

WESTERN SYDNEY
UNIVERSITY



School of Computer, Data and Mathematical Sciences



Learning Guide

300165 Systems Administration Programming
Autumn 2020

Unit Details

Unit Code:	300165
Unit Name:	Systems Administration Programming
Credit Points:	10
Unit Level:	3
Assumed Knowledge:	Students should have a thorough grounding in systems programming and operating systems basics.

Note: Students with any problems, concerns or doubts should discuss those with the Unit Coordinator as early as they can.

Unit Coordinator

Name: Dr. Golenur Begum Huq

Phone: TBA

Location: ER.1.07, Parramatta Campus

Email: g.huq@westernsydney.edu.au

Consultation Arrangement:

Tuesday 14:00-15:00 Y211. Please also check vUWS site for the most up to date information on consultation arrangement in case of changes.

For unit inquiries, you can email a staff member directly. Please note that a staff member is typically teaching multiple units, so make sure you start the subject line with "300165 SAP" and then include a relevant subject.

For any unit related inquiries, you need to use your Western Sydney University student email account; we really should not correspondent with students via external email addresses as per the university policy since they are not verifiable.

In addition, the coordinator may use emails to address the unit related issues (clarifying administrative policies, providing hints to practical activities, presenting extra/supplementary materials for the unit studies). So please check your Western Sydney University emails regularly and carefully. It is pivotal for any student wishing to perform well to read all these emails carefully.

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Note: The relevant Learning Guide Companion supplements this document

1 About Systems Administration Programming

1.1 An Introduction to this Unit

This unit covers programming techniques and tools used to administer standalone and networked computer systems. The unit focuses on the use of high level interpretive scripting languages to automate everyday administrative tasks, and to monitor and control running systems. Techniques to extend scripting language capabilities by dynamic linking to compiled code are examined, particularly in terms of access to operating system level functions. The unit also examines the use of administrative programs and tools to monitor and adjust system performance and capacity.

1.2 What is Expected of You

Study Load

A student is expected to study an hour per credit point a week. For example a 10 credit point unit would require 10 hours of study per week. This time includes the time spent within classes during lectures, tutorials or practicals.

Attendance

It is strongly recommended that students attend all scheduled learning activities to support their learning.

Online Learning Requirements

Unit materials will be made available on the unit's vUWS (E-Learning) site (<https://vuws.westernsydney.edu.au/>). You are expected to consult vUWS at least twice a week, as all unit announcements will be made via vUWS. Teaching and learning materials will be regularly updated and posted online by the teaching team.

No E-Learning resources required for this Unit.

Special Requirements

Essential Equipment:

Not Applicable

Legislative Pre-Requisites:

Not Applicable

Policies Related to Teaching and Learning

The University has a number of policies that relate to teaching and learning. Important policies affecting students include:

- [Assessment Policy](#)
- [Bullying Prevention Policy](#) and
- [Guidelines](#)
- [Enrolment Policy](#)
- [Examinations Policy](#)
- [Review of Grade Policy](#)
- [Sexual Harassment Prevention Policy](#)
- [Special Consideration Policy](#)
- [Student Misconduct Rule](#)
- [Teaching and Learning - Fundamental Code](#)

Academic Integrity and Student Misconduct Rule

In submitting assessments, it is essential that you are familiar with the policies listed above and that you understand the principles of academic integrity. You are expected to act honestly and ethically in the production of all academic work and assessment tasks, submit work that is your own and acknowledge any contribution to your work made by others.

Important information about academic integrity, including advice to students is available at https://www.westernsydney.edu.au/studysmart/home/academic_integrity_and_plagiarism. It is your responsibility to familiarise yourself with these principles and apply them to all work submitted to the University as your own.

When you submit an assignment or product, you will declare that no part has been: copied from any other student's work or from any other source except where due acknowledgement is made in the assignment; submitted by you in another (previous or current) assessment, except where appropriately referenced, and with prior permission from the Unit Coordinator; written/produced for you by any other person except where collaboration has been authorised by the Unit Coordinator.

