

## **Specialty Training Requirements (STR)**

Name of Specialty:	Gastroenterology
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### **Contents**

Scope of Gastroenterology .....	2
Purpose of the Residency Programme.....	2
Admission Requirements .....	2
Selection Procedures .....	2
Less Than Full Time Training .....	3
Non-traditional Training Route.....	3
Separation .....	3
Duration of Specialty Training .....	3
“Make-up” Training .....	3
Learning Outcomes: Entrustable Professional Activities (EPAs).....	4
Learning Outcomes: Core Competencies, Sub-competencies and Milestones.....	4
Learning Outcomes: Others .....	8
Curriculum .....	8
Learning Methods and Approaches: Scheduled Didactic and Classroom Sessions.....	8
Learning Methods and Approaches: Clinical Experiences .....	8
Learning Methods and Approaches: Scholarly / Teaching Activities.....	9
Learning Methods and Approaches: Documentation of Learning .....	9
Summative Assessments .....	10

## Scope of Gastroenterology

*Gastroenterology* is the field of medicine concerned with the diagnosis, treatment and management of disorders of the digestive system which includes diseases of the gastrointestinal tract.

## Purpose of the Residency Programme

The aim of the Gastroenterology programme is to train competent and independent gastroenterologists who are professional, compassionate and empowered in self-learning, research and medical education. The programme is a comprehensive 3-year training programme designed and implemented to imbibe the core competencies within a framework that includes inpatient and ambulatory care, consult services, endoscopic training and subspecialty rotations including liver transplantation, inflammatory bowel disease / nutrition, motility disorders, research, advanced endoscopy and many others.

## Admission Requirements

At the point of application for this residency programme:

- a) Applicants must be employed by employers endorsed by Ministry of Health (MOH); and
- b) Residents who wish to switch to this residency programme must have waited at least one year between resignation from his / her previous residency programme and application for this residency programme.

At the point of entry to this residency programme, residents must have fulfilled the following requirements:

- a) Have completed local Internal Medicine Residency programme and attained the MRCP (UK) and / or Master of Medicine (Internal Medicine) (NUS) qualifications or equivalent. Potential residents without these qualifications will need to seek ratification from Joint Committee on Specialist Training (JCST) before they can be considered for the programme; and
- b) Have a valid Conditional or Full Registration with Singapore Medical Council (SMC).

## Selection Procedures

Applicants must apply for the programme through the annual residency intake matching exercise conducted by Ministry of Health Holdings (MOHH).

Continuity plan: Selection should be conducted via a virtual platform in the event of a protracted outbreak whereby face-to-face on-site meeting is disallowed and cross institution movement is restricted.

### Less Than Full Time Training

Less than full time training is not allowed. Exceptions may be granted by Specialist Accreditation Board (SAB) on a case-by-case basis.

### Non-traditional Training Route

The programme should only consider the application for mid-stream entry to residency training by an International Medical Graduates (IMG) if he / she meets the following criteria:

- a) He / she is an existing resident or specialist trainee in the United States, Australia, New Zealand, Canada, United Kingdom and Hong Kong, or in other centres / countries where training may be recognised by the SAB.
- b) His / her years of training are assessed to be equivalent to the local training by JCST and/or SAB.

*Applicants who meet the above criteria will have their past training assessed by the JCST and / or SAB, and may enter residency training at the appropriate year of training, subject to a match by the Programme Director (PD) during the residency intake exercise. The latest point of entry into residency for these applicants is Year 1 of the senior residency phase.*

*Note: Entering at Year 1 of the senior residency phase by IMG in any of the IM-related programmes / subspecialty programmes is regarded as 'mid-stream entry' because it requires the recognition of the overseas Junior Residency training / specialist accreditation of the base specialties respectively.*

### Separation

The PD must verify residency training for all residents within 30 days from the point of notification for residents' separation / exit, including residents who did not complete the programme.

### Duration of Specialty Training

The training duration must be 36 months.

*Maximum candidature: All residents must complete the training requirements, requisite examinations and obtain their exit certification from JCST not more than 36 months beyond the usual length (IM residency + Gastroenterology) of their training programme. The total candidature for Gastroenterology is 36 months Internal Medicine residency + 36 months Gastroenterology residency + 36 months candidature.*

*Nomenclature: Gastroenterology residents will be denoted by SR1, SR2 and SR3 according to their residency year of training.*

### "Make-up" Training

"Make-up" training must be arranged when residents:

- Exceed days of allowable leave of absence / duration away from training; or
- Fail to make satisfactory progress in training.

The duration of make-up training should be decided by the Clinical Competency Committee (CCC) and should depend on the duration away from training and / or the time deemed necessary for remediation in areas of deficiency. The CCC will review residents' progress at the end of the "make-up" training period and decide if further training is needed.

Any shortfall in core training requirements must be made up by the stipulated training year and / or before completion of residency training.

### Learning Outcomes: Entrustable Professional Activities (EPAs)

Residents must achieve level 4 of the following EPAs by the end of residency training:

	<b>Title</b>
<b>EPA 1</b>	Managing common acid-peptic related disorders
<b>EPA 2</b>	Managing common functional gastrointestinal disorders (FGID)
<b>EPA 3</b>	Managing common gastrointestinal (GI) motility disorders
<b>EPA 4</b>	Managing common liver diseases
<b>EPA 5</b>	Managing common complications of cirrhosis
<b>EPA 6</b>	Performing upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention
<b>EPA 7</b>	Performing endoscopic procedures for the evaluation and management of gastrointestinal bleeding
<b>EPA 8</b>	Managing common biliary disorders
<b>EPA 9</b>	Managing common pancreatic diseases
<b>EPA 10</b>	Managing common gastrointestinal (GI) infections in non-immunosuppressed and immunocompromised populations
<b>EPA 11</b>	Identifying and managing patients with common non-infectious gastrointestinal (GI) luminal disease
<b>EPA 12</b>	Managing common gastrointestinal (GI) and liver malignancies and associated extraintestinal cancers
<b>EPA 13</b>	Assessing nutritional status and developing and implementing nutritional therapies in health and disease

### Learning Outcomes: Core Competencies, Sub-competencies and Milestones

The programme must integrate the following competencies into the curriculum, and structure the curriculum to support resident attainment of these competencies in the local context.

Residents must demonstrate the following core competencies:

## **1) Patient Care and Procedural Skills**

Residents must demonstrate the ability to:

- Gather essential and accurate information about the patient
- Counsel patients and family members
- Make informed diagnostic and therapeutic decisions
- Prescribe and perform essential medical procedures
- Provide effective, compassionate and appropriate health management, maintenance, and prevention guidance

Residents must demonstrate competence in:

- EPA 1: Manage common acid-peptic related disorders
- EPA 2: Manage common functional gastrointestinal disorders (FGID)
- EPA 3: Manage common gastrointestinal (GI) motility disorders
- EPA 4: Manage common liver diseases
- EPA 5: Manage common complications of cirrhosis
- EPA 6: Perform upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention
- EPA 7: Perform endoscopic procedures for the evaluation and management of gastrointestinal bleeding
- EPA 8: Manage common biliary disorders
- EPA 9: Manage common pancreatic diseases
- EPA 10: Manage common gastrointestinal (GI) infections in non-immunosuppressed and immunocompromised populations
- EPA 11: Identify and managing patients with common non-infectious gastrointestinal (GI) luminal disease
- EPA 12: Manage common gastrointestinal (GI) and liver malignancies and associated extraintestinal cancers
- EPA 13: Assess nutritional status and developing and implementing nutritional therapies in health and disease

## **2) Medical Knowledge**

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioural sciences, as well as the application of this knowledge to patient care.

Residents must demonstrate knowledge of:

- Common acid-peptic related disorders
- Common functional gastrointestinal disorders (FGID)
- Common gastrointestinal (GI) motility disorders
- Common liver diseases
- Common complications of cirrhosis
- Common biliary disorders
- Common pancreatic diseases
- Common non-infectious gastrointestinal (GI) luminal disease

### **3) System-based Practice**

Residents must demonstrate the ability to:

- Work effectively in various health care delivery settings and systems relevant to their clinical specialty
- Coordinate patient care within the health care system relevant to their clinical specialty
- Incorporate considerations of cost awareness and risk / benefit analysis in patient care
- Advocate for quality patient care and optimal patient care systems
- Work in inter-professional teams to enhance patient safety and improve patient care quality. This includes effective transitions of patient care and structured patient hand-off processes.
- Participate in identifying systems errors and in implementing potential systems solutions
- This can be applied in the context of various EPAs as listed:
  - EPA 5: Manage common complications of cirrhosis
  - EPA 6: Perform upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention
  - EPA 7: Perform endoscopic procedures for the evaluation and management of gastrointestinal bleeding
  - EPA 11: Identify and managing patients with common non-infectious gastrointestinal (GI) luminal disease
  - EPA 12: Manage common gastrointestinal (GI) and liver malignancies and associated extraintestinal cancers
  - EPA 13: Assess nutritional status and developing and implementing nutritional therapies in health and disease

### **4) Practice-based learning and improvement**

Residents must demonstrate a commitment to lifelong learning.

