

Mainframe Application Development 1 – 7861

Unit Outline 2009

Faculty of Information Sciences and Engineering

University of Canberra

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

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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 Application Development 1
 - 1b Unit number**
7861
 - 1c Semester and year offered**
Semester 1, 2009
 - 1d Credit point value**
3
 - 1e Unit level**
Postgraduate
 - 1f Name of Unit Convener and contact details (including telephone and email)**
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- Name of Unit Moderator and contact details (including telephone and email)**

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2: Academic Content

2a Unit description and learning outcomes

To develop the ability to design, code, publish, run and test COBOL programs in a mainframe enterprise environment (zOS / OS390) including use of file systems for data access and the use of CICS with COBOL programs for interaction with the environment and for transaction processing and control.

Conceptual Development:

- Understanding and facility with procedural programming
- Understanding of COBOL language structure & syntax
- Understanding of COBOL program structure
- Familiarity with COBOL data types and data structures
- Understanding of the design of COBOL reports
- Knowledge of correct name conventions and structure
- Knowledge of CICS programming environment

Practical Outcomes:

- Maintain COBOL source code written by other programmers
- Develop COBOL programs in a mainframe environment
- Develop COBOL programs to work with data files
- Develop COBOL programs that sort input data
- Develop COBOL programs to call sub programs
- Develop COBOL programs for a CICS environment (Simple)
- Debug COBOL programs
- Develop COBOL report programs

2b Prerequisites and/or co-requisites

Pre/co-requisite: 7860 Mainframe Systems 1

3: Delivery of Unit and Timetable

3a Delivery mode

Mixed mode: Online (Moodle) and Intensive

There will be 4 occasions with intensive sessions. On each such occasion, there will be several sessions on Friday and several on the following Saturday. The typical format will be:

Friday 11 am – 1 pm	Supervised lab session
Friday 2 pm – 4 pm	Lecture
Friday 4 pm – 6 pm	Supervised lab session
Saturday 10 am – 12 noon	Lecture
Saturday 1 pm – 3 pm	Supervised lab session

The lecturer may modify this to suit the requirements at various stages of the course. The intensive sessions will be on the following dates:

Friday 27 Feb and Saturday 28 Feb.
Friday 03 Apr and Saturday 04 Apr
Friday 08 May and Saturday 09 May
Friday 05 Jun and Saturday 06 Jun

Except on weeks with a intensive sessions on Friday and Saturday, there will be online session, through Moodle, every Thursday from 7 – 9 pm. Students will need to connect through their LearnOnline account for these sessions. In addition, questions will be placed in a LearnOnline forum for discussion. The forum will be open between Thursday and Monday for responses. All students are expected to participate in the forum.

Questions to the lecturer may be left through the assigned section of LearnOnline at anytime. The lecturer will normally provide a response on a question within 2 working days. Note that all questions to the lecturer should be either in class or using the designated online forum, so that responses are available to all students.

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

Week/Lesson	Activity (Topics apply to Lectures and to Laboratory Sessions)
1*	Introduction to Cobol Structure, Syntax & Changing, Compiling & running
2	Report Production
3	Structured Programming
4	More Language Elements – Move, Initialise & IBM extensions
5	More Language Elements – Arithmetic & Intrinsic functions
6*	Working with dates & character strings, copies, CALLS & sub programs
7	Using Cobol Tables
8	Working with Sequential Files – fixed and variable length records
9*	Working with Indexed and Relative Files
10	Using Sort/Merge

11	Testing and Debugging Tools
12	Maintenance Programming
13 *	(Friday) Intro to CICS and Program life cycle
14 *	(Saturday) Review

Note: * lessons are given during the intensive sessions

4: Unit Resources

4a Lists of required texts/readings

Murach's "Mainframe COBOL" by Mike Murach, Anne Prince and Raul Menendez, ISBN-10: 1-890774-24-3, Mike Murach & Associates, Inc., Fresno, CA, 2004.

Enterprise COBOL for z/OS Programming Guide & Language Reference, Version 3, Release 3, IBM, 2004, PDFs

Debug Tool for z/OS & Debug Tool Utilities and Advanced Functions for z/OS User's Guide, Version 4, Release 1, IBM, 2003, PDF

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 Moodle. To access the Moodle site, you need to:

First open URL <http://learnonline.canberra.edu.au/> and select Log on to LearnOnline (Moodle) where you will be asked to provide your student ID (u#####) and your network password.

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%)
<i>Quality of participation in all course activities, including intensive classes and online</i>		8
<i>Multi choice Quizzes integrated into each lesson (13 in all) @ 2.5% each</i>		32.5
<i>Assignment 1: Assessed tasks using lessons 1 - 5</i>	April 3	5
<i>Assignment 2: Assessed tasks using lessons 1 - 8</i>	May 8	10
<i>Assignment 3: Assessed tasks using lessons 1 - 13</i>	June 14	14.5
<i>Final Exam</i>		30

5b Details of each assessment item

Multi choice exams are conducted in lectures/labs as appropriate
Assignments 1 to 3 shown in 5a are the assessment tasks to be undertaken on the mainframe computer system within a specified time period.

5c Special assessment requirements

1. In order to pass the unit, students must complete every item of the assessment.
2. In the case of illness, misadventure or unavoidable commitments at the scheduled time of an examination, students should contact the Unit Convener as soon as possible (well in advance).
3. Grades: For final assessment in the subject, the result will be one of the following grades: HD, DI, CR, P or Fail.

Performing satisfactorily in the assignments means there are no outstanding submissions at the end of the teaching period.

Subject to meeting the above requirements, your grade will depend on your Multi Choice Exam mark (MCEM) and the assignments mark (AM), where

Multi Choice Exam mark (MCEM) = (MCEM1+MCEM2+MCEM3+ . . .) converted to percentage.

Assignment mark (AM) = (A1+A2+A3) converted to percentage.

This will then be converted to a grade according to the following table:

Grade	Percentage Marks in each of the MCEM and AM components
HD	MCEM in the range ≥ 85 & AM ≥ 85
DI	MCEM in the range ≥ 75 & AM ≥ 75
CR	MCEM in the range ≥ 65 & AM ≥ 65
P	MCEM in the range ≥ 50 & AM ≥ 50
NX	MCEM in the range < 50 OR AM < 50

5d Supplementary assessment

Not available

5e Text-matching software

Not in use; however, the lecturer reserves the right to ask a student to attend extra oral defence to his/her assignment. Should it happen, the mark for the assignment will be based on the oral performance.

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

There will be no roll calls for lectures; however, students are encouraged to make every attempt to attend all scheduled teaching activities. Failing to do so may result poor understanding and failure of the unit.

6d Required IT skills

See Section 2b

6e Costs

Text book, Web access, and consumables.

Information about the DEST guidelines on student charges for HECS students can be found on OSIS.

6f Additional information

7: Student Feedback

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 through an anonymous questionnaire administered

through the University's Centre for the Enhancement of Learning Teaching and Scholarship (CELTS).

8: Authority of this Unit Outline

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/her to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.