|  |  |  |  |
| --- | --- | --- | --- |
| 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: IntroductionWeek 02: Classification of communication methods 1Week 03: Classification of communication methods 2Week 04: OSI modelWeek 05: SignalsWeek 06: Filters and coding Week 07: modulationWeek 08: QuizWeek 09: Sampling TheoremWeek 10: Analog-to-Digital ConversionWeek 11: Media Sharing SchemesWeek 12: Transmission MediaWeek 13: Channel ImpairmentsWeek 14: FramingWeek 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 Homework1 Report h, 1 Presentation, 1 Project1 QuizFinal 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 following50% Final Exam10% [Report, Presentation, Project, Quiz] Each2% 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** |

 |