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| Date: | Examination No.: 15367 | Version:1/2/2023 | Start: 1/2/2023 |
| **Module Name - Code** | Data Communication - 5108 | | |
| **Module Language:** | English | | |
| **Responsible:** | M Sanar Fawzi | | |
| **Lecture (s):** | M Sanar Fawzi | | |
| **College:** | College of Engineering – Salahaddin University | | |
| **Duration:** | 15 week – 1 semester | | |
| **Course outcomes:** | On successful completion of the module students should be able to demonstrate:   1. Can understand how the data are carried in different mediums. 2. Understand the nature of each medium. 3. Use cases for each transmission method. 4. Know different modulation methods 5. How the signals can be used to transfer data. 6. Different networking topologies and their use cases. | | |
| **Course Content:** | Week 01: Introduction  Week 02: Classification of communication methods 1  Week 03: Classification of communication methods 2  Week 04: OSI model  Week 05: Signals  Week 06: Filters and coding  Week 07: modulation  Week 08: Quiz  Week 09: Sampling Theorem  Week 10: Analog-to-Digital Conversion  Week 11: Media Sharing Schemes  Week 12: Transmission Media  Week 13: Channel Impairments  Week 14: Framing  Week 15: Final Examination. | | |
| **Literature:** | • Oliver C. Ibe, “Fundamentals of Data Communication Networks”, 2018, Wily, USA  • Lectures and handouts | | |
| **Type of Teaching:** | 2 hrs in lectures  2 hrs laboratory working. | | |
| **Pre-requisites:** | None | | |
| **Frequency:** | Annually in Spring semester | | |
| **Requirements for credit points:** | For the award of credit points it is necessary to pass the module exam.  The module exam contains:  5 Homework  1 Report h, 1 Presentation, 1 Project  1 Quiz  Final Exam  **Student's attendance is required in all classes**. | | |
| **Credit point:** | 5 | | |
| **Grade Distribution:** | The Grade is generated from the examination result(s) with the following  50% Final Exam  10% [Report, Presentation, Project, Quiz] Each  2% Homework each | | |
| **Work load:** | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | ECTS Workload Calculation Form | | | | | | | | | Activity | S | Description | Activity Type | | No. | Time Factor | Workload | | **Course** | 1 | Theory | f | | 13 | 2 | 26 | | 2 | Preparation ( theory) | h | | 13 | 2 | 26 | | 3 | Practical | f | | 13 | 2 | 26 | | 4 | Preparation (practical) | h | | 13 | 2 | 26 | | **Assignment** | 5 | Homework | h | | 5 | 1 | 5 | | 6 | Report | h | | 1 | 4 | 4 | | 7 | Presentation | h | | 1 | 3 | 3 | | 8 | Project | h | | 2 | 3 | 6 | | **Assessment** | 9 | Quiz | h | | 2 | 0.5 | 1 | | 10 | Final | Theory | f | 1 | 2 | 2 | | 11 | Preparation | h | 1 | 6 | 6 | | 12 | Practical | f | 1 | 0 | 0 | | 13 | Preparation | h | 1 | 4 | 4 | | Face to face hours (f)/12 week | | | 4.50 | Face to face hours (f) | | | 54 | | Home hours (h)/16 week | | | 4.94 | Home hours (h) | | | 81 | | Total hours/16 week | | | 8.31 | Total hours | | | 135 | | **ECTS** (Total hours/ 25) | | | | | | | **5** | | | |