MEDWAIZ

Health education

Advanced online course on

SURGICAL ENDOSCOPY FOR INSTRUMENT TECHNICIANS

Directors:

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Online Course

Self-study, videoclasses and online seminars

Duration

184 hours in 3 months

Start date

March 1, June 2 and September 3

sence
Súmate a los nuevos empleos

√ Course with Sence Code

Information and registration

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Advanced online course on

SURGICAL ENDOSCOPY FOR SURGICAL INSTRUMENT TECHNICIAN

01. Basis

Surgical endoscopy represents a milestone in the evolution of modern medicine, offering unparalleled advantages in terms of minimal invasiveness, rapid postoperative recovery and unprecedented anatomical visualization. These advances, while promising, introduce particular challenges in the instrumentation domain.

The role of the surgical instrumentalist in this scenario is of vital importance. Not only is he or she entrusted with the preparation and optimization of instrumentation, but also with the responsibility to anticipate and adapt to the surgeon's demands during the procedure. This requires a mastery of instrument knowledge, functionality and identification of potential complications, as well as a thorough understanding of endoscopic surgery and its unique characteristics.

02. Teachers

Dr. Ignacio Miranda

Dr. Nicolás Guiloff

Dr. Mauricio Correa

03. Online component (184 hours)

- 10 Video classes:
  Theoretical knowledge in expository classes.
- 3 Tutorial seminars:
  Space to resolve doubts and review of concepts.
- Self-study:
  Detailed reading of the surgical instrumentation manual.

04. General objective

To develop advanced skills and specific competencies in surgical instrument technician for the correct handling, maintenance and optimization of the use of instruments in endoscopic procedures, thus guaranteeing the efficiency and safety of minimally invasive surgeries. and safety of minimally invasive surgeries.

05. Specific objectives

a. To provide the general fundamentals of the operation, handling and storage of laparoscopic and hysteroscopic instruments used in intermediate and advanced surgeries.

b. To know the basic principles of endoscopic surgery, the distribution of instruments, equipment and personnel in the ward.

c. Acquire knowledge of electrosurgery and energy.

d. Acquire knowledge of the different problems and frequent situations in the endoscopic surgery ward.

e. To become familiar with the timing of advanced endoscopic surgery in order to achieve an adequate integration with the surgical team.

06. Methodology

This course has been structured to respond to the training demands of ward instrumentalists in intermediate-advanced level endoscopic surgery. With the integration of multiple pedagogical strategies, we seek to ensure learning that is not only deep in its theoretical understanding, but also directly applicable to clinical surgical practice.

a. **Self-study:** The first stage of the course is focused on self-study, where a manual on surgical instrumentation in endoscopic surgery will be provided. This material has been created to provide students with a solid theoretical foundation, allowing them to progress at their own pace and establish a foundation prior to the interactive sessions.

b. **Video Classes:** Complementing the self-study, online theoretical classes will be offered, taught by experts in the field. These classes, structured under an active learning approach, will not only provide information, but will also engage students in discussions and analysis, fostering critical thinking and a deep understanding of the topics addressed.

c. **Online Seminars:** In order to strengthen understanding and clarify possible doubts, three online seminars will be conducted, each lasting 90 minutes. These sessions will allow students to interact directly with faculty, review key concepts, resolve questions and analyze simulated clinical situations in detail.

07. Evaluation

There will be tests for each unit (70% of the final grade) and a final test (30% of the final grade).

08. Assistance

It will be 100% mandatory

09. Cause for disapproval

Grade lower than 5 or non-attendance in the course

10. Units

Unit I: General aspects of endoscopic surgery

Chapter 1: Introduction to endoscopic surgery

1. Definition and fundamentals of endoscopic surgery:

- What is endoscopic surgery? Definition, main characteristics and how it differs from other surgical approaches.
- Anatomy of the equipment: use of endoscopic cameras and instruments, their function and characteristics.
- Minimally invasive surgery and its benefits for patient recovery: Why is it important? Advantages in terms of postoperative recovery and long-term results.

2. A look into the past: History of endoscopic surgery:

- Evolution of endoscopic surgery: major milestones and technical advances that have driven it.
- Profiles of pioneers: Who have been the key figures in the development of endoscopic surgery and what have been their contributions.
- Technological advances that have facilitated the development and popularization of endoscopic surgery.

3. Advantages and benefits of endoscopic surgery:

- Direct patient benefits: How it translates into less invasiveness, less pain and blood loss, and reduced scarring.
- Health system level benefits: Faster recovery, reduced hospitalization time and better utilization of resources.
- Improved visualization and specialized instruments: How these elements increase accuracy and successful accuracy and success in surgical outcomes.

4. Limitations and challenges:

- When is endoscopic surgery not recommended? Limitations in terms of applicability and patient selection.
- Technical challenges: The learning curve and the need for specialized equipment and resources.
- Complication management and surgical team collaboration: How to manage the challenges inherent in the practice of endoscopic surgery.

Chapter 2: Role of the arsenal in endoscopic surgery

1. Roles and responsibilities of the arsenal in endoscopic surgery

- Specific tasks and responsibilities in the operating room: How the operating room is prepared, how the endoscopic equipment is prepared and how it is managed during surgery.
- Preoperative and postoperative processes: How does the arsenalera contribute to these processes and what is her role at each stage?

2. Collaboration with the surgical team:

- Teamwork in the OR: How roles and responsibilities are distributed and how to communicate and collaborate effectively with the rest of the team.
- The role of each member of the surgical team: Who does what? How do their roles complement each other to achieve a successful outcome?

3. Communication and coordination during endoscopic procedures:

- Communication protocols during surgery: How are intraoperative communications handled and what to do and what not to do?
- Coordination of tasks and timing during the procedure: How is workflow managed during surgery and how is it synchronized with other team members?

Unit II: Preparation and Safety in Endoscopic Surgery

Chapter 1: Asepsis and safety in endoscopic surgery

1. Principles of asepsis and antisepsis in endoscopic surgery:

- Basic concepts and techniques to maintain asepsis and antisepsis.
- Importance of these principles in the success of surgery and infection prevention.

2. Infection prevention in endoscopic surgery:

- Preventive measures to reduce the risk of postoperative infections.
- Management of possible infections and protocols for action.

3. Quality control in sterilization of endoscopic instruments:

- Instrument sterilization process.
- Quality control and sterilization verification.

Chapter 2: Preparation and gowning techniques in endoscopic surgery.

1. Patient preparation for endoscopic surgery:

- Preoperative processes and patient preparation.
- Effective communication and patient orientation.

2. Clothing and personal protection elements in endoscopic surgery:

- Standards and procedures for surgical gowning.
- Importance and correct use of personal protective equipment.

3. Package opening techniques and handling of sterile material:

- Process of opening sterile packages and handling of sterile material.
- Protocols to avoid contamination of sterile material.

Unit III: Instrumentation and equipment in endoscopic surgery

Chapter 1: Basic Endoscopic Instruments

1. Types of endoscopes and their functions:

- Definition of endoscope, its origin and historical evolution.
- Different types of endoscopes: rigid, flexible, semi-rigid.
- Special emphasis on the classification according to the specialty: gastroscope, colonoscope, bronchoscope, etc.
- Specific uses of each type of endoscope according to the type of surgery or procedure.
- The advantages and limitations of each type of endoscope.
- Terminology and handling of instruments: Glossary of technical terms associated with endoscopes and their use.
- Principles of endoscope handling, with emphasis on insertion and navigation technique.
- The relationship between patient anatomy and endoscope use.
- The importance of ergonomics during endoscope handling.

2. Light source:

- Types of light sources and their function in endoscopy.
- Maintenance and common problems with light sources.
- The importance of light quality in the visualization of anatomical structures.

3. Display devices:
    - Description of image transmission systems, including fiber optics and digital systems.
    - Knowledge of the endoscopic camera, its components and operation.
    - Discussion of visualization screens, their role in endoscopy, and considerations for their correct use and maintenance.

Chapter 2: Electrosurgery

1. Definition and principles of electrosurgery.
2. The importance of electrosurgery in endoscopic surgery.
3. Different types of current used in electrosurgery: cutting and coagulation.
4. Safety precautions and possible complications of electrosurgery.
5. Handling of electrosurgical instruments and their maintenance.

Unit IV: Procedures and techniques in endoscopic surgery

1. Laparoscopic surgeries
2. Hysteroscopies
3. Urological procedures
4. Digestive endoscopy

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