

COURSE: Electronic Components and Circuits DEGREE: Telematics Engineering YEAR: TERM: 2nd 1st

The course has 27 sessions distributed in 14 weeks. The duration of each session is 100 minutes (50 + 50) with 10 minutes breaks. The laboratory sessions are included in 4 of these sessions with a duration of 150 minutes.

The student will have a maximum of 2 sessions per week.

| | | WEEKLY P | Group | | | Chudan Washin Wark | | |
|-------|---------|--|------------|-------------|-------------------|--|----------------|------------------|
| Week | Session | | | oup | | Studen Weekly Work | | |
| | | Description | Lecture | Seminar | Location | Description | Class Hours | Homewor Hours |
| 1 | 1 | Course Presentation. Electronic and Photonic Components 1: Passive components | х | | | Comprehension of the introduction to laboratory instrumentation and measurement techniques | 1,67 | 7 |
| | 2 | Laboratory Instrumentation and Measurement Techniques | | Х | Lab. | measurement techniques | 1,67 | |
| 2 | 3 | Electronic and Photonic Components 2: Semiconductor fundamentals | х | | | • Theory | 1,67 | 5 |
| | 4 | Electronic and Photonic Components 3: Exercises with electronic components in current technologies | | х | | • Exercises | 1,67 | |
| 3 | 5 | Electronic and Photonic Components 4: Photonic components | х | | | Preparation of practice 1. Comprehension of the practices manual and the necessary theoretical calculations | 1,67 | 7 |
| | 6 | Laboratory practice 1 | | Х | Lab. | | 2,50 | |
| 4 | 7 | Electronic and Photonic Components 5: Applications of electronic and photonic components | х | | | Proposed exercises solving | 1,67 | 7 |
| | 8 | Electronic and Photonic Components 6: Exercises with electronic and photonic components in current applications | | х | | | 1,67 | |
| 5 | 9 | Electronic and Photonic Components 7: Applications of electronic and photonic components | х | | | Proposed exercises solving Preparation of practice 2. Comprehension of the practices manual and the necessary theoretical calculations | 1,67 | 7 |
| | 10 | Laboratory Practice 2 | | Х | Lab. | | 2,50 | |
| 6 | 11 | Signal Electronic Amplifiers 1: Concept and characteristic parameters of amplifiers | х | | | Proposed exercises solving Preparation of the Electronic Circuits simulation tools session | 1,67 | 7 |
| | 12 | Electronic Circuits Simulation Tools | | х | Computers | | 1,67 | |
| 7 | 13 | <u>Signal Electronic Amplifiers 2:</u> The Ideal Operational Amplifier and application circuits | х | | | Proposed exercises solving | 1,67 | 5 |
| | 14 | Signal Electronic Amplifiers 3: Exercises with IOA | | х | | | 1,67 | |
| 8 | 15 | Signal Electronic Amplifiers 4: Bias point and operation at medium frequencies | х | | | Proposed exercises solving | 1,67 | 5 |
| | 16 | Signal Electronic Amplifiers 5: Exercises with amplifiers at medium frequencies | | Х | | | 1,67 | |
| 9 | 17 | Signal Electronic Amplifiers 6: Amplification examples with discrete components Signal Electronic Amplifiers7: | Х | | | Proposed exercises solving | 1,67 | 5 |
| | 18 | Exercises of amplifiers with discrete components | | Х | | | 1,67 | |
| 10 | 19 | Signal Electronic Amplifiers 8: Applications | Х | | | Preparation for the Midterm Exam | 1,67 | 7 |
| | 20 | Signal Electronic Amplifiers 9: Exercises with integrated amplifiers | | Х | | | 1,67 | |
| 11 | 21 | MIDTERM EXAM | Х | | | Midterm Exam Preparation of practice 3. Comprehension of the practices manual and the necessary theoretical | | 6 |
| | 22 | <u>Laboratory Practice 3</u> | | Х | Lab. | | 2,50 | |
| 12 | 23 | Frequency Response 1: Concept of bandwidth, cut-off frequencies. Components that affect frequency response. | х | | | Preparation of practice 4. Comprehension of the practices manual and the necessary theoretical calculations | 1,67 | 5 |
| | 24 | Laboratory Practice 4 | | Х | Lab. | | 2,50 | |
| 13 | 25 | Frequency Response 2: Frequency response of amplifiers | х | | | Proposed exercises solving | 1,67 | 7 |
| | 26 | Frequency Response 3: Exercises | | Х | | | 1,67 | |
| 14 | 27 | Study cases 1: Proposal | х | | | Proposed exercises solving | 1,67 | 5 |
| 14 | 28 | Study cases 2: Solving | | Х | | 0 | 1,67 | |
| | | | | | | Subtotal 1 | 48,34 | 85 |
| 15 | | Make up alacce totalele homouppie has the state | Total 1 (0 | Class hours | and homework h | ours between weeks 1-14) | | 133,34 |
| 15 | | Make-up classes, tutorials, homeworks handing in, etc | | | | | 1,67 | 10 |
| 16-18 | | Exam preparation and exam | | | | Subtotal 2 | 3 4,67 | 12 |
| | | | Tatal C // | Nasa bar | and hamanis de le | | | 16,67 |
| | | | rotar 2 (C | JIASS HOUIS | and nomework n | ours between weeks 15-18) TOTAL | | 150 |