## Republic of Iraq

The Ministry Of Higher Education

& Scientific Research





**University:** Baghdad

**College:** Science for women **Department:** computer science

Stage: Fourth stage

Lecturer name: haider.M.abdulhadi

Qualification: M.Sc. in Engineer

Place of work: college of Science for

women/ computer science

## Syllabus Form

| Instructor Name    | haider.M.abdulhadi  |            |         |         |            |
|--------------------|---|------------|---------|---------|------------|
| E-mail             | Haider.abdulhadi2@gmail.com   |            |         |         |            |
| Course Title       | Computer Networks   |            |         |         |            |
| Course Coordinator |   |            |         |         |            |
| Course Objectives  | To enable students to appreciate the basic fundamentals of networking systems and how to link many processes in a networking fashion.   |            |         |         |            |
| Course Description | The course starts with in-depth analysis of the ISO-OSI seven layers. LANs such as Ethernet, Ring, Slotted Ring, FDDI, Token Bus, and others, with their frame formats are discussed in detail. TCP/IP (Internet) layers with their frame format are all discussed in detail too. |            |         |         |            |
| Textbook           | 1. Computer Networks, fourth edition Tanenbaum, A., 2003.<br>Understanding Data Communications and Networks, Shay, W.,<br>1995.   |            |         |         |            |
| References         | <ol> <li>Data communications, Computer Networks and OSI, Halsall, F., 1996.</li> <li>Computer Networks and Internets, Comer, D., 1999.</li> </ol>   |            |         |         |            |
|                    | Term Tests  | Laboratory | Quizzes | Project | Final Exam |
| Course Assessments | As(25%)   | As(15%)    | As(0%)  | -       | As(60%)    |
| General Notes      | Type here general notes regarding the course  |            |         |         |            |

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## Course Weekly Outline

| Week | Date | Topes Covered  | Lab. Experiment Assignments                        | Notes |
|------|------|--|--|-------|
| 1    |      | Details of the ISO-OSI Model                             | Network devices                                    |       |
| 2    |      | Physical Layer and Framing in the<br>Data Link Layer     | Types of Network Communication Links               |       |
| 3    |      | Network and Transport Layers                             | UTP Configurations                                 |       |
| 4    |      | Error Control and Communication Protocols                | Simple Network  Designs Using a  Network Simulator |       |
| 5    |      | Session, Presentation and Application Layers             | Classes of IPs                                     |       |
| 6    |      | Ethernet Network   | Routers, Switches & Hubs ISO-OSI Layers            |       |
| 7    |      | Ring , Slotted Ring, CBX, FDDI and<br>Token Bus Networks | Troubleshooting your TCP/IP LAN Connection         |       |
| 8    |      | Window Size and Flow Control                             | Troubleshooting your Internet Connection           |       |
| 9    |      | Data Movement Through the TCP/IP  Model                  | MAC IP Relation on LANs                            |       |

| 10 | Internet Names and Addresses | MAC IP relation with Routers                               |
|----|------------------------------|--|
| 11 | IP routing                   | Local and Global Network Configurations                    |
| 12 | IPvr.4                       | Design of a Simple LAN System                              |
| 13 | IPvr.6                       | Design of a Medium size LAN System                         |
| 14 | TCP/IP                       | Integrating WLAN Systems Using Router(s) and Access Points |
| 15 | UDP                          | Design of a WAN System                                     |

Instructor Signature:

Dean Signature: