SCUOLA SUPERIORE di CATANIA
STUDI UNIVERSITARI E DI PERFEZIONAMENTO

Università degli Studi di Catania

II level international postgraduate Master in Mininvasive Surgery and New Technologies

The Master's primary aim is to develop skills in Mininvasive Surgery and Computer Technologies in order to offer surgeons living in the Mediterranean Area the opportunity to master mininvasive procedures in diagnostics and treatment and to practice with the most advanced medical equipment and methods used in microsurgery.

Participants who successfully conclude the master will be specialised in mininvasive surgery procedures and will acquire specific skills in technological methods and tools used in microsurgery.

The master is directed to foreign graduates in Medicine and Surgery, living in the Mediterranean Area, who need to develop skills in general surgery and in mininvasive surgery procedures, provided that nowadays the majority of surgical performances (about 70%) are carried out using laparoscopic methods. At the end of the master participants will be able to perform the most delicate surgical operations with mininvasive procedures while sharing the skills acquired during the course with other professionals working in the same field.

The master is directed to 12 participants and lasts 12 months for a total of 1500 hours articulated as follows: frontal lessons, seminar sessions, teleconferences, group work in operating room, simulating sessions and practical exercises (450 hours), Internship (400 hours), individual and team work, (500 hours), final written report (150 hours).
At the end of the master, participants will gain 60 credit points.

PROGRAMME

Course Modules:

Basic laparoscopic surgical anatomy

Basic laparoscopic surgery

Advanced laparoscopic surgery

Minimally invasive techniques and robotics

Modules
Basic laparoscopic surgical anatomy (video laparoscopic surgical anatomy of abdominal and thoracic chamber; instruments and materials; anaesthesiology knowledge; indications to diverse pathologies with a laparoscopic approach; medical-legal aspects; complications).
Basic laparoscopic surgery (cholecyst and principle biliary truct surgery; benign and malignant gastric surgery; gastric esophageal reflux surgery; abdominal wall defects surgery; urgency laparoscopic surgery).
Advanced laparoscopic surgery (obesity surgery; esophageal surgery; thoracic surgery; spleen surgery; liver and pancreas surgery; endocrine surgery; colon-rectal surgery; gynaecological surgery; kidney surgery).
Minimally invasive techniques and robotics (knowledge of diverse technologies applied in the field, up to virtual reality and telemanipulation).

OBJECTIVES

Through an innovative teaching method, comprehending not only theoretical lectures, but also operating room group work, highly advanced technologies for simulation, teleconference, and practise, the master aims to:

1. provide students with an adequate cultural support related to mininvasive surgery, its indications and limits, tinged principles to diverse surgery procedures, anaesthesiology issues;

2. deepen the knowledge of laparoscopic surgical anatomy, necessary for the optimal fulfilment of diverse procedures;
3. favour the acquisition of specific competences in relation to equipment and technological supports;
4. provide with specific technical competences in relation to basic surgical procedures representing consolidated methods: through frontal lessons, seminars with video and following discussion, practical demonstration in operating room as well as didactic through simulators.
5. provide with an adequate cultural support on advanced surgical procedures requesting an high level training. It will be obtained through frontal lectures, seminars, visual supports and simulators.
6. provide with a knowledge of diverse technologies related to the specific field up to virtual reality and telemanipulation

REQUIREMENTS

The admission requirements are a degree in Medicine and Surgery and a good knowledge of the English language.

Lessons will be held by Professors from the University of Catania and other Italian and foreign Universities and by experts in mininvasive surgery. The master also contemplates sessions of internship at local and national qualified Institutions aimed at training participants in laparoscopic procedures involving both the operating conditions and experimental activities. Students will also acquire skills through simulated operating conditions laboratories in which the majority of surgical performances will be computer simulated. So trainees will have the opportunity to experience the skills acquired before entering the operating room and also can monitor directly what and how they are learning. In order to gain the master qualification, participants are due to draw up a final written report aiming at an overall assessment of the student's entire course of studies, results of the skills and contents acquired during the course and the internship.