CSN08101 Systems & Services: Module Information (2012-13)

	School of Computing	**Module Name:**	Systems & Services
SEMESTER :	1	**Module Number:**	CSN08101
LECTURERS:	Alastair Soutar, Frank Greig, Alistair Armitage, Jim Jackson	**Module Leader:**	**Alistair Armitage**

INTRODUCTION

This module has two halves, one on hardware and one on operating systems. The two sections are more or less independent. There are two lectures in each week. You will see on your timetable that you have one two hour practical block, but to begin with, that will be one hour of practical work on the computers, and one hour of tutorial written work. The class is large enough that the practical sessions have to be split up, but you only need to attend one two-hour session per week. You will be assigned to one of these laboratory groups depending on the rest of your timetable.

CLASS

			Room	
Lecture 1	Tuesday	12:00 – 13:00	A17	(all groups)
Lecture 2	Thursday	17:00 – 18:00	A17	(all groups)
Lab	Monday	16:00 - 18:00	C6/C27	
Lab	Wednesday	9:00 - 11:00	C6/C27	
Lab	Thursday	14:00 - 16:00 OR 15:00-17:00	C6/C27	
Extra tutorial	Tuesday	11:00 – 12:00	C27	

SYLLABUS OUTLINE

Two main topics:

1. Computer Architecture: PC systems, Pentium & ARM, I/O hardware, buses and methods
2. Operating Systems/Unix: Processes, memory systems, filestorage and Linux/Unix scripts

Learning Outcomes for module

On completion of this module, students will be able to:

LO1: Analyse the architecture of a range of processor based systems.
LO2: Compare and contrast the different approaches to system architecture.
LO3: Describe in detail how the main components of an operating system work.
LO4: Be able to write and test scripts for an operating system application.

ASSESSMENT TIMETABLE

ASSESSMENTS	WEIGHT	MATERIAL ASSESSED	Week	Time and Date
1A. Class test	50%	Hardware (units 1 - 6)	7	17:00, 23rd Oct 2014, A17
1B. Coursework	50%	Linux scripting and Operating systems	12/13	Part A – practical in lab Sessions; Part B – class test date 27th Nov (TBC), A17

OVERALL MARK AWARDED

The overall mark is made up of the weighted total from the hardware and the operating systems sections. To pass, your overall average must be greater than 40%.

SYSTEMS & SERVICES - DRAFT PLAN

Week begin	Wk	Lecture 1 Tuesday 12:00 1hr A17	Lecture 2 Thursday 17:00 1hr A17	Practical C6/C27	Practical/ Tutorial C6/C27
15/09/14	2	Unit 1: revision of hardware, Fetch execute AA	Unit 2a: PC architecture & mother-boards AA	Lab: CPU simulation (No Monday class: local holiday)	Tutorial 1: Number systems & basic architecture
22/09/14	3	Unit 2b: the Pentium Architecture AA	Unit 3a: RISC architecture AA	Lab: CPU-ID	Tutorial 2: PC motherboards
29/09/14	4	Unit 3: dram & cache AA	Unit 4: I/O Methods FG	Pentium assembly	Tutorial 3: Assembly lang.
06/10/14	5	Unit 4: I/O Methods FG	Unit 5: Bus Systems FG	Lab: GPIO	Tutorial 4: I/O Methods
1310/14	6	Unit 5: Bus Systems FG	Unit 6: I/O Devices FG	Lab: Serial I/O	Tutorial 5: Bus Systems
20/10/14	7	Unit 6: Interface Devices FG	HW Test (Units 1-6)	Lab: Analogue & Interrupts	Tutorial 6: Interface Devices & Test Revision
27/10/14	8	Intro to O/S AS OS Command line revision JJ	Linux utility commands JJ	Lab: C27 Practical Linux JJ	
03/11/14	9	Shell Scripts I JJ	Shell Scripts II JJ	Lab: C27 Linux Scripts JJ	
10/11/14	10	Processes ASr	Scheduling ASr	Lab: C27 Linux Coursework I JJ	
17/11/14	11	Memory ASr	Filestores ASr	Lab: C27 Linux Coursework II JJ	
24/11/14	12	Revision AS	Mini Class Test	Coursework submission/ demo JJ/ASr	
01/12/14	13	HW Test resit AA/FG	Mini Test resit JJ/ASr	Demo / Re- Submission JJ/ASr	
0812/14	14				
15/12/14	15				