The Student Misconduct Rule applies to all students of Western Sydney University and makes it an offence for any student to engage in academic, research or general misconduct as defined in the Rule.

The University considers plagiarism, cheating and collusion as instances of academic misconduct. The University also considers submitting falsified documentation in support of applications for special consideration, including sitting of deferred examinations, as instances of general misconduct. You should be aware that changes were made to the Student Misconduct Rule commencing 1 January 2020 that provide for minimum sanctions that apply to certain conduct, including the provision of falsified documentation to the University.

Important information about academic integrity, including advice to students is available at https://www.westernsydney.edu.au/studysmart/home/academic_integrity_and_plagiarism. It is your responsibility to familiarise yourself with these principles and apply them to all work submitted to the University as your own.

You are strongly advised to read the [Student Misconduct Rule](#) and the Inappropriate Behaviour Guidelines at the commencement of each session to familiarise yourself with this process and the expectations of the University in relation to work submitted for assessment.

1.3 Changes to Unit as a Result of Past Student Feedback

The University values student feedback in order to improve the quality of its educational programs. The feedback provided helps us improve teaching methods and units of study. The survey results inform unit content and design, learning guides, teaching methods, assessment processes and teaching materials.

You are welcome to provide feedback that is related to the teaching of this unit. At the end of the semester you will be given the opportunity to complete a Student Feedback on Unit (SFU) questionnaire to assess the unit. You may also have the opportunity to complete a Student Feedback on Teaching (SFT) questionnaire to provide feedback for individual teaching staff.

As a result of student feedback, the following changes and improvements to this unit have recently been made:

- Unit vUWS pages have been modified to make the content exploration and information retrieval more user friendly.
- Lecture and laboratory materials have been updated to match the textbook edition. Some laboratory exercises have been revised for clarity.
- Continuous assessment has been redesigned to avoid peaks of activities, and the assessment structure tends to be more comprehensive model.
- Sample exam paper and extra exam information have been provided to help students for the final exam.
- Announcement and group-emails are used to address the unit related issues, which turned out to be more effective for students in different modes to study this unit.
- Optional extracurricular learning materials and exercises are provided for further reference.

2 Assessment Information

2.1 Unit Learning Outcomes

This unit aims to help students build up the basic skills in scripting for Windows system administration, web server maintenance, and network setting. The unit focuses on the use of high level interpretive scripting languages to automate everyday administrative tasks, monitor and control running systems, as well as adjust system performance and capacity. Students will learn scripting techniques through working on a set of common administrative tasks, from simple logon to automated system management. This unit also provides students with more training in understanding programming principles for studying other computing-related subjects.

	Outcome
1	List and define the key types of system administration tasks that are suitable for full or partial automation programmatically
2	Select the most appropriate programming implementation method for a required system administration task from the range: shell scripts, scripting languages, and low level compiled languages; and explain the reasons for the selection
3	Write, test and document system administration programs in a scripting language for various administration tasks that are synchronised or asynchronised (serial, parallel, or event driven) in nature
4	Write programs to automate tasks like user management, software management, backup & recovery, and system security for both local (centralised) and distributed systems
5	Extend the capabilities of a high level scripting language
6	Explain the fundamental principles of performance and capacity planning in regards to systems administration
7	Write programs to collect performance and capacity data for performance and capacity planning purposes. Explain the meaning and significance of the data collected, recommend system administration actions based on this interpretation, and write programs to implement the recommended actions
8	Deliver tested and documented programs with significant complexity within specified project deadlines and in a form that meets IT professional standards

2.2 Approach to Learning

This unit has been restructured towards a new delivery model, where the teaching activities consist of online lecturing and on-campus hands-on practice. This model builds upon the nature of university studies - being effective and independent learners. There are NO traditional face-to-face lectures in this unit. Lectures are in on-line format and hence no attendance is required for this component; you undertake a self-study of the lecture modules that present the major topics of this unit. The lectures and text reading will examine the key topics of your learning environment related to systems administration. The practical activities are designed to reinforce students' understanding of theoretical concepts and that you will gain programming expertise in becoming a confident and competent systems administrator. The weekly on-campus practicals start from week 2; each session is in three hours: ten minutes for quiz, fifty minutes for tutorial and the rest of two hours for practical tasks. Students are required to attend tutorials. We'll continue to revise the Blended Learning approach (e.g. implementing adaptable techniques and settings) to satisfy the needs for student-centered learning.

