment; your results will be displayed.
2. Select “Share your result” from the results page menu items.
3. Copy the URL and paste it into the assignment submission area in the Blackboard online course shell.
4. Summarize, in two to three (2-3) sentences, both your strengths and weaknesses with respect to the topics you covered in the assessment.

**Note:** The written summary may be submitted in the assignment submission area along with the results URL, or it may be submitted as a separate attachment.

1. Once you have successfully pasted the results URL and included the assessment summary, you may submit your assignment for grading.

**Note:** Failure to submit the results URL into the assignment submission area within the Blackboard online shell will result in 0 points for the assignment. **Evidence of purposely skipped answers, incomplete answers, or limited effort is at the instructor’s discretion and may result in partial or incomplete credit for the assignment.**

**Faculty Note:** The intent of offering half credit is to encourage student effort in the assessments. Students who attempt to bypass the purpose of the assignment with unusually limited time spent on an assessment, or little effort [many skipped questions] is apparent, it is at the instructor’s discretion to limit a student’s score.

Grading for uCertify assessments will be based on the following rubric.

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| **Points: 25** | **uCertify Assessments** | | |
| **Criteria** | **Unacceptable**  **Below 60% F** | **Meets Minimum Expectations - Fair**  **60-79% D - C** | **Proficient** - **Exemplary**  **80-100% B - A** |
| 1. Complete and submit the results of the uCertify assessment in the Blackboard assignment submission link. **Note:** Students must submit the results URL for full credit.  Weight: 80% | Did not submit the participation results in the Blackboard assignment submission link or did not complete the uCertify assessment. | Submitted the participation results in the Blackboard assignment submission link but lacks strong evidence of participation when completing the uCertify assessment. | Submitted the participation results in the Blackboard assignment submission link with strong evidence of participation when completing the uCertify assessment. |
| 2. Summarize, in two to three (2-3) sentences, both your strengths and weaknesses with respect to the topics you covered in the uCertify assessment.  Weight: 20% | Did not submit or incompletely summarized, in two to three (2-3) sentences, both your strengths and weaknesses with respect to the topics you covered in the uCertify assessment. | Partially summarized, in two to three (2-3) sentences, both your strengths and weaknesses with respect to the topics you covered in the uCertify assessment. | Thoroughly summarized, in two to three (2-3) sentences, both your strengths and weaknesses with respect to the topics you covered in the uCertify assessment. |

**uCertify Labs**

Worth 40 points apiece

Submit each lab based on the following:

1. Complete the weekly set of labs described below using the uCertify lab environment.
2. Submit only those labs identified below. **Note**: Students are encouraged to explore the additional labs and videos offered through the lab environment on an optional / non-graded basis.
3. To submit a completed set of labs you must export your Study Planner report. To export the report:
   * Select “Study Planner” from the uCertify home page.
   * Click the “Submit” button to generate a unique URL.
   * Copy and paste the generated URL into the assignment submission box of the Blackboard online course shell. **Note**: The URL will report your cumulative work in uCertify at the moment you generated the URL. Live progress is not tracked through the generated URL.You must generate / submit a new URL each time you submit a set of labs for grading.
4. Once you have successfully pasted the URL into the assignment submission area of the online shell, you may submit the set of labs for grading.

