

*IAEM*

**ELECTROMEDICINE  
ADVANCED**

**Specialisation Courses**

- General Objectives
- Thematic Contents
- Course Organisation

## 1. Course:

### **Electromedicine Advanced Course**

## 2. Objectives:

Aimed at understanding the principle of operation of electrical/electronic instruments and the various technologies applied in the health area. It will enable you to carry out repairs, technical assistance and maintenance of electromedical equipment and installations.

## 3. Aimed at:

Maintenance personnel in health institutions. Providers of electromedical equipment installation or repair services.

## 4. Summary description of contents:

1. **Electromedicine:** Sterilisation, Laboratory, Spirometry, Mechanical ventilation, Medical gases, Dental equipment, Holter, Multiparametric monitors
2. **Diagnostic imaging:** Fundamentals of Ultrasound, Ultrasound, Introduction to tomography, Introduction to magnetic resonance imaging
3. **Electronics and electromedical practice:** Organisation of maintenance, Test equipment, Repair and soldering techniques, Analogue and digital circuit analysis, Repair of power supplies

## 5. Thematic units and distribution:

### **ELECTROMEDICINE:**

- Unit 1: Sterilisation
- Unit 2: Laboratory
- Unit 3: Spirometry
- Unit 4: Mechanical ventilation
- Unit 5: Medical gases
- Unit 6: Dental equipment
- Unit 7: Holters
- Unit 8: Multiparametric monitors

### **DIAGNOSTIC IMAGING:**

- Unit 1: Fundamentals of Ultrasound
- Unit 2: Ultrasound
- Unit 3: Introduction to tomography
- Unit 4: Introduction to magnetic resonance imaging

## **ELECTRONICS AND ELECTROMEDICAL PRACTICE:**

- Unit 1: Organisation of maintenance
- Unit 2: Test equipment
- Unit 3: Repair and soldering techniques
- Unit 4: Analogue and digital circuit analysis
- Unit 5: Repair of power supplies

## **6. Previous knowledge required:**

General technical knowledge.

## **7. Certificate:**

Participants will receive a certificate of attendance or approval (if all the questionnaires were correctly filled in).

## **8. Organización del curso:**

### **1. Easy and comprehensive teaching**

Our modules are developed in a simple way to make it easy for the student to succeed. The teaching starts from the most elementary and step by step goes through the details until you receive a complete and complex teaching.

### **2. Affordable tuition**

You can study with the ease of paying a small fee to complete the course without any effort on your part. The price of our course is very low, as we are a non-profit organisation. The fee includes the membership fee and all the material until the end of the course. All the study texts are prepared by the institute, which has its own bibliography due to the lack of specific books on the market. In the face-to-face courses, students are provided with study books, materials, tools and instruments for practice, free of charge, by the institute to be used during the instruction.

### **3. Correction of questionnaires**

The student completes an online questionnaire and sends the answers of each module to be corrected by his teacher who checks one by one the student's answers, grades them by giving each questionnaire the corresponding mark and sends them back to the student so that he can appreciate the corrections, review the subjects observed and keep them in his possession.

### **4. Duration of the course:**

In distance learning courses, the duration of the course depends on the time that the student can dedicate to the study of the modules and his previous knowledge. It is estimated at 3-4 months.

### **5. Final exams**

Passing all the evaluation questionnaires will lead to the promotion of the subjects without the need to take a final exam. If students have to take a final exam, they do so in the same way and do not have to travel to the institute to take the online final exam. The final exam questionnaires are prepared to be

completed by the "open folder" method and solved by the student with all the material received during the course.

#### **6. Technical consultations**

Every student can use the "consultation service" which is a real technical support in the resolution of problems.

#### **7. Didactic material:**

All students receive the documentation for each module with theoretic and practical topics.

### **9. Teaching staff**

Director: Prof. Carlos Daneri

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