2.3 Contribution to Course Learning Outcomes

3506: Bachelor of Computer Science

Course Learning Outcomes	ULO 1	ULO 2	ULO 3	ULO 4	ULO 5	ULO 6	ULO 7	ULO 8
1. Communicate in a professional manner with others at all levels within and beyond the industry and across discipline, cultural and national boundaries, orally, in writing and through presentations.				Introduced		Introduced		
2. Perform work of high quality with an awareness of the professional code of conduct, professional and personal ethics, and the legal and social implications of technological change and professional practice				Introduced		Introduced		Introduced
3. Work independently and as a member of a team, including cross-discipline teams, and plan, manage and report on personal and project deliverables	Introduced	Developed	Developed	Developed	Developed	Developed		Developed
4. Plan, implement and monitor systems to provide appropriate and ongoing quality assurance in respect to all work undertaken	Introduced	Developed	Assured	Assured	Developed	Developed	Assured	Assured
5. Demonstrate an understanding of a variety of computer systems, their capabilities and limitations	Introduced	Developed	Developed	Developed		Developed	Developed	Developed

3634: Bachelor of Computer Science (Advanced)

Course Learning Outcomes	ULO 1	ULO 2	ULO 3	ULO 4	ULO 5	ULO 6	ULO 7	ULO 8
1. Communicate in a professional manner with others at all levels within and beyond the industry and across discipline, cultural and national boundaries, orally, in writing and through presentations.				Introduced		Introduced		
2. Perform work of high quality with an awareness of the professional code of conduct, professional and personal ethics, and the legal and social implications of technological change and professional practice				Introduced		Introduced		Introduced
3. Work independently and as a member of a team, including cross-discipline teams, and plan, manage and report on personal and project deliverables		Introduced	Developed	Developed	Developed	Developed		Developed
4. Plan, implement and monitor systems to provide appropriate and ongoing quality assurance in respect to all work undertaken	Introduced	Developed	Assured	Assured	Developed	Developed	Assured	Assured
5. Demonstrate an understanding of a variety of computer systems, their capabilities and limitations	Introduced	Developed	Developed	Developed		Developed	Developed	Developed
6. Understand and appreciate the directions of current research in their chosen discipline				Introduced				

3639: Bachelor of Information and Communications Technology

Course Learning Outcomes	ULO 1	ULO 2	ULO 3	ULO 4	ULO 5	ULO 6	ULO 7	ULO 8
1. Explain the complex networks involved when dealing with people, business and government in the context of ICT development, support and service provision.			Introduced	Introduced		Developed	Introduced	Developed
2. Evaluate the technological and software core of ICT theory and practice analysing and designing applications	Introduced	Introduced	Developed	Developed	Developed	Introduced	Developed	Developed
3. Apply the knowledge and skills required for the development of new applications and new application areas			Introduced	Introduced	Developed			
4. Innovate by keeping up to date with the rapid development in technology and practice across the ICT domain, as an extension of their current understandings and the ability to find innovative ICT solutions and move the ICT field forward.	Introduced	Developed	Developed	Developed	Developed	Developed	Introduced	Introduced
5. Perform work of high quality with an awareness of the professional code of conduct, professional and personal ethics, and the legal and social implications of technological change relating to privacy of information and professional practice.	Introduced	Introduced	Developed	Developed		Developed		Introduced