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| **uCertify Labs** | | | |
| **Week Due** | **Lab #** | **Lesson** | **Lab Title** |
| 1 | Lab 1 | Lesson 2 | 2.1.1 Verify the working directory  2.1.2 Creating an environment variable  2.1.3 Listing files/directories  2.2.1 Redirecting an output to a file  2.3.2 Performing reverse sort for a file  2.3.3 Removing duplicate lines |
| 2 | Lab 2 | Lesson 3 | 3.2.1 Getting information about processor  3.2.2 Displaying packages  3.2.3 Identifying RPM utility  3.2.4 Verifying, installing, and removing rpm packages  3.3.1 Removing a package with its configuration file  3.4.1 Converting an rpm package into the Debian package  3.7.1 Listing processes  3.7.2 Listing all running screen processes  3.7.3 Reporting virtual memory statistics  3.7.4 Displaying currently running processes |
| 3 | Lab 3 | Lesson 4 | 4.1.1 Displaying hardware information  4.1.2 Viewing the IRQs  4.2.1 Displaying PCI bus information  4.2.2 Listing loaded kernel modules  4.2.3 Removing a kernel module  4.3.1 Dumping the physical USB device hierarchy  4.6.1 Setting up a Linux swap area  4.7.1 Running the fsck command  4.7.2 Checking and repairing Linux file systems  4.8.1 Unmounting a filesystem  4.8.2 Storing information about mounted filesystems |
| 4 | Lab 4 | Lesson 5 | 5.1.1 Maintaining backup of a hard disk  5.1.2 Extracting an archive file  5.1.3 Compress files using bzip command  5.2.1 Modifying ownership of a file  5.3.1 Checking the file permission of a file  5.3.2 Running an executable file with permissions  5.3.3 Changing file attributes  5.3.4 Making a script executable |
| 5 | Lab 5 | Lesson 6 | 6.1.1 Storing Linux bootloader  6.1.2 Setting devices to read only at boot time  6.1.3 Functioning of Linux Loader  6.2.1 Displaying messages from the kernel ring buffer  6.2.2 Displaying boot log  6.4.1 Choosing runlevel for the reboot command  6.4.2 Identifying mode of runlevels  6.4.3 Identifying runlevels |
| 6 | None | | |
| 7 | Lab 6  Lab 7 | Lesson 8  Lesson 9 | 8.1.1 Starting an X session  8.6.1 Setting the variables  9.1.1 Creating and deleting an account  9.1.2 Managing a group  9.1.3 Creating a user  9.1.4 Configuring a password  9.1.5 Identifying a directory name  9.1.6 Deleting a user account  9.1.7 Configuring password aging  9.3.1 Managing log files  9.4.1 Displaying long file listing  9.4.2 Setting the local date and time |
| 8 | Lab 8 | Lesson 10 | 10.1.1 Identifying a layer name  10.2.1 Mapping port numbers and protocols  10.3.1 configuring the routing table  10.3.2 Adding a default gateway  10.3.3 Working with local Ethernet connection  10.4.1 Displaying sockets  10.4.2 Displaying information regarding traffic  10.4.3 Pinging to the IPv6 host  10.4.4 Tracing an IPv6 path |
| 9 |  | None | |
| 10 | Lab 9  Lab 10 | Lesson 11  Lesson 12 | 11.1.1 Displaying environment variable  11.4.1 Running MySQL  12.1.1 Identifying TCP/IP and UDP ports  12.1.2 Supporting FTP bounce scan  12.2.1 Searching SGID files  12.2.2 Limiting user resources  12.2.3 Displaying information of processes |

Grading for lab assignments will be based on the following rubric.

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| **Points: 40** | **uCertify Labs** | | | | |
| **Criteria** | **Unacceptable**  **Below 60% F** | **Meets Minimum Expectations**  **60-69% D** | **Fair**  **70-79% C** | **Proficient**  **80-89% B** | **Exemplary**  **90-100% A** |
| 1. Complete the lab assignment according to the lab instructions.  Weight: 100% | Did not submit or incompletely completed the lab assignment according to the lab instructions. | Insufficiently completed the lab assignment according to the lab instructions. | Partially completed the lab assignment according to the lab instructions. | Satisfactorily completed the lab assignment according to the lab instructions. | Thoroughly completed the lab assignment according to the lab instructions. |

**Assignment 1: Linux GUI**

Due Week 6 and worth 50 points

As explained in the textbook, UNIX / Linux initially only provided a command line interface for interaction with the operating system (OS). The introduction of a Graphical User Interface (GUI) to UNIX / Linux OS makes it easier to administer a Linux system.

Write a two to three (2-3) page paper in which you:

1. Discuss the primary advantages of GUI over a textual (command-line) interface in Linux system administration.
2. Describe two (2) linux desktop environments and explain how they generally function.
3. Recommend one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install.
4. Use at least three (3) quality resources in this assignment. **Note:** Wikipedia and similar Websites do not qualify as quality resources.
5. Format your assignment according to the following formatting requirements:
   1. Typed, double spaced, using Times New Roman font (size 12), with one-inch margins on all sides.
   2. Include a cover page containing the title of the assignment, the student’s name, the professor’s name, the course title, and the date. The cover page is not included in the required page length.
   3. Include a reference page. Citations and references must follow APA format. The reference page is not included in the required page length.

The specific course learning outcomes associated with this assignment are:

* Examine the UNIX / Linux shell command line, and command-line utilities.
* Use technology and information resources to research issues in operating systems.
* Write clearly and concisely about UNIX / Linux topics using proper writing mechanics and technical style conventions.

Grading for this assignment will be based on answer quality, logic / organization of the paper, and language and writing skills, using the following rubric.

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| **Points: 50** | **Assignment 1: Linux GUI** | | | | |
| **Criteria** | **Unacceptable**  **Below 60% F** | **Meets Minimum Expectations**  **60-69% D** | **Fair**  **70-79% C** | **Proficient**  **80-89% B** | **Exemplary**  **90-100% A** |
| 1. Discuss the primary advantages of GUI over a textual (command-line) interface in Linux system administration.  Weight: 25% | Did not submit or incompletely discussed the primary advantages of GUI over a textual (command-line) interface in Linux system administration. | Insufficiently discussed the primary advantages of GUI over a textual (command-line) interface in Linux system administration. | Partially discussed the primary advantages of GUI over a textual (command-line) interface in Linux system administration. | Satisfactorily discussed the primary advantages of GUI over a textual (command-line) interface in Linux system administration. | Thoroughly discussed the primary advantages of GUI over a textual (command-line) interface in Linux system administration. |
| 2. Describe two (2) Linux desktop environments and explain how they generally function. Weight: 30% | Did not submit or incompletely described two (2) Linux desktop environments and did not submit or incompletely explained how they generally function. | Insufficiently described two (2) Linux desktop environments and insufficiently explained how they generally function. | Partially described two (2) Linux desktop environments and partially explained how they generally function. | Satisfactorily described two (2) Linux desktop environments and satisfactorily explained how they generally function. | Thoroughly described two (2) Linux desktop environments and thoroughly explained how they generally function. |
| 3. Recommend one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install.  Weight: 30% | Did not submit or incompletely recommended one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install. | Insufficiently recommended one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install. | Partially recommended one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install. | Satisfactorily recommended one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install. | Thoroughly recommended one (1) scenario or situation that demonstrates when each GUI system you described previously (two [2] total scenarios) would be most suitable to install. |
| 4. 3 references  Weight: 5% | No references provided | Does not meet the required number of references; all references poor quality choices. | Does not meet the required number of references; some references poor quality choices. | Meets number of required references; all references high quality choices. | Exceeds number of required references; all references high quality choices. |
| 5. Clarity, writing mechanics, and formatting requirements  Weight: 10% | More than 8 errors present | 7-8 errors present | 5-6 errors present | 3-4 errors present | 0-2 errors present |

**Assignment 2: Composing and Using Regular Expressions**

Due Week 9 and worth 50 points

Regular expressions became popular with the introduction of the UNIX operating system in 1960s and its text processing tools such as *grep* and *ed.*

Write a two to three (2-3) page paper in which you:

1. Define regular expressions and explain their purpose.
2. Provide at least three (3) examples which demonstrate the way regular expressions work.
3. Examine the shortcomings of regular expressions and describe at least two (2) situations where using them might be inappropriate.
4. Use at least three (3) quality resources in this assignment. **Note:** Wikipedia and similar Websites do not qualify as quality resources.
5. Format your assignment according to the following formatting requirements:
6. Typed, double spaced, using Times New Roman font (size 12), with one-inch margins on all sides.
7. Include a cover page containing the title of the assignment, the student’s name, the professor’s name, the course title, and the date. The cover page is not included in the required page length.
8. Include a reference page. Citations and references must follow APA format. The reference page is not included in the required page length.

The specific course learning outcomes associated with this assignment are:

* Identify and create simple regular expressions.
* Use technology and information resources to research issues in operating systems.
* Write clearly and concisely about UNIX / Linux topics using proper writing mechanics and technical style conventions.

Grading for this assignment will be based on answer quality, logic / organization of the paper, and language and writing skills, using the following rubric.

