**CSNB153**

**Computer System**

**Semester II, 2016/2017**

**Lecturer’s Info**

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| **Lecturer’s Name** | Eze Manzura Mohd Mahidin |
| **Room No.** | BW-3-C40 |
| **Office Tel. No.** | 03-8921 2020 ext: 3311 |
| **Email**  | rina@uniten.edu.my |
| **Time Table** |

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| --- | --- |
|  | Section 1 |
| Lecture | Tuesday (8 am – 10 am)BW-1-R06Wednesday (2 pm –3 pm)BW-1-R06 |

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| **Consultation Hours** | Wednesday (10.00 am– 10.30am)Friday (10.00 am – 11.00 am) |
| **PEO & PO** |  |
| **Aims/****Objectives** | This course aims to:* Explain the evolution of computers.
* Provide an overview of the structure and organization of computers.
* Explain the functions of various computer components and how it works.
* Introduce the concepts of operating systems (OS).
* Provide an overview of the task involve in OS installation, configuration and maintenance.
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| **Course Outcomes**  | At the end of the course, the student should be able to:* Explain concepts related to modern computer architecture and operating systems.
* Compare between various techniques that are used to manage a computer system.
* Describe the tasks involved in doing system administration.
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**Course Content and Weekly activity**

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| ***Week*** | ***Topic*** | ***Assessments*** |
| 1 | **1.Introduction - Course Outline****2.Computer Evolution and Operating System Concepts*** Basic computer system architecture
* Overview of components and system bus
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| 2 | **Computer Evolution and Operating System Concepts (Cont.)*** Operating System Objective and Functions
* Characteristics of Modern Operating Systems
* Top-level Instruction cycle
 | Quiz 1 |
| 3 | **Process Description and Control** * Process States
* Process Description
* Process Control
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| 4 | **Process Description and Control (cont.)*** Processes and Threads
* Process Scheduling
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| 5 | **Process Description and Control (cont.)*** Principles of Concurrency

**Memory** * Computer memory hierarchy
 | Test 1 |
| **6** | **MIDTERM BREAK** |  |
| 7 | **Memory (cont.)*** Internal memories: memory types, organization, and error processing
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| 8 | **Memory** * Cache memory
* External memories: discs, optical memories and magnetic tapes
* Memory Management Requirements
 | Quiz 2 |
| 9 | **Memory** * Memory management techniques: Partitioning ,Paging ,Segmentation
* Virtual memory concepts
 | Assignment 1 |
| 10 | **Input/Output** * Input /Output Subsystems: Ports, I/O interfaces and devices ,External devices
* Organization of the I/O Function
 | Test 2 |
| 11 | **Input/Output** * Programmed I/O, Interrupt-driven I/O and Direct Memory Access (DMA)
* I/O Buffering
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| 12 | **Input/Output** * Disk Scheduling
* Disk Cache
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| 13 | **System Administration*** Operating System platforms
* Operating System installation
* Operating System configuration and maintenance
* File management
 | Quiz 3 Assignment 2 |
| 14 | **Services** * Web service
* Network services
* Client services
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| 15 | **Revision** |  |
|  | **Final Exam** |  |
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**Text Book**

1. William Stallings, Operating Systems: Internals and Design Principles, 8th Ed. 2014
2. William Stallings, “Computer Organization and Architecture: Designing for Performance”, 9th. Edition or later, Prentice-Hall Inc., 2013

**Lecture Notes & Announcement**

The Lecture Notes can be downloaded from the following website: [*http://lms.uniten.edu.my/*](http://lms.uniten.edu.my/)

Announcement & important notices will be done at our website: *or via* ***Class Notice (email).***

**Assessment**

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|  Quizzes | 15%  |
|  Assignments | 20%  |
|  Test 1 Test 2 | 15%10% |
|  |  |
| **Final exam:** | 40%  |

**Attendance**

Attendance will be taken for every lecture and tutorial. It is a Uniten’s rule, that you must attend more than **80%** of the lectures to be admitted to the Final Examination. Your lecturer reserves the right to apply this rule.