**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](mailto:rina@uniten.edu.my) |
| **Time Table** | |  |  | | --- | --- | |  | Section 1 | | Lecture | Tuesday (8 am – 10 am)  BW-1-R06  Wednesday (2 pm –3 pm)  BW-1-R06 | |
| **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. |
| **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. |

**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 |  |
| 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 |  |
| 4 | **Process Description and Control (cont.)**   * Processes and Threads * Process Scheduling |  |
| 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 |  |
| 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 |  |
| 12 | **Input/Output**   * Disk Scheduling * Disk Cache |  |
| 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 |  |
| 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% |
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| **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.