

MASTER

Santé

Path: Surgical Science and Innovation Technology - Surgical Endoscopy

Inspiring and Growing the Next Generation of Medical Innovators

Over the past twenty years there has been a slow but continuous migration from open surgery to less invasive, more patient-centered therapeutic options. The majority of surgical diseases in 2019, particularly digestive diseases, can be approached in a minimally invasive fashion. This is typically video-image directed and includes both laparoscopic/thoracoscopic surgery and flexible endoscopic surgery.

As flexible endoscopy is incisionless – occurring as it does via a natural orifice – it tends to be less invasive than even laparoscopy, which has long been considered the pinnacle of minimally invasive surgery and is therefore progressively replacing much of open and laparoscopic GI surgery.

The fact that flexible endoscopy is practiced with two different specialties has been traditionally problematic, as one is medically focused and lacks the surgeons' background in anatomy and physiology, not to mention the ability to convert to standard surgery if needed, and the other lacks sufficient exposure of surgeons to endoscopic technology to enable them to become expert endoscopists.

Building on the hugely successful DU in Surgical Endoscopy, we now offer a Master's in Surgical Endoscopy open to both surgeons and gastroenterologists. This 2-year program aims at providing a firm grounding in the surgical anatomy of digestive pathologies, their endoscopic treatments as well as extensive hands-on exposure using simulators, animate and inanimate models and clinical experience to achieve demonstrable competency in endoscopic surgery.

To accommodate busy clinicians, didactic content is presented on our proprietary, interactive, web-based training platform. Basic as well as advanced flexible endoscopic techniques will be presented by experienced endoscopists, with didactic endoscopic images and video clips of clinical cases.

This will be followed by practice in the way of hands-on sessions, and clinical rotations. You will learn key endoscopic procedures in a structured way, under the mentorship of world leaders in the field with access to the newest technologies and techniques.

Methods

On-line **24/7** educational platform, Interactive theoretical and video sessions:

Clinical case discussions

Live and pre-recorded demonstrations

Hands-on sessions on live tissue, simulators and phantoms



Program Details



20 Students Accepted Annually

Who should apply? Surgeons, gastroenterologists

Requirements: Only open to specialists in continuing training (not open to residents)

Logistics: 2-year program

Location: IHU in Strasbourg France

Application Deadline: October 1st, 2024

Course Start: 4th Trimester 2024 (*online modules*)

Program Syllabus

Objectives

Basic and advanced flexible endoscopic techniques will be presented by experienced surgeons and endoscopists, with didactic endoscopic images, video clips of clinical cases and subsequently put to practice during hands-on sessions. You will learn key endoscopic procedures in a structured way, under the mentorship of world-renowned experts in the field with access to the newest technologies and techniques.

In the second year, applicants will pursue one of the following pathways:

- Bariatric Endoscopy
- ERCP & EUS
- Dissection Techniques

First Year – M1

- To learn the endoscopic management of common surgical complications: bleeding, perforations, leaks and fistulas, stenosis...
- To acquire basic endoscopic skills required to form a foundation in the practice of flexible endoscopy.
- To address the indications, techniques, and results of the most common procedures in flexible endoscopy.

Second Year – M2

According to the selected pathway:

- To learn Endoscopic sleeve gastropasty and suturing techniques.
- To learn ERCP and EUS.
- To learn Endoscopic ablation and resection techniques: RFA, EMR and ESD.
- To learn Submucosal tunneling techniques: POEM, POP, STER ...

At the end of the program students will

- Acquire a general fund of knowledge of disorders amenable to diagnosis and/or treatment by flexible endoscopy.
- Understand signs/symptoms, pathophysiology, and the natural history of diseases amenable to flexible endoscopy and be able to apply this knowledge to explain indications, contraindications, and risks of an endoscopic procedure as well as radiological and/or surgical alternative/adjunctive therapies.
- Acquire/improve the knowledge required to form a foundation for the practice of diagnostic and interventional endoscopic procedures in a structured way under the mentorship of world leaders in the field with access to the newest technologies, techniques, and platforms.
- Apply the essential steps of postoperative care and management of postoperative complications.

Modalities

- Online learning
- Onsite (IHU Strasbourg) practical training sessions
- Clinical training session at the IHU Strasbourg or on partner sites

Year 1 - 1st Semester

Two modules:

1. Basics Principles of Endoscopy

- Know and understand the indications and contraindications for surgical endoscopy
- Know and understand how to prepare patients for endoscopic and surgical procedures
- Know and understand the techniques for sedation and anesthesia
- Understand postoperative care

2. Digestive Endoscopy

- Know the normal anatomy (endoscopic and surgical) of the gastrointestinal tract
- Recognize surgically altered anatomy
- Master safe and efficient access to and navigation of the gastrointestinal tract (upper and lower) with a variety of flexible endoscopes
- Master the endoscopic management of surgical complications
- Recognize and master the treatment of complications related to flexible endoscopy
- Perform basic procedures (tissue biopsy, hemostasis, stenosis dilatation, removal of abnormal tissue, placement of enteral access device, placement of endoscopic stents)
- Know the most advanced techniques (treatment of reflux, obesity, Barrett's esophagus, achalasia, NOTES technique, ...)
- Acquire a fundamental knowledge, practical skills, and clinical judgment necessary for the practice of flexible endoscopy

Year 1 - 2nd Semester

Two modules:

1. Hepato-Bilio-Pancreatic Endoscopy

- Know the normal anatomy (endoscopic and surgical) of the bile ducts
- Recognize surgically altered anatomy
- Master the endoscopic management of surgical complications
- Recognize and master the treatment of complications related to flexible endoscopy
- Perform basic procedures (tissue biopsy, hemostasis, stenosis dilatation, removal of abnormal tissue, placement of enteral access device, placement of endoscopic stents)
- Acquire a fundamental knowledge, practical skills and clinical judgment necessary for the practice of flexible endoscopy

2. Imaging Modalities

- Understand the basics of diagnostic imaging and guidance modalities (NBI, echo-endoscopy, endocystoscopy, confocal endomicroscopy, ...)
- Acquire a fundamental knowledge, practical skills and clinical judgment necessary for the practice of flexible endoscopy

Year 2 – 3rd Semester

In the second year, applicants will pursue one of the following 3 pathways:

1. Bariatric Endoscopy: Diagnostic and Interventional Techniques in the fields of Digestive and Bariatric Surgery

- Further develop the knowledge and skills acquired in M1
- Master the endoscopic management of surgical complications in the fields of digestive and bariatric surgery
- Master the treatment of complications related to flexible endoscopy in the fields of digestive and bariatric surgery: stent placement, internal pigtail drainage, septotomy, dilatation techniques, etc.
- Develop a fundamental knowledge, practical skills and clinical judgment necessary for the practice of flexible endoscopy
- Apply a multidisciplinary approach to complex patients involving discussions with pathologists, cytologists, surgeons, oncologists, and radiologists
- Master the most advanced techniques: treatment of reflux, obesity, Barrett's esophagus, Zenker's diverticulum, achalasia, NOTES technique, ...)
- Be familiar with radiation protection requirements for the safe and effective clinical use of fluoroscopy
- Explore training and research opportunities with experts in the field

2. ERCP & EUS: Diagnostic and interventional techniques in the field of Hepato-Bilio-Pancreatic Surgery

- Further develop the knowledge and skills acquired in M1
- Master the endoscopic management of surgical complications in the field of hepato-bilio-pancreatic surgery
- Develop a fundamental knowledge, practical skills and clinical judgment necessary for the practice of flexible endoscopy in the field of hepato-bilio-pancreatic surgery
- Recognize and master the treatment of complications related to flexible endoscopy in the field of hepato-bilio-pancreatic surgery
- Apply a multidisciplinary approach to complex patients involving discussions with pathologists, cytologists, surgeons, oncologists, and radiologists
- Master the following interventional procedures:

- Therapeutic ERCP including biliary and pancreatic sphincterotomy, gallstone and pancreatic stone extraction, biliary and pancreatic stenting, pancreatic cyst drainage, intraluminal radiotherapy
- Combined percutaneous and endoscopic procedures
- Extracorporeal shock wave lithotripsy (ESWL) of gallstones and pancreatic stones
- Apply recommendations for the maintenance of endoscopes used for ERCP and EUS to ensure infection prevention and patient safety
- Be familiar with radiation protection requirements for the safe and effective clinical use of fluoroscopy
- Be familiar with EUS-hybrid endoscopic procedures such as cholecysto-gastrostomy, gastrojejunostomy, biliary anastomosis and echoendoscopy guided appointment techniques, necrosectomy, management of complex hilar stenoses, retrograde and transluminal interventional cholangioscopy, and altered anatomy cases
- Explore training and research opportunities with experts in the field

3. Dissection Techniques

- Further develop the knowledge and skills acquired in M1
- Develop a fundamental knowledge, practical skills and clinical judgment necessary for the practice of flexible endoscopy in the field of endoscopic dissection
- Master the indications and techniques for endoscopic dissection (EMR, ESD, POEM, POP, ...)
- Recognize and treat complications related to endoscopic dissection techniques
- Become familiar with the indications and technical aspects of full-thickness GI resections and hybrid endo-laparoscopic techniques
- Apply a multidisciplinary approach to complex patients involving discussions with pathologists, surgeons, and oncologists
- Be familiar with radiation protection requirements for the safe and effective clinical use of fluoroscopy.
- Explore training and research opportunities with experts in the field

Year 2 - 4th Semester

- Research project and essay writing

Prices

for the year 2024-2025

Administrative Fees

(amount established by ministerial decree)

To be paid to the University of Strasbourg

250 €

CVEC

(Student and Campus Life Contribution)

To be paid online on a dedicated website

103 €

Tuition Fees:

To be paid to the IHU Strasbourg

Only open to specialists as continuing training (not open to residents)

First year:

4000 €

Second year:

4500 €