

 **Jerash University**

 **Faculty of Computer Science and Information Technology**

 **Computer Sciences Department**

 **Semester**: Fall Semester 2018/2019

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| **Course symbol and number:**   | **Course Name:** الشبكات الانظمة متعددة الوسائط |
| **Teaching Language:** English | **Prerequisites:** . **1003250** |
| **Credits:** 3 hours**.** | **Course Level:** 3 |

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| **Course Description**  |
| This course provide the basic concept to network programming , also it gives the student the ability to use JAVA programming to different applications concerning network programs , also this course provide theoretical background to the capabilities of JAVA program in all aspects . |

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| **Course Objectives**  |
| * Understand the Java Micro Edition architecture, and the stacking of virtual machine, configuration, and profile to address different types of micro devices.
* Understand the mission of the Mobile Information Device Profile, and see how programming for mobile devices is fundamentally different from Java SE programming.
* Build a simple, functioning "MIDlet."
* Understand the framework for packaging and deploying MIDlets to devices.
* Build user interfaces for mobile devices, including text presentation, graphics, keypad and pointer event handling, and multi-screen navigation.
* Save and re-load information from one MIDlet run to the next using the MIDP Record Management System.
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| **Learning Outcomes**  |
| Upon completion of this course, the student will be able to: 1. Employ the physical security of network infrastructure components using National Institute of Standards and Technology (NIST) Guidelines and other best practices. 2. Develop backup procedures to provide for data security. 3. Use network operating system features to implement network security. 4. Identify computer and network threats and vulnerabilities and methods to prevent their effects. 5. Use tools to enhance network security. 6. Use encryption techniques to protect network data. |

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|  | **Text Book(s)**  |
| **Title**  | Security+ Guide to Network Security Fundamentals |
| **Author(s)**  | Mark Ciampa |
| **Publisher**  | 2012 |
| **Year**  | 2012 |
| **Edition**  | Fourth |

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|  | **References**  |
| **Books**  |  1. Security+ Guide to Network Security Fundamentals, Fourth Edition, Mark Ciampa, Course Technology, Cengage Learning, 2012. a. ISBN number is 978-1-1116-4012-5 |
| **Internet links**  |  http://www.jpu.edu.jo/lms |
| **Course link**  | [Click here](http://www.jpu.edu.jo/lms) |

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|  | **Instructors**  |
| **Instructor**  |   |
| **Office Location**  | الطابق السادس - 611 |
| **Office Phone**  | 666 |
| **E-mail**  |  |

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| **Topics Covered**  |
| **Topics**  | **Chapters in Text**  | **Week number**  | **Teaching hours**  |
| ***The Java ME Architecture**** Micro Devices
* The Need for Java ME
* The Java ME Software Stack
* Virtual Machine
* Configuration
* Profile
* Development Process
* The Java Wireless Toolkit

VM Speed Emulation | Ch1 | 1-3 | 2  |
| ***The Connected, Limited Device Configuration**** Classification of CLDC Target Devices
* Limitations of Java Language Support in CLDC
* The java.lang Package
* CLDC Collections API
* The Streams Model

The Generic Connection Framework | Ch2 | 4, 5, 6  | 7  |
| The Mobile Information Device Profile* Relationship of MIDP to CLDC
* MIDlets
* MIDlet Lifecycle
* Application Descriptors
* The Java Application Manager
* MIDlet Suites

Loading Resources | Ch3 | 8,9, 10  | 7  |
| The High-Level User-Interface API* Application Descriptors
* The Displayable Hierarchy
* Forms and Items
* Text Fields, Dates, and Times
* Choice Groups
* Alerts
 | Ch4 | 11  | 3  |
| ***The Low-Level User-Interface API**** The Canvas Class
* The Graphics Object
* Drawing Graphics
* Drawing Text
* Controlling Fonts
 | Ch5 | 12  | 3  |
| Event Handling* MIDP Event Architecture
* High-Level Event Handling
* Commands
* Item State Changes
* Low-Level Event Handling
* Keypad Input
* Pointer Input
* MVC in MIDP
* Model Events
 | Ch6 | 13,14 | 4 |
| ***The Record Management System**** Persistence on Mobile Devices
* Scope of Record Management
* Opening a Record Store
* Managing Records
* Using Streams for Record I/O
* Persistence Strategies
* Filtering and Sorting Records
 | Ch7 | 15 | 3 |
|  | Handout  |  |  |

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|  | **Evaluation**  |  |
| **Assessment Tool**  | **Expected Due Date**  | **Weight**  |
| Programming assignments and LMS |   | 20 %  |
| First Exam  |   | 20 %  |
| Second Exam  |   | 20 %  |
| Final Exam  | According to the University final examination schedule  | 40 %  |

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|  | **Policy**  |
| **Attendance**  | Attendance is very important for the course. In accordance with university policy, students missing more than the allowed absence rate of total classes are subject to failure. Penalties may be assessed without regard to the student's performance. Attendance will be recorded at the beginning or end of each class.  |
| **Exams**  | All exams will be CLOSE-BOOK; necessary algorithms/equations/relations will be supplied as convenient.  |

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| **Class Schedule & Room**  |

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| **Office Hours**  |
|  Sun: 11 – 12.30 Mon: 11 - 12:30  Tues: 11- 12.30  Wed: 11 – 12:30 |
|  | \* Or by an appointment through email |   |

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|  | **Teaching Assistant**  |
| To announced later on.  |  |

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|  | **Prerequisites**  |
| **Prerequisites by course**  |  |