3687: Bachelor of Information Systems

Course Learning Outcomes	ULO 1	ULO 2	ULO 3	ULO 4	ULO 5	ULO 6	ULO 7	ULO 8
1. Communicate in a professional manner with others at all levels within and beyond the industry and across discipline, cultural and national boundaries, orally, in writing and through presentations.				Introduced		Developed		
2. Understand the importance of a strong synergies between people, processes and selected technologies.				Introduced		Introduced		
3. Research, plan, implement and monitor systems to provide appropriate and ongoing quality assurance in respect to all work undertaken according to current standards in the computing industry.	Introduced	Developed	Developed	Developed	Developed	Developed	Assured	Assured
4. Perform work of high quality with an awareness of the professional code of conduct, professional and personal ethics, and the legal and social implications of technological change and professional practice				Introduced		Developed	Developed	Developed
5. Work independently and as a member of a team, including cross-discipline teams, and plan, manage and report on personal and project deliverables		Introduced	Developed	Developed	Developed	Developed	Developed	Developed
6. Innovate, research and look for new technologies and tools that can assist businesses when implementing cutting edge information systems.				Introduced		Introduced		

3684: Bachelor of Information and Communications Technology (Advanced)

Course Learning Outcomes	ULO 1	ULO 2	ULO 3	ULO 4	ULO 5	ULO 6	ULO 7	ULO 8
1. Explain the complex networks involved when dealing with people, business and government in the context of ICT development, support and service provision.			Introduced	Introduced		Developed	Introduced	Developed
2. Evaluate the technological and software core of ICT theory and practice analysing and designing applications	Introduced	Introduced	Developed	Developed	Developed	Introduced	Developed	Developed
3. Apply the knowledge and skills required for the development of new applications and new application areas			Introduced	Introduced	Developed			
4. Innovate by keeping up to date with the rapid development in technology and practice across the ICT domain, as an extension of their current understandings and the ability to find innovative ICT solutions and move the ICT field forward.	Introduced	Developed	Developed	Developed	Developed	Developed	Introduced	Introduced
5. Perform work of high quality with an awareness of the professional code of conduct, professional and personal ethics, and the legal and social implications of technological change relating to privacy of information and professional practice.	Introduced	Introduced	Developed	Developed		Developed		Introduced

3688: Bachelor of Information Systems Advanced

Course Learning Outcomes	ULO 1	ULO 2	ULO 3	ULO 4	ULO 5	ULO 6	ULO 7	ULO 8
1. Communicate in a professional manner with others at all levels within and beyond the industry and across discipline, cultural and national boundaries, orally, in writing and through presentations.				Introduced		Developed		
2. Understand the importance of a strong synergies between people, processes and selected technologies.				Introduced		Developed		
3. Research, plan, implement and monitor systems to provide appropriate and ongoing quality assurance in respect to all work undertaken according to current standards in the computing industry.	Introduced	Developed	Developed	Developed	Developed	Developed	Assured	Assured
4. Perform work of high quality with an awareness of the professional code of conduct, professional and personal ethics, and the legal and social implications of technological change and professional practice				Introduced		Developed	Developed	Developed
5. Work independently and as a member of a team, including cross-discipline teams, and plan, manage and report on personal and project deliverables		Introduced	Developed	Developed	Developed	Developed	Developed	Developed
6. Innovate, research and look for new technologies and tools that can assist businesses when implementing cutting edge information systems.				Introduced		Introduced		
7. Become an active member of UWS research groups and teams and under supervision engage in cutting edge research, developments and implementations of innovative state of the art technologies.			Introduced	Introduced			Developed	

2.4 Assessment Summary

The assessment items in this unit are designed to enable you to demonstrate that you have achieved the unit learning outcomes. Completion and submission of all assessment items which have been designated as mandatory or compulsory is essential to receive a passing grade.

To pass this unit you must:

- Achievement of at least 50% overall is required to pass this unit. - At least half of the quizzes must be attempted. No mandatory pass assessment components.

