



DENOMINACIÓN ASIGNATURA: Instalaciones Eléctricas

GRADO: Ingeniería Eléctrica

CURSO: Tercero

CUATRIMESTRE: 2

*La asignatura tiene 29 sesiones que se distribuyen a lo largo de 14 semanas. Los laboratorios pueden situarse en cualquiera de estas ellas. Semanalmente el alumno tendrá dos sesiones, excepto en un caso que serán tres.*

| PLANIFICACIÓN SEMANAL DE LA ASIGNATURA |         |  |                     |           |   |  |                            |                       |   |
|--|---------|--|---------------------|-----------|---|--|----------------------------|-----------------------|---|
| WEEK                                   | SESSION | CONTENTS   | GRUPO<br>(marcar X) |           | Indicar espacio<br>distinto de<br>aula (aula<br>informática,<br>audiovisual,<br>etc.) | Indicar<br>SI/NO<br>es una<br>sesión con 2<br>profesores | TRABAJO SEMANAL DEL ALUMNO |                       |   |
|  |         |  | GRANDE              | PEQUEÑO   |   |  | DESCRIPCIÓN                | HORAS<br>PRESENCIALES | HORAS<br>TRABAJO<br>(Max. 7h<br>semana) |
| PARTE I: LOW VOLTAGE INSTALLATIONS     |         |  |                     |           |   |  |                            |                       |   |
| 1                                      | 1       | Calculation of L.V. distribution lines                             |                     | 28-29 ene |   |  |                            | 1,66                  | 7                                       |
| 1                                      | 2       | Part 1.1. Outdoor L.V. lines. Overhead and underground L.V. lines. | 30 ene              |           |   |  |                            | 1,66                  |   |
| 2                                      | 3       | Laboratory 1: L.V. calculation programs                            |                     | 4-5 feb   | Computer classroom  |  |                            | 1,66                  | 7                                       |
| 2                                      | 4       | Part 1.2. Indoor L.V. installations                                | 6 feb               |           |   |  |                            | 1,66                  |   |
| 3                                      | 5       | Problem: Calculation of indoor L.V. lines                          |                     | 11-12 feb |   |  |                            | 1,66                  | 7                                       |
| 3                                      | 6       | Part 1.3. Load estimation: housing, buildings and stores.          | 13 feb              |           |   |  |                            | 1,66                  |   |

|  |    |   |        |           |                    |  |  |              |              |
|--|----|---|--------|-----------|--------------------|--|--|--------------|--------------|
| 4  | 7  | Laboratory 2: L.V. calculation programs.  |        | 18-19 feb | Computer classroom |  |  | 1,66         |              |
| 4  | 8  | Part 1.4. Electric panels.  | 20 feb |           |                    |  |  | 1,66         | 7            |
| 5  | 9  | Part 1.5. L.V. Project  |        | 25-26 feb |                    |  |  | 1,66         |              |
| 5  | 10 | L.V. Exam   | 27 feb |           |                    |  |  | 1,66         | 7            |
| <b>PARTE II: MEDIUM AND HIGH VOLTAGE INSTALLATIONS</b> |    |   |        |           |                    |  |  |              |              |
| 6  | 11 | First order transients (RL and RC)  |        | 4-5 mar   |                    |  |  | 1,66         |              |
| 6  | 12 | Circuit breaker selection. Equipment isolation from ground.                                   | 6 mar  |           |                    |  |  | 1,66         | 7            |
| 7  | 13 | Second order transients (LC)  |        | 11-12 mar |                    |  |  | 1,66         |              |
| 7  | 14 | Arcing. Transient Recovery voltage.   | 13 mar |           |                    |  |  | 1,66         | 7            |
| 8  | 15 | Obtaining Transient recovery voltaga  |        | 18-19 mar |                    |  |  | 1,66         |              |
| 8  | 16 | Temporary overvoltages: Ground faults, load drop, resonances, ferorresonances.                | 20 mar |           |                    |  |  | 1,66         | 7            |
| 9  | 17 | Laboratory 3: Computer simulation of concentrated paramenter circuits                         |        | 25-26 mar | Computer classroom |  |  | 1,66         |              |
| 9  | 18 | Transients in the connection and disconnection of capacitor banks                             | 27 mar |           |                    |  |  | 1,66         | 7            |
| 10   | 19 | Wave reflection and refraction. Application Problem   |        | 8-9 abr   |                    |  |  | 1,66         |              |
| 10   | 20 | Examination: Circuits of concentrated parameters  | 10 abr |           |                    |  |  | 1,66         | 7            |
| 11   | 21 | Problems of distributed parameter circuits  |        | 15-16 abr |                    |  |  | 1,66         |              |
| 11   | 22 | Switching overvoltages. Slow overvoltages.  | 17 abr |           |                    |  |  | 1,66         | 7            |
| 12   | 23 | Problems: Circuits with distributed parameters  |        | 22-23 abr |                    |  |  | 1,66         | 7            |
| 12   | 24 | Standarization. Angel Ramos   | 24 abr |           |                    |  |  | 1,66         | 7            |
| 13   | 25 | Ligthning. Fast overvoltages. Line shielding.   |        | 29-30 abr |                    |  |  | 1,66         | 7            |
| 13   | 26 | Problems: Line shielding.   | 4 may  |           |                    |  |  | 1,66         | 7            |
| 14   | 27 | Laboratory 4: Computer simulación of distributed parameter circuits                           |        | 6-7 may   | Aula Informática   |  |  | 1,66         | 7            |
| 14   | 28 | Surge arresters: Constitution, location, selection. Problem: Energy loss in a surge arrester. | 8 may  |           |                    |  |  | 1,66         | 7            |
|  |    |   |        |           |                    |  |  |              | 5            |
| <b>Subtotal 1</b>                                      |    |   |        |           |                    |  |  | <b>48,33</b> | <b>102,5</b> |

**Total 1** (Horas presenciales y de trabajo del alumno entre las semanas 1-14)

151

|   |  |  |           |  |  |  |  |  |            |           |
|---|--|--|-----------|--|--|--|--|--|------------|-----------|
| 15  |  | Theory exam: AT y MT installations<br>Problem exam: distributed parameter circuits,<br>shielding, surge arresters. | 13<br>may |  |  |  |  |  | 10         |           |
| 16  |  | Preparación de evaluación y evaluación   |           |  |  |  |  |  | 3          |           |
| 17  |  |  |           |  |  |  |  |  | 15         |           |
| 18  |  |  |           |  |  |  |  |  |            |           |
| <b>Subtotal 2</b>   |  |  |           |  |  |  |  |  | <b>3</b>   | <b>26</b> |
| <b>Total 2</b> (Horas presenciales y de trabajo del alumno entre las semanas 15-18) |  |  |           |  |  |  |  |  | 29         |           |
| <b>TOTAL</b> (Total 1 + Total 2. <u>Máximo 180 horas</u> )                          |  |  |           |  |  |  |  |  | <b>180</b> |           |