

# **Mainframe Systems 2 – 7857**

**Unit Outline 2009  
Semester 1 2009**

**Faculty of Information Sciences and Engineering**

**University of Canberra**

*Australian Government Higher Education (CRICOS)  
Registered Provider number: #00212K*

## Mainframe Systems 2 – 7857

### Unit Outline 2009, Semester 1

#### Faculty of Information Sciences and Engineering

#### University of Canberra

*Australian Government Higher Education (CRICOS)  
Registered Provider number: #00212K*

This Unit Outline must be read in conjunction with:

- a) *Studying at the University of Canberra: A Guide to Policies and Procedures*, which sets out University-wide policies and procedures, including information on matters such as plagiarism, grade descriptors, moderation, feedback and deferred exams, and is available at <http://www.canberra.edu.au/student-services>
- b) *Guide to Student Services at the University of Canberra*, and is available at <http://www.canberra.edu.au/student-services>
- c) Any additional information specified in section 6f.

#### 1: General Information

- 1a **Unit title**  
Mainframe Systems 2
- 1b **Unit number**  
7857
- 1c **Semester and year offered**  
Semester 1, 2009
- 1d **Credit point value**  
3
- 1e **Unit level**  
Level 3
- 1f **Name of Unit Convener and contact details (including telephone and email)**  
Unit Convener: Dr Kim Le  
Office: 11C12  
Tel: 6201 2425  
Email: [kim.le@canberra.edu.au](mailto:kim.le@canberra.edu.au)  
Unit Lecturer: Wayne Bickerdike

- 1g Administrative contact details (including name, location, telephone and email)**  
 ISE Faculty Office 11B14  
 Ph: 6201 2153, 6201 2417  
[ise@canberra.edu.au](mailto:ise@canberra.edu.au)

<b>2: Academic Content</b>
----------------------------

**2a Unit description and learning outcomes**

To develop practical skills in, and understanding of, the tools and practices typically used in managing mainframe processing environments by personnel with system administration responsibilities.

**Syllabus:** In this unit you will consider the management and optimisation of IT infrastructure in a corporate mainframe environment. This includes theoretical and practical.

**Learning Outcomes:** Upon successful completion of this unit you will be able to describe and evaluate factors affecting resource requirements, and systems performance in a corporate IT mainframe environment. You will be able to use and demonstrate the tools to analyse and manage the situation and propose configuration management procedures. You will have an overall ability to select the correct tools of analysis including additional tools relevant to security management and project management

**2b Prerequisites and/or co-requisites**

Prerequisites: 7854 Mainframe Systems 1

<b>3: Delivery of Unit and Timetable</b>
--

**3a Delivery mode**

Online

**3b Schedule of topics/lectures/tutorials/practicals/field classes by week**

Week	Activity
1	z/VM Concepts and introduction to REXX
2	REXX Programming in the z/OS environments TSO/BATCH
3	REXX in the CICS environment
4	JCL scripting and automation of JCL production
5	JCL file tailoring using REXX, REXX programming with Panels
6	REXX Interface to files
7	REXX CICS panel programming
8	Semester break
9	Semester break
10	z/OS - The UNIX operating system, USS - Unix Systems Services - Introduction
11	USS file systems - HFS and ZFS
12	USS Security - SSH access, Telnet.
13	Editing in USS, compiling and executing programs.

14	USS administration tasks, batch execution of USS services and programs
15	Summary and overview

#### 4: Unit Resources

##### 4a Lists of required texts/readings

TSO/E V2R4 REXX/MVS Reference (SC28-1883-06) - IKJ2A303

Free download from :

<http://www.elink.ibm.com/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=SC28-1883-06>

IBM Redbooks: See <http://www.redbooks.ibm.com/>

These are available as a free download in PDF format from the above site.