Item	Weight	Due Date	ULOs Assessed	Threshold
Laboratory work	40%	During the scheduled tutorial time; details can be found in the lab worksheets.	3, 4, 5, 6, 7, 8	No
Quizzes	10%	Weekly during the scheduled tutorial time	1, 2, 3, 4, 5, 6, 7	No
Final examination	50%	To be scheduled during the university exam period	1, 2, 3, 4, 5, 6, 7	No

Feedback on Assessment

Feedback is an important part of the learning process that can improve your progress towards achieving the learning outcomes. Feedback is any written or spoken response made in relation to academic work such as an assessment task, a performance or product. It can be given to you by a teacher, an external assessor or student peer, and may be given individually or to a group of students. As a Western Sydney University student, it is your responsibility to seek out and act on feedback that is provided to you as a resource to further your learning.

In this unit, the laboratory tasks are to be marked in the laboratory classes when you will be given comments and feedback to your work. Quizzes are marked online automatically that you can check your result after the tutorial session. Further informal feedback will also be provided in tutorials as exemplar annotations.

2.5 Assessment Details

2.5.1 Laboratory work

Weight:	40%
Type of Collaboration:	Individual
Due:	During the scheduled tutorial time; details can be found in the lab worksheets.
Submission:	vUWS drop box and in-class demonstration.
Format:	Programs and demonstration
Length:	Practical tasks along with associated project work
Curriculum Mode:	Practical

The laboratory tasks are provided in vUWS. Students should use the lecture notes, recommended readings, or online searching to work out answers to these questions.

There are 10 sets of laboratory tasks (including practical activities along with associated project work), out of them only the FOUR selected sets are to be marked (10 marks each set; marks are explained in the corresponding lab worksheets).

Attendance at laboratory classes is compulsory and marks for the laboratory tasks can only be obtained by demonstrating them to the tutor during the scheduled lab session. In addition to demonstration, the associated project work must be submitted electronically in vUWS by the due time. Unless an extension to a further date is granted to the student by the unit coordinator, no late submission is accepted.

Resources:

Refer to the weekly lab sheets

Marking Criteria:

Students should demonstrate a mastery of knowledge of the relevant content; understand the theoretical/practical concepts, and implement the programming points to gain an insight into systems administration.

The laboratory work must be submitted and demonstrated for grading. No marks for the laboratory work can be obtained without demonstrating your work during laboratory unless running out of the time. Students' performance regarding the lab task implementation will be individually checked. A true and proper attempt must be in evidence. Students are encouraged to present the script programs which are fully tested. Any program language errors, run time errors, and logical errors will detract from the full marks.

2.5.2 Quizzes

Weight:	10%
Type of Collaboration:	Individual
Due:	Weekly during the scheduled tutorial time
Submission:	to be completed online in tutorial time
Format:	vUWS online quiz style with multiple choice or T/F questions
Length:	Ten quizzes, each quiz contains ten multiple choice questions
Curriculum Mode:	Quiz

To ensure that you have read the online lecture materials and prepared relevant lab work each week , there are 10 weekly online quizzes during tutorial time; each takes 10 minutes and is worth 1%.

Questions can be in form of True/False and multiple choice. You will find that some of the questions are quite trivial if you have read the lecture notes in advance.

You are required to do an online quiz at the beginning of each practical session (say the first ten minutes when password is to be provided for quiz access). Absence of these quizzes will not be tolerant, which means that if you miss one, you will not have one make-up quiz.

At least half of the quizzes must be attempted to pass the unit.

Resources:

vUWS online quiz style with multiple choice or T/F questions

Marking Criteria:

Based on understanding of the theoretical/practical concepts and programming points of systems administration.

2.5.3 Final examination

Weight:	50%
Type of Collaboration:	Individual
Due:	To be scheduled during the university exam period
Submission:	Examination paper in the exam session
Format:	On-paper
Length:	Two hours, open book
Curriculum Mode:	Final Exam

The final examination is a mandatory component of this unit, which is a formal two-hour open-book exam to be completed in the scheduled exam period.

The final exam comprises of questions in short answers, term interpretation, task analysis and design, code writing and code comprehension in systems administration mechanics. The exam questions may range over all topics treated in the unit, including those studied in lectures, laboratory classes, and self-study modules and exercises.

Special consideration of the Final Exam: If you are sick on the day of the exam, or you have urgent matters/misadventures that will really affect you in the exam, do not attend the exam. If you are sick, go to see doctors and get a medical certificate and then apply for a deferred exam through Student Central. All deferred exams are run centrally. Special consideration will not be given for students who sit the exam and then go to the doctor afterwards (unless there is an emergency during the final exam). This rule applies to other urgent matters/misadventures.

Resources:

A sample paper will be provided in vUWS

Marking Criteria:

Depending on questions, for instance, you should provide scholarly answers (i.e. supply evidence) and argue a case where appropriate. For code writing tasks, the program should be well structured and fulfil the task; any program language errors, run time errors, and logical errors will detract from the full marks.

1. Marking of the final exam will be done concisely that even the most minute (e.g. 0.2) marks are given a careful consideration before being awarded or deducted. 2. Marks are not given at will, but are based on the quality of students' answers. The consistency will be fairly maintained for the marking.

2.6 General Submission Requirements

Submission

- All assignments must be submitted by the specified due date and time.
- Complete your assignment and follow the individual assessment item instructions on how to submit. You must keep a copy of all assignments submitted for marking.

Turnitin

- The Turnitin plagiarism prevention system may be used within this unit. Turnitin is accessed via logging into vUWS for the unit. If Turnitin is being used with this unit, this means that your assignments have to be submitted through the Turnitin system. Turnitin from iParadigms is a web-based text-matching software that identifies and reports on similarities between documents. It is also widely utilised as a tool to improve academic writing skills. Turnitin compares electronically submitted papers against the following:
 - Current and archived web: Turnitin currently contains over 24 billion web pages including archived pages
 - Student papers: including Western Sydney University student submissions since 2007
 - Scholarly literature: Turnitin has partnered with leading content publishers, including library databases, text-book publishers, digital reference collections and subscription-based publications (e.g. Gale, Proquest, Emerald and Sage)
- Turnitin is used by over 30 universities in Australia and is increasingly seen as an industry standard. It is an important tool to assist students with their academic writing by promoting awareness of plagiarism. By submitting your assignment to Turnitin you will be certifying that:
 - I hold a copy of this assignment if the original is lost or damaged
 - No part of this assignment has been copied from any other student's work or from any other source except where due acknowledgement is made in the assignment
 - No part of the assignment has been written for me by any other person/s
 - I have complied with the specified word length for this assignment
 - I am aware that this work may be reproduced and submitted to plagiarism detection software programs for the purpose of detecting possible plagiarism (which may retain a copy on its database for future plagiarism checking).

Self-Plagiarising

- You are to ensure that no part of any submitted assignment for this unit or product has been submitted by yourself in another (previous or current) assessment from any unit, except where appropriately referenced, and with prior permission from the Lecturer/Tutor/Unit Co-ordinator of this unit.

Late Submission

- If you submit a late assessment, without receiving approval for an extension of time, (see next item), you will be penalised by 10% per day for up to 10 days. In other words, marks equal to 10% of the assignment's weight will be deducted from the mark awarded.
- For example, if the highest mark possible is 50, 5 marks will be deducted from your awarded mark for each late day.
- Saturday and Sunday are counted as one calendar day each.
- Assessments will not be accepted after the marked assessment task has been returned to students.
- This is consistent with Clause 51 of the Western Sydney University's Assessment Policy - Criteria and Standards-Based Assessment.

Extension of Due Date for Submission

Extensions are only granted in exceptional circumstances. To apply for an extension of time, locate an application form via the Western Sydney University homepage or copy the following link:

https://www.westernsydney.edu.au/currentstudents/current_students/forms

Application forms must be submitted to the Unit Coordinator/Convenor. Requests for extension should be made as early as possible and submitted within policy deadlines. Appropriate, supporting documentation must be submitted with the application. An application for an extension does not automatically mean that an extension will be granted. Assessments will not be accepted after the marked assessment task has been returned to students.

Resubmission

Resubmission of assessment items will not normally be granted if requested.

