



BOWIE STATE UNIVERSITY
Department of Computer Science
CTEC 222 UNIX Operating Systems (3 Credits)
Spring 2011

ADA Statement: Students who have a disability and who would like accommodations should report immediately to Disability Support Services (DSS), located in Room 1328 in the Business and Graduate Studies Building, or call Dr. Michael S. Hughes, DSS Coordinator, at 301-860-4067.

EPE Statement: Please take your **English Proficiency Examination** as early as possible! After completing ENGL 101 and ENGL 102, students must take and successfully pass the Bowie State University English Proficiency Examination. Transfer students who completed their English composition requirements at another university should take the English Proficiency Examination during their first semester of enrollment at the University.

Instructor:	Dr. Sharad Sharma
Classroom:	Computer Science Building, Room 313
Class Hours:	Monday: 4:55 – 7:25 PM
Office Hours:	Monday: 1:55 – 4:55 PM Other Times by Appointment
Office Location:	Computer Science Building, Room 317
Email:	ssharma@bowiestate.edu
Phone:	2-4502 (in campus)
Course Website:	http://cs.bowiestate.edu/~sharad/unix/index.htm

REQUIRED TEXT:

Mark G. Sobell, "Practical Guide to Linux® Commands, Editors, and Shell Programming", Prentice Hall, 2005. **ISBN-10:** 0131478230, **ISBN-13:** 978-0131478237

RECOMMENDED READING LIST:

- "The UNIX Programming Environment" by Kernighan and Pike, Prentice Hall, ISBN 0-13-937681-X
- Todd Meadors, "Linux Shell Script Programming", Thomson Course Technologies, 2003, ISBN 0-619-15920-0
- Syed Mansoor Sarwar, Robert Koretsky, and Syed Aqeel Sarwar, "Unix: The Textbook", Addison-Wesley Pub Co; ISBN: 0201612607
- Keith Haviland, Dina Gray, and Ben Salama, "UNIX System Programming" Addison-Wesley Pub Co; ISBN: 0201877589; 2nd edition (December 9, 1998)
- Stephen G. Kochan and Patrick H. Wood "UNIX Shell Programming", Hayden Books, 1990.
- Marty Poniowski, "UNIX User's Handbook, Second Edition", Prentice Hall PTR, 2002.

CATALOG DESCRIPTION:

This course is an introduction to UNIX operating system and commands. Topics include: file manipulation; directory structure; operating system performance; editors; UNIX shell scripts programming.

STUDENT EXPECTED OUTCOMES

Upon completion of this course, the student will be able to:

- Understand and become familiar with basic UNIX commands and the ability to combine them to accomplish system tasks.
- Define and understand UNIX operating system and basic commands
- Write a complete program in Bash Shell Programming.
- Describe and understand the use of arrays.
- Have the ability to write elementary scripts to automate tasks.

STUDENT LEARNING OBJECTIVES

The essential objectives for this course are to:

1. Develop proficiency and familiarity with using vi editor.
2. Acquire skills and understand variables, commands, operators, conditional statements, looping statements, and expressions in Bash Shell programming.
3. Use and manipulate strings and functions in Bash Shell programming.

TEACHING MODE:

The primary teaching mode will be lecture-discussion, problem solving, and question-answer approach. The lectures will be supplemented by some projects in computer labs.

EVALUATION METHOD:

Final semester grade will be determined by the average of the student performance on the homework, in-class projects, projects, midterm, and the final exam as follows:

In-class Quiz & Homework	30%
Project	10%
Midterm	20%
Final	30%
Class attendance and participation	10%

Letter Grades will be assigned according to:

90 - 100	= A
80 - 89	= B
70 - 79	= C
60 - 69	= D
below 60	= F

IMPORTANT DATES AND TEST SCHEDULE: (right click and open hyperlink)

<http://www.bowiestate.edu/about/events.asp>

IMPORTANT TELEPHONE NUMBERS:

Dept of Comp Sc (Secretary): (301) 860-3960
Dept of Comp Sc (Fax): (301) 860-3979
Bowie State University (Main): (301) 860-4000
Inclement Weather related closures: (301) 860-4000

Weekly Time Schedule

Date	Topics	Assignments
24-Jan	Introduction to Unix	
31-Jan	Unix Operating System and UNIX commands	
7-Feb	Unix Editor: Vi Editor	Quiz 1
14-Feb	VI Editor	Quiz 2
21-Feb	VI Editor	Quiz 3, Homework 1
28-Feb	VI Editor ,Bash Programming: export, single/double quote, environmental variables, exit command, read command	Quiz 4
7-March	Bash Programming: Command substitution, arithmetic operator, arithmetic evaluation	Quiz 5 , Homework 2 assigned
14-March	Mid Term Exam	
21-March	Spring Break	
28-March	Bash Programming: Conditional Statements, expressions, if-else, case statement, Iteration statement: for, list	Quiz 6, Due Homework 2
4-April	Bash Programming: Example case statement, Iteration statement	Quiz 7
11-April	Bash Programming: List, arrays, loops	Quiz 8
18-April	Bash Programming: debugging, error resolution, while statement	Quiz 9, Final Project assigned
25-April	Bash Programming: menu, Find pattern, continue, break statement	Quiz 10
2-May	Bash Programming: Strings, Functions	Quiz 11
9-May	Bash Programming: random operator, example scripts	Quiz 12, Due date for Project
16-May	Final Exam	

IMPORTANT!

- Class attendance is mandatory at Bowie State University. This policy will be enforced. After six (6) absences from a daytime course or two absences (2) from an evening course, the matter will be referred to the department chair. It is of the utmost importance that you attend **every** class!
 - Expect a quiz or test every week. The quiz time will run from the start of class for 15 minutes. Therefore, if you are 15 minutes or more late, you will miss the quiz.
 - All homework and assignments are to be turned in *on or before the due date*, even if class is cancelled for *any* reason or you are not able to attend class. Assignments may be submitted in class, slipped under my office door, or given to me during my office hours. It is each individual student's responsibility to submit homework and assignments on time.
 - There will be **no make-up** for missed homework, assignments, or quizzes. Makeup of exams will be allowed *only* if the absence is validated by a formal document (e.g., from the hospital) and a prior notice if it can be notified before the class.
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Policy on Cell Phones, etc.

The ringers of cell phones, pagers and any other electronic devices must be turned OFF or set to vibrate during class time. Only calls of an urgent or emergency nature should be taken and you should step outside the classroom to do so. If you do not observe this policy, you may be asked to leave the class for that day and an unexcused absence will be incurred.

Some useful links:

- Bash Tutorial: http://www.faqs.org/docs/bashman/bashref_4.html#SEC4
- vi Editor Tutorial: http://math.la.asu.edu/vi_tutorial/vi3.html
- emacs Tutorial: <http://jeremy.zawodny.com/emacs/emacs.html>
- <http://www.uic.edu/depts/accc/software/unixgeneral/vi101.html>
- <http://www.cs.okstate.edu/newuser/>
- <http://catcode.com/teachmod/>