*Introduction to the New Mainframe: z/VM Basics*, IBM, 2007, PDF

Search : <http://www.redbooks.ibm.com/abstracts/sg247316.html?Open>

*ABCs of z/OS System Programming*, Vols 1-11, IBM, 2007, PDF

Search : <http://www.redbooks.ibm.com/cgi-bin/searchsite.cgi?query=abcs>

##### 4b Materials and equipment

IBM Mainframe access, provided by Global Online Learning Pty Ltd  
Vista tn3270 terminal emulator

##### 4c Unit website

The subject website can be accessed through UC Moodle. Students are advised to regularly check the subject website (at least twice each week) for the latest information on the subject material and other information including important announcements.

#### 5: Assessment

##### 5a Assessment overview

Assessment Item (including exams held in the exam period)	Due Date of Assignments*	Weighting (total to equal 100%)
1) z/VM basics	Friday Week 3	10
2) REXX usage	Friday Week 6	20
3) Unix Systems Services overview	Friday Week 11	20
4) Unix Systems Services administration	Friday Week 14	20

5) Final examination - 3 hours	UC Exam period	30
* Due dates may be changed based on lectures progress.		

## 5b Details of each assessment item

### 1) z/VM basics

- Virtualization technology in general and how it is exploited by z/VM
- Operating systems that can run as guest systems under z/VM
- z/VM components
- The z/VM control program and commands
- The interactive environment under z/VM, CMS and its commands

### 2) REXX Usage

- The REXX™ programming language.
- REXX in TSO/ISPF
- REXX in Batch
- REXX for JCL Automation
- REXX for system administration
- REXX under CICS
- REXX and screen based programming

### 3) Unix Systems Services overview

- USS file systems
- Security in USS
- Access to USS - ISPF shell, OMVS shell, SSH, Telnet
- Directories
- Program execution

### 4) Unix Systems Services administration

- Creating a USS user
- Securing a USS user
- File systems security
- Backing up a file system

### 5) Final examination

- To cover key topics from assessment items 1-4.

**5c Special assessment requirements**  
Nil

**5d Supplementary assessment**  
See UC supplement assess policy on  
[https://guard.canberra.edu.au/policy/policy.php?pol\\_id=2900](https://guard.canberra.edu.au/policy/policy.php?pol_id=2900) (section 7).

**5e Text-matching software**  
Nil

## **6: Student Responsibility**

**6a Workload**

The amount of time you will need to spend on study in this Unit will depend on a number of factors including your prior knowledge, learning skill level and learning style. Nevertheless, in planning your time commitments you should note that for a 3cp Unit the total notional workload over the fifteen week semester is assumed to be 150 hours or an average of 10 hours per week. These hours include time spent in classes. The total workload for Units of different credit point value should vary proportionally. For example, for a 6cp Unit the total notional workload over a fifteen week semester is assumed to be 300 hours or an average of 20 hours per week.

**6b Special needs**

Students who need assistance in undertaking the unit because of disability or other circumstances should inform their Unit Convener or the Disabilities Office as soon as possible so the necessary arrangements can be made.

**6c Attendance requirements**

Online teaching, need Internet access regularly.

**6d Required IT skills**

Familiar with IBM 3270 emulation and accessing mainframe systems.  
Basic JCL skills.  
Basic ISPF knowledge.  
Understanding of CICS, DB2 and COBOL.

**6e Costs**

- HECS: Students need to read information from DETYA guidelines or similar materials about HECS.
- Internet access.

**6f Additional information**

Additional information will be informed on the unit website.

<b>7: Student Feedback</b>
----------------------------

All students enrolled in this Unit will have an opportunity to provide anonymous feedback on the Unit at the end of the Semester via the Unit Satisfaction Survey which will be presented to you on OSIS. Your lecturer or tutor may also invite you to provide more detailed feedback on their teaching through an anonymous in-class questionnaire administered through the University's Teaching and Learning Centre (TLC).

<b>8: Authority of this Unit Outline</b>
--

Any change to the information contained in Section 2 (Academic content), Section 3 (Delivery of Unit and timetable) and Section 5 (Assessment) of this document, will only be made by the Unit Convener if the written agreement of staff and a majority of students has been obtained; and if written advice of the change is then forwarded to each student enrolled in the Unit at their registered term address. Any individual student who believes him/herself to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.