

ADVANCED SURGICAL SKILLS

Compulsory elective subject for third to fifth-year students of the Faculty of Medicine.

Teacher in charge of the course: Prof. habil. Mihály Boros, M.D., Ph.D., D.Sc., Head of Department.

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Course code: AOK-KA1461 (lecture), AOK-KA1462 (practice)

Course credit: 2

Course hours per week: 2 (lecture) + 2 (practice)

Prerequisite of registration: Completion of the of Basic Surgical Skills (or Surgical Techniques). The subject should be taken up and accomplished in the 3th-5th semesters.

The aim of the subject: teaching basic surgical techniques, invasive interventions and advanced surgical knowledge to medical students interested in different surgical specialties.

Acquired competence: By applying principles of asepsis, the student is autonomously able to perform minor surgical interventions, bowel and vessel anastomoses, tracheostomy and laparotomy, and routinely uses traditional and minimal invasive surgical instruments under simulated sterile operating conditions.

Method: online lectures (6 x 120 min) + practices (6 x 120 min)

Topics of the lectures (6 x 120 min):

- 1. Surgical asepsis and basic surgical techniques.** Historical background. Surgical infections, sources of infections. Types, classification, risks and prevention of wound contaminations. Sterilization, disinfection. Preparation of the patient before operation: scrub preparation and isolation of the surgical site. Scrubbing, disinfection, gowning and gloving of the operating team. Personnel attire and movement. Basic rules of asepsis in the operating room. Postoperative wound management. Surgical antisepsis. Design and equipment of the operating room, basic technical background. Operating room personnel and their duties. Positioning of the patient on the operating table.
- 2. Minor surgical procedures.** Incisions, excisions, biopsies, local anaesthesia. Minor surgical procedures: Principles of ambulatory surgery, sterility, surgical instrumentation, surgical tasks, administration. Possibilities of incisions and excisions. Surgical indications. Biopsy techniques, indications. Preoperative preparations on patients. Basics of local anaesthesia (anaesthetics, types of anaesthesia, complications).
- 3. Conicotomy, tracheostomy.** Principles, indications of tracheostomy and conicotomy, risks and responsibility.
- 4. Basics of abdominal surgery, incisions, laparotomy.** Principles, and indications of laparotomy, risks and complications. Closure of laparotomy. Basics and indications of appendectomy.
- 5. Advanced surgical techniques: enterotomy, bowel- and vessel anastomoses.** Advanced surgical suturing techniques. Definition, characteristics, indications methods and possible complications of enterotomy. Indications and methods vessel anastomoses.
- 6. Advanced laparoscopic procedures.** Types of laparoscopic surgery. Consequences of pneumoperitoneum (pathophysiological aspects, complications). LC appendectomy, cholecystectomy.
- 7. Basics of thoracic and cardiac surgery.** Historical background. Technical principles. Instruments. Pathophysiological aspects, complications.

Topics of practices (6 x 2 hours):

- 1. Scrubbing.** Basic knotting and suturing techniques (2 hours)

2. **Minor Skin Procedures.** Local anesthesia. Ellipse excision of skin. Removal of encapsulated structures (cysts, tumors). Incision of abscesses (2 hours)
3. **Advanced suturing techniques.** Enterotomy. Intestinal and vessel anastomoses. (2 hours)
4. **Minimally invasive surgery** (2 hours)
- 5-6. **Advanced forms of surgical hemostasis** and suturing techniques on a large animal model. Tracheostomy. Laparotomy (4 hours)

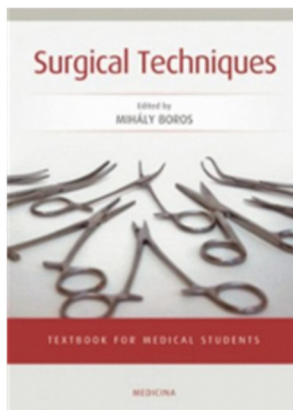
Criteria for completing the course:

- Viewing of the online lectures is recommended, attendance of practices: a minimum of 75% is compulsory. Making-up of missed practices is possible only if schedule makes it possible and only after obtaining written permission from the course organizers.
- Acknowledgement of absences from practices and exams are based on medical certificate.
- Requirements for acknowledgement of practices is visiting minimum of 75% of practices.
- Practical exam is on week 14, improvement possibility of practical exam marks is on week 15.
- The prerequisite for the theoretical examination is the completion of a successful practical exam, which can be achieved by successful completion of all three practical exam tasks until the end of the semester.

Evaluation:

- We evaluate the performance of the students on all practices and give a continuous feedback of their progress.
- Written theoretical test (5-grade).

Compulsory textbooks:



Surgical Techniques

Textbook for medical students

Mihály Boros (ed.)

Medicina, Budapest, 2009.



Practical Skills Syllabus

Mihály Boros (ed.)

Innovariant Kft., Szeged, 2008.

Recommended literature: Tutorial video