Application for Special Consideration

It is strongly recommended that you attend all scheduled learning activities to support your learning. If you have suffered misadventure, illness, or you have experienced exceptional circumstances that have prevented your attendance at class or your completion and submission of assessment tasks, you may need to apply for Special Consideration via the Western Sydney University website. http://www.westernsydney.edu.au/currentstudents/current_students/services_and_facilities/special_consideration2 or the Student Centre/Sydney City Campus Reception. Special Consideration is not automatically granted. It is your responsibility to ensure that any missed content has been covered. Your lecturer will give you more information on how this must be done.

3 Teaching and Learning Activities

Weeks	Topic	Lecture	Tutorial	Independent	Assessments Due
Week 1 02-03-2020	Scripting concepts	Online Lecture Modules	Tutorials from week 2	Chap1&2	
Week 2 09-03-2020	VBScript basics	Online Lecture Modules	Prac 1	Chap5-10	
Week 3 16-03-2020	Logon scripts	Online Lecture Modules	Prac 2	Chap3&4	
Week 4 23-03-2020	VBScript objects	Online Lecture Modules	Prac 3	Chap11	
Week 5 30-03-2020	WMI basics	Online Lecture Modules	Prac 4	Chap17&19	
Week 6 06-04-2020	Operating files using FSO	Online Lecture Modules	Prac 5	Chap12&13	
Week 7 13-04-2020	Working with ADSI	Online Lecture Modules	Prac 6	Chap14-16	
Week 8 20-04-2020	Email automation	Online Lecture Modules	Prac 7	J. Felling, "IT Administrator's Top 10 ..."	
Week 9 27-04-2020					
Week 10 04-05-2020	Flexible [for catch-up]				
Week 11 11-05-2020	Hypertext Applications (HTAs)	Online Lecture Modules	Prac 8	J. Felling, "IT Administrator's Top 10 ..."	
Week 12 18-05-2020	CGI scripting	Online Lecture Modules	Prac 9	S. Cozens, Beginning Perl.	
Week 13 25-05-2020	Server side programming using Perl	Online Lecture Modules	Prac 10	S. Cozens, Beginning Perl.	
Week 14 01-06-2020	Conclusion Final exam info			Start your revision	
Week 15 08-06-2020					

Weeks	Topic	Lecture	Tutorial	Independent	Assessments Due
Week 16 15-06-2020					
Week 17 22-06-2020					

The above timetable should be used as a guide only, as it is subject to change. Students will be advised of any changes as they become known on the unit's vUWS site.

4 Learning Resources

4.1 Recommended Readings

Prescribed Textbook

Jones, D. (2007). *VBScript, WMI and ADSI unleashed: using VBScript, WMI, and ADSI to automate Windows administration* (2nd ed.). Upper Saddle River, NJ: Sams Pub.

Additional Reading

Ford, J. L. (2005). *Microsoft WSH and VBScript programming for the absolute beginner* (2nd ed.). Boston, MA: Thomson Course Technology.

Jones, D. & Hicks, J. (2006). *Advanced VBScript for Microsoft Windows administrators*. Redmond, Wash.: Microsoft Press.

Jones, D. (2004). *Managing Windows(R) with VBScript and WMI*. US: Pearson Education Limited.

Jones, D. (Ed.). (2005). *The administrator shortcut guide to VBScripting for Windows*. In. Retrieved from http://eddiejackson.net/web_documents/The_Administrator_Shortcut_Guide_to_VB_Scripting_for_Windows.pdf

Kingsley-Hughes, A., Kingsley-Hughes, K. & Read, D. (2004). *VBScript programmer's reference*. (2nd ed.). Hoboken, N.J.: Wiley.

Malik, B. (2007). *Practical Windows administration scripting*. Boston: Charles River Media.

Torres, J. M. (2006). *Windows admin scripting little black book* (3rd ed.). Scottsdale, AZ: Paraglyph Press.

Wilson, E. (2004). *Microsoft Windows scripting self-paced learning guide*. US: Microsoft Press.