COURSE SYLLABUS
NET300: Windows Shell Scripting

Course Description

This course focuses on the current scripting environment used by the Windows operating systems for automation. Subjects will include introduction of common commands, usage, remote execution, expansion with WMI concepts, inclusion of security and management system modification, error handling, analysis, and creation of script examples.

General Course Information

Number of Units/Weeks	4/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	40/80
Prerequisite(s)	NET208, NET209
Co-requisites (s)	None
Course Developer(s)	Brent Luallin, MS
Date Approved / Last Review	August 2017 (Reviewed)

Learning Outcomes

- Recognize and identify commonly used commands and methods for use in a Windows scripting environment
- Demonstrate security methods described and used in Windows scripting
- Analyze and critique scripts for correct operation and efficiency
- Create simple scripts to automate redundant Windows OS tasks
- Demonstrate usage of the commands, objects, and functions used in the scripting shell

Instructional Methods Employed in this Course

A number of instructional/learning methods are employed in this course, including the following:

- Lecture and reading assignments.
- Hands-on exercises.
- Practical application of theory and skills in authentic design projects.
- Hands-on projects complementing the course content.

Information Resources for this Course

Textbook

Wilson, Ed. (2015). Windows PowerShell Step by Step, 3rd Edition. Microsoft Press.

Lab Manual

None.

Web Site Readings

Table/Topics & Assignments

Types of Assignments:

Lecture -
Considered Lecture Hours

Classroom Discussion -
Considered Lecture Hours

In Class Critique -
Considered Lecture Hours

Delivering Oral Presentations -
Considered Lecture Hours

In Class (IC) Exercise -
Considered Lecture Hours

Reading -
Considered Homework (HW), work done outside of class

WebClass lesson (non-online courses) -
Considered HW, work done outside of class

Lab Work -
Considered Lab Hours

Quiz, Midterm or Final -
Considered Lecture Hours

Week 1						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	Due
LEC 1A	Using PowerShell and the CLI	3	--	--	--	
IC EX 1A	CMD Usage and Cmdlets	1	--	--	10	Week 1
HW 1A	Read Chapters 1 and 2.	--	--		--	Week 1
HW 1B	Homework Quiz 1	--	--		20	Week 2
Total Week 1		4		10.5	30	

Week 2						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 2A	Using PowerShell Providers and Remoting	3	--	--	--	
IC EX 2A	Providers and Remote Connections	1	--	--	--	Week 2
HW 2A	Research Paper	--	--	3.5	20	Week 3
HW 2B	Read Chapters 3 and 4.	--	--	9.9	10	Week 2
Total Week 2		4		13.4	30	

Week 3						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 3A	PowerShell Scripting and Functions	3	--	--	--	
HW 3A	Read Chapters 5 and 6.	--	--	7.7	--	Week 3
IC EX 3B	Script Day and Scripting Logic	1	--	--	--	Week 3
HW 3B	Script writing assignment	--	--	4	40	Week 4
Total Week 3		4		11.7	40	

Week 4						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 4A	Advanced Functions, PowerShell ISE, and PowerShell Profiles	3	--	--	--	
IC EX 4A	Advanced Functions and the ISE	1	--	--	10	
HW 4A	Chapters 7-9 (Pgs.)	--	--	8	--	
HW 4B	Homework Quiz 2	--	--	2	20	
Total Week 4		4		10	30	

Week 5						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 5A	Review Discussion Chapters 1-9	1	--	--	--	
EXAM 5A	Midterm Quiz	1	_	--	100	Week 5
EXAM 5B	Performance Test	2	--	--	250	Week 5
Total Week 5		4			350	

Week 6						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 6A	WMI in PowerShell	4	--	--	--	
HW 6A	Chapters 10 and 11	--	--	5.2	--	Week 6
HW 6B	WMI Scripting	--	--	3	30	Week 7
Total Week 6		4		8.2	30	

Week 7						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC7A	WMI Remoting and Using PowerShell WMI commands	3	--	--	--	
IC EX 7A	Remote/Method WMI	1	--	--		
HW 7A	Chapters 12 and 13	--	--	7.5	--	Week 7
HW 7B	Homework Quiz 3	_		2	20	Week 7
HW 7C	Remote WMI script assignment	--	--	1	20	Week 8
Total Week 7		4		10.5	40	

Week 8						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 8A	PowerShell and Active Directory	3	--	--	--	
IC EX 8A	Active Directory Scripting	1	--	2	--	
HW 8A	Read Chapters 15 and 16.	--	--	7.7	--	Week 8
HW 8B	Homework Quiz 4	--	--	2	20	Week 8
HW 8C	Active Directory script assignment	--	--	1	20	Week 9
Total Week 8		4		12.7	40	

Week 9						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 9A	Troubleshooting PowerShell Scripts	3	--	--	--	
IC EX 9A	Error usage and Analyzing scripts	1	--	--		
HW 9A	Read Chapters 18 and 19	--	--	7.6	--	Week 9
HW 9B	Homework Quiz 5			1.5	20	Week 9
HW 9C	Error handling script	--	--	3	30	Week 10
Total Week 9		4		12.1	50	

Week 10						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 10A	Review Discussion	.75	--	--	--	
EXAM 10A	Final Quiz	1	--	--	100	Week 10
EXAM 10B	Performance Test Eval. of Participation Points	2.25	--	--	250 10	Week 10
Total Week 10		4			360	

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Using PowerShell and the CLI	4	--	10.5
2	Using PowerShell Providers and Remoting	4	--	13.4
3	PowerShell Scripting and Functions	4	--	11.7
4	Advanced Functions, PowerShell ISE, and PowerShell Profiles	4	--	10
5	Midterm/Chapters 1-9	4	--	0
6	WMI in PowerShell	4	--	8.2
7	PowerShell and Active Directory	4	--	10.5
8	PowerShell and Active Directory	4	--	12.7
9	Troubleshooting PowerShell Scripts	4	--	12.1
10	Final/Chapters 10-19	4	--	0
Total		40	--	89.1

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	CMD Usage and Cmdlets/Homework Quiz 1	30	3%
2	Research Paper / Providers and Remote Connections	30	3%
3	Script writing assignment	40	4%
4	Advanced Functions and the ISE / Homework Quiz 2	30	3%
5	Midterm Quiz / Performance Test	350	35%
6	WMI Scripting	30	3%
7	Homework Quiz 3 / Remote WMI script	40	4%
8	Homework Quiz 4 / Active Directory script	40	4%
9	Homework Quiz 5 / Error handling script	50	5%
10	Final Quiz / Performance Test Eval. of Participation Points	360	36%
Total		1000	100%

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.
Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit
WV = Waiver	

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.