



## **INNOVATIVE PROTOCOLS IN MEDICINE.**

**FROM NEW ADMINISTRATION METHODS TO  
MOLECULAR NANOVAPORIZATION, FROM  
MAGNETIC STIMULATION TO NEW SURGICAL  
TECHNIQUES - BALLOON AND LASER**

Advanced Training Course

*Under the patronage of*



**UnitelmaSapienza.it**



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## 1. Purpose

The Advanced Training Course in "***Innovative Protocols in Medicine: from new methods of administration to Molecular Nanovaporization, from Magnetic Stimulation to new balloon and Laser surgical techniques***" aims to provide students and interested professionals with the tools to learn the theoretical and practical foundations and protocols of the most modern diagnostic and therapeutic methods for the health and integral well-being of the person, according to an innovative integrated vision of high biomedical technology.

## 2. Target audience

The Advanced Training Course is aimed at the following professional profiles:

- Health professionals (doctors, biologists, pharmacists, nurses, physiotherapists, audiologists, hearing aid specialists) interested in understanding the applications of advanced technologies in medicine.
- Researchers and technologists in the field of biological and biomedical sciences.
- Biomedical engineers and specialists in nanotechnologies applied to health.

## 3. Admission requirements

Those who meet the following requirements are eligible to enroll in the Advanced Training Course:

- i. a degree obtained in accordance with Ministerial Decree no. 270/2004;
- ii. a degree obtained in accordance with Ministerial Decree no. 509/1999;
- iii. a degree obtained under previous regulations;
- iv. a qualification obtained abroad and recognized as equivalent under current legislation.

## 4. Teaching

The teaching methodology used for the course involves video lessons, supplemented by related teaching materials that can be downloaded from the platform. Students can therefore follow the lessons at any time, 24 hours a day, and in their preferred mode – video/audio video.

There is also an experiential teaching component, consisting of case studies carried out through practical activities in contexts such as the operating room or clinic (also delivered asynchronously), aimed at illustrating the practical application of the clinical and surgical protocols covered in the theoretical part of the course.



## 5. Assistance and Tutoring

The University guarantees continuous assistance and support for the learning process of students through the presence of an expert and qualified tutor.

In addition to providing assistance to University students, the tutor proactively manages the relationship with the virtual class of students, preparing all teaching and information tools deemed useful to support students, also using synchronous and asynchronous methods, such as chat, forums, etc.

## 6. Duration and organization of the Advanced Training Course

The Advanced Training Course lasts 6 months.

The course provides 20 credits in the sectors FIS/07, MED/31, MED/06, MED/50, CHIM/06, MED/18, MED/03, and MED/27.

There will be a midterm test in the form of a multiple-choice quiz, administered directly through the course's online platform. The test will be graded on a scale of 30/30.

In order to obtain the course diploma, a final exam in the form of an oral discussion of the written PW is required.

## 7. Management and Teachers

The Advanced Training Course is directed by Prof. Bruno Brandimarte (Full Professor of Electronic Measurements, University of Tor Vergata, Rome) and Prof. Lino Di Rienzo Businco (Head of Otolaryngology, San Giovanni Battista Hospital - Order of Malta, Rome).

The teachers of the Master's program are:

- Prof. Bruno Brandimarte (Full Professor of Electronic Measurements, University of Tor Vergata, Rome)
- Prof. Lino Di Rienzo Businco (Head of Otolaryngology, San Giovanni Battista Hospital - Order of Malta, Rome)
- Prof. Giampaolo Tortora (Full Professor of Medical Oncology, Catholic University Policlinico Gemelli Rome)
- Prof. Giovanni Pellacani (Full Professor of Dermatology, La Sapienza University, Rome)
- Dr. Andrea Di Rienzo Businco, (Head of Allergology, Pertini Hospital, Rome)
- Prof. Virgilio Sacchini (Director of *Breast Unit*, Sloan Kettering, New York)
- Prof. Giuseppe Novelli (Director of the Institute of Genetics, University of Tor Vergata, Rome)
- Dr. Pasquale Davide Longo (Audiologist, Clinical Research Unit, Integria Foundation, Rome)



## 8. Final exam and diploma

At the end of the training course, participants will be required to complete a project in the form of a written thesis, which involves the design and drafting of a clinical research protocol that will be evaluated by the course faculty.

At the end of the course, a Diploma of Participation will be awarded (with the awarding of 20 CFU - University Credits).

## 10. Registration and fees

Enrollment in the course is possible at any time of the year in the appropriate "Enroll" section online at [www.unitelmasapienza.it](http://www.unitelmasapienza.it).

The full registration fee for the Advanced Training Course is **€1.900,00**, payable in two installments:

- the first, €600.00, upon registration;
- the second, €500.00, within 30 days of the registration date.

## 11. COURSE PROGRAM

The Advanced Training Course program provides for the attainment of **20 credits**, divided into **18 credits** for teaching, according to the **11 modules** indicated below, and **2 credits** for the final Project Work.

### MODULE I - Biophysics applied to technological innovations for medicine

**(FIS/07; 2 credits)**

Lecturers: Prof. Bruno Brandimarte (Full Professor of Electronic Measurements, University of Tor Vergata, Rome)

### MODULE II - Description of the nano molecular vaporizer, tinnimultistop, ambient air and breath sensor, intracranial magnetic stimulation, LASER for ENT surgery

**(FIS/07; 2 CFU)**

Lecturers: Prof. Bruno Brandimarte (Full Professor of Electronic Measurements, University of Tor Vergata, Rome)

### MODULE III - Technological innovations and integrated protocols for minimally invasive surgery

**(MED/31; 6 CFU)**

Lecturers: Prof. Lino Di Rienzo Businco (Head of Otolaryngology, San Giovanni Hospital, Order of Malta, Rome)



**MODULE IV - New routes of chemotherapy administration in oncology  
(MED/06; 1 CFU)**

Lecturers: Prof. Giampaolo Tortora (Full Professor of Medical Oncology, Catholic University Policlinico Gemelli Rome)

**MODULE V - Transcutaneous drug administration via molecular vaporization: protocols for clinical results  
(MED/50; 1 CFU)**

Lecturers: Prof. Giovanni Pellacani (Full Professor of Dermatology, La Sapienza University, Rome)

**MODULE VI - Allergic hyperreactivity syndrome of the respiratory tract: precision and personalized protocols  
(MED/31; 1 CFU)**

Lecturers: Dr. Andrea Di Rienzo Businco, (Head of Allergology, Pertini Hospital, Rome)

**MODULE VII - Biochemistry of inhaled compounds for molecular vaporization therapy  
(CHIM/06; 1 CFU)**

Lecturers: Prof. Bruno Botta (Full Professor of Organic Chemistry, La Sapienza University, Rome – Rector of Unitelma Sapienza)

**MODULE VIII - Clinical applications of the nanovaporizer in general surgery (MED/18; 1 CFU)**

Lecturers: Prof. Virgilio Sacchini (Director of the Breast Unit, Sloan Kettering, New York)

**MODULE IX - Innovative therapies with monoclonal antibodies and vaccines using molecular vaporization  
(MED/03; 1 CFU)**

Lecturers: Prof. Giuseppe Novelli (Director of the Institute of Genetics, University of Tor Vergata, Rome)

**MODULE X - Indications and clinical results of magnetic stimulation in tinnitus and cochlear damage  
(MED/31; 1 CFU)**

Lecturers: Dr. Pasquale Davide Longo (Audiologist, Clinical Research Unit, Fondazione Integria Roma)

**MODULE XI - Transcranial magnetic stimulation (TMS) and comparison with bimodal soft TMS: indications and results in neurology (MED/27; 1 CFU)**

Lecturers: *to be confirmed*



## SUMMARY

- **Total Modules: 11 for a total of 18 credits**
- **Project work/final thesis: 2 credits**
- **Total credits: 20**
- **Total teaching hours: 500**
- **Laboratories/interactive teaching: 40-minute laboratories (asynchronous)**

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## INFORMATION

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