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| --- | --- | --- | --- | --- | --- |
| **Points: 50** | **Assignment 2: Composing and Using Regular Expressions** | | | | |
| **Criteria** | **Unacceptable**  **Below 60% F** | **Meets Minimum Expectations**  **60-69% D** | **Fair**  **70-79% C** | **Proficient**  **80-89% B** | **Exemplary**  **90-100% A** |
| 1. Define regular expressions and explain their purpose.  Weight: 30% | Did not submit or incompletely defined regular expressions and did not submit or incompletely explained their purpose. | Insufficiently defined regular expressions and insufficiently explained their purpose. | Partially defined regular expressions and partially explained their purpose. | Satisfactorily defined regular expressions and satisfactorily explained their purpose. | Thoroughly defined regular expressions and thoroughly explained their purpose. |
| 2. Provide at least three (3) examples which demonstrate the way regular expressions work. Weight: 25% | Did not submit or incompletely provided at least three (3) examples which demonstrate the way regular expressions work. | Insufficiently provided at least three (3) examples which demonstrate the way regular expressions work. | Partially provided at least three (3) examples which demonstrate the way regular expressions work. | Satisfactorily provided at least three (3) examples which demonstrate the way regular expressions work. | Thoroughly provided at least three (3) examples which demonstrate the way regular expressions work. |
| 3. Examine the shortcomings of regular expressions and describe at least two (2) situations where using them might be inappropriate.  Weight: 25% | Did not submit or incompletely examined the shortcomings of regular expressions and did not submit or incompletely described at least two (2) situations where using them might be inappropriate. | Insufficiently examined the shortcomings of regular expressions and insufficiently described at least two (2) situations where using them might be inappropriate. | Partially examined the shortcomings of regular expressions and partially described at least two (2) situations where using them might be inappropriate. | Satisfactorily examined the shortcomings of regular expressions and satisfactorily described at least two (2) situations where using them might be inappropriate. | Thoroughly examined the shortcomings of regular expressions and thoroughly described at least two (2) situations where using them might be inappropriate. |
| 4. 3 references  Weight: 10% | No references provided | Does not meet the required number of references; all references poor quality choices. | Does not meet the required number of references; some references poor quality choices. | Meets number of required references; all references high quality choices. | Exceeds number of required references; all references high quality choices. |
| 5. Clarity, writing mechanics, and formatting requirements  Weight: 10% | More than 8 errors present | 7-8 errors present | 5-6 errors present | 3-4 errors present | 0-2 errors present |

**uCertify Overview**

uCertify provides quality test prep kits for global IT certifications including certification practice assessments, interactive course materials, as well as automated feedback designed to encourage student achievement.

The unlimited use of uCertify is encouraged throughout this course in preparation for certification readiness. Students are encouraged to review their assessment results, including both correct and incorrect questions, in order to understand the rationale behind each answer.

The use of uCertify is a **required** component of the course that includes both **graded** and **non-graded** participation assessments.

uCertify Access and Registration

* Students must purchase a uCertify access code from the Strayer Bookstore: <http://www.strayerbookstore.com/>.
* Instructors will provide a course / instructor key at the start of the course in which students must use to register the uCertify product.
* Students must register the uCertify product via the instructions and link provided in the Blackboard online course shell.
* Once registered, students may access the uCertify materials for up to 12 months via:
  + The uCertify tab, located in the Blackboard online course shell; or,
  + A Web browser, at: <http://strayer.ucertify.com/>   
    **Note:** When manually accessing the materials via <http://strayer.ucertify.com/>, you may retrieve / reset your password through the “Forgot password?” feature.

uCertify Help and Support

* For technical questions or problems associated with accessing uCertify, please contact uCertify support at <http://www.ucertify.com/support.php>
* For problems associated with obtaining an access code, please contact the Strayer University Online Bookstore by calling 855-561-7052 or submitting a ticket at [www.strayerbookstore.com](http://www.strayerbookstore.com/) or [www.jwmibookstore.com](http://www.jwmibookstore.com/) on the "Contact us" page.

**uCertify Activities**

(30% of overall grade) uCertify Assessments

* One (1) pre-assessment and one (1) post-assessment are part of the required assessments for this course. These assessments use the material covered within the course in order to evaluate your exam readiness. Additional specifics surrounding the submission and grading of each assessment are located with the assessment rubric.
* Quizzes are required most weeks in order to facilitate certification exam readiness. The uCertify quizzes allow for unlimited attempts. The correct answers display at the completion of each quiz for self-evaluation. Additional specifics surrounding the submission and grading of each assessment are located with the assessment rubric.

(Optional / Non-Graded) uCertify Practice Tests

* Practice tests are optional and ungraded assessments that are encouraged throughout this course in preparation for certification readiness. Practice tests are encouraged in Week 11, with unlimited attempts. The correct answers display at the completion of each practice test for self-evaluation.

**(Optional / Non-Graded) Comprehensive Certification Discussion**

One (1) comprehensive discussion thread is available within the online course shell. You may discuss certification-based questions or questions about the certification preparation activities openly with your instructor and classmates. You are encouraged to participate in this discussion on a weekly basis.