# Templates NO (10)

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| **University** | Helwan |
| **Faculty** | Computers and Artificial Intelligence |
| **Department** | Software Engineering |

#### **Course Specifications**

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| **1- Course Data** | | |
| **Code: IT 222** | **Course Name:** **Computer Networks** | **Level: Three** |
| **Specialization:**  Information Systems | **No of Learning Units:**  Lecture (2) Practical (1) Tutorial ()  **Prerequisites**: |  |

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| **2- Course Objective:** | The goal of this course is to introduce the fundamental networking concepts and technologies. In this course, the students will learn how to develop the skills necessary to plan and implement small networks across a range of applications and to introduce the fundamental routing concepts and technologies. In this course, the students will learn about different types of routing protocols |
| **3- Intended Learning Outcomes (ILOs)** | |
| 1. **Knowledge and Understanding:** | **A1** Understand the basics of IP Addressing and subnetting  **A2** Understand the basic concepts of switched networks  **A3** Describe the importance of VLAN and inter VLAN Routing  **A4** Identify the difference between static and dynamic routing. |
| 1. **Intellectual Skills:** | **B1**  Describe the types of IP classes  **B2** Categorize the types of switches  **B3** Describe the types of VLANs and how to secure VLANs |
| 1. **Professional and Practical Skills:** | **C1:** Learn how to subnet a specific network  **C2** Learn how to configure switch  **C3** Demonstrate how to create VLANs |
| 1. **General and Transferable Skills:** | **D1** Apply knowledge for continual self learning  **D2** Develop the requirement for lifelong learning. |
| **4- Course Content:** | **Week 1 :** Subnetting  **Week 2: Introduction to switched networks**  **Week 3: Basic switch configuration**  **Week 4 : switch security management and implementation**  **Week 5:** introduction to VLANs  **Week 6: VLAN segmentation and implementation**  **Week 7: Quiz, Midterm**  **Week 8:** Introduction to routing concepts  **Week 9:** inter VLAN routing configuration  **Week 10:** Static Routing  **Week 11:** Dynamic Routing  **Week 12:** types of Dynamic routing protocols  **Week 13 :** types of Dynamic routing protocols  **Week 14 : Revision**  **Week 15: Final Exam.** |
| **5- Learning and Teaching Methods:** | Lectures  Case Study  Presentations |
| **6- Learning and Teaching Methods for students with limited skills:** | Academic advising |
| **7- Students Evaluation:** | |
| 1. **Used Methods** | - Semester work  - Final written Exam |
| 1. **Schedule** | * Assessment 1: Throughout the semester * Assessment 2: End of Semester (according to faculty’s exams schedule) |
| 1. **Grades Distribution** | * Final written exam: 50 marks * Semester Work: 50 marks (20 for midterm exam+ 20 for quizzes+10 for practical) * **Total**:100 marks |
| **List of Books and References:** | |
| 1. **Notes:** | * **course notes** |
| 1. **Mandatory Books:** | * CCNA basics and CCNA Routing and Switching |
| 1. **Suggested Books:** |  |
| 1. **Periodicals & Websites** |  |

**Course Professor: Dr. Ibrahim El desoky**

**Course Coordinator:**

**Chairman of the Scientific Department: Assoc.Prof. Amany Abdo**