Resident must demonstrate the ability to:

- Investigate and evaluate patient care practices
- Appraise and assimilate scientific evidence
- Improve the practice of medicine
- Identify and perform appropriate learning activities based on learning needs
- This can be applied in the context of various EPAs as listed:
  - EPA 1: Manage common acid-peptic related disorders
  - EPA 4: Manage common liver diseases
  - EPA 6: Perform upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention
  - EPA 10: Manage common gastrointestinal (GI) infections in non-immunosuppressed and immunocompromised populations
  - EPA 11: Identify and managing patients with common non-infectious gastrointestinal (GI) luminal disease

## **5) Professionalism**

Residents must demonstrate a commitment to professionalism and adherence to ethical principles including the SMC's Ethical Code and Ethical Guidelines (ECEG).

Residents must:

- Demonstrate professional conduct and accountability
- Demonstrate humanism and cultural proficiency
- Maintain emotional, physical and mental health, and pursue continual personal and professional growth
- Demonstrate an understanding of medical ethics and law
- This can be applied in the context of various EPAs as listed:
  - EPA 5: Manage common complications of cirrhosis
  - EPA 6: Perform upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention
  - EPA 7: Perform endoscopic procedures for the evaluation and management of gastrointestinal bleeding
  - EPA 12: Manage common gastrointestinal (GI) and liver malignancies and associated extraintestinal cancers

## **6) Interpersonal and Communication Skills**

Residents must demonstrate ability to:

- Effectively exchange information with patients, their families and professional associates.
- Create and sustain a therapeutic relationship with patients and families
- Work effectively as a member or leader of a health care team
- Maintain accurate medical records
- This can be applied in the context of various EPAs as listed:
  - EPA 2: Manage common functional gastrointestinal disorders (FGID)
  - EPA 5: Manage common complications of cirrhosis
  - EPA 6: Perform upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention
  - EPA 7: Perform endoscopic procedures for the evaluation and management of gastrointestinal bleeding
  - EPA 8: Manage common biliary disorders
  - EPA 9: Manage common pancreatic diseases
  - EPA 12: Manage common gastrointestinal (GI) and liver malignancies and associated extraintestinal cancers
  - EPA 13: Assess nutritional status and developing and implementing nutritional therapies in health and disease

## **Other Competency: Teaching and Supervisory Skills**

Residents must demonstrate ability to:

- Teach others
- Supervise others

### Learning Outcomes: Others

Residents must attend Medical Ethics, Professionalism and Health Law course conducted by Singapore Medical Association (SMA).

### Curriculum

The curriculum and detailed syllabus relevant for local practice must be made available in the Residency Programme Handbook and given to the residents at the start of residency.

The PD must provide clear goals and objectives for each component of clinical experience.

### Learning Methods and Approaches: Scheduled Didactic and Classroom Sessions

Residents must attend the following didactic sessions:

Didactic session	Frequency	Min Attendance (if any)
Journal Club	Weekly	60%
Topic reviews	Weekly	60%
Multidisciplinary team (MDT) meetings: <ul style="list-style-type: none"><li>• Histopathology meetings;</li><li>• Liver and Pancreaticobiliary MDT meetings;</li><li>• Inflammatory Bowel Disease MDT meeting; and</li><li>• Liver Transplant MDT meeting.</li></ul>	Monthly	60%

Residents must attend at least two of each of the following during their 3-year training:

- Annual national scientific meeting
- Annual Gastroenterology postgraduate course (local or well-established international meeting and courses, for examples, Digestive Disease Week (DDW), United European Gastroenterology Week (UEG), and Asian Pacific Digestive Week (APDW).

In the event of a protracted outbreak whereby face-to-face on-site meeting is disallowed and cross institution movement is restricted, face to face didactic meetings should be replaced by hybrid or fully virtual sessions.

### Learning Methods and Approaches: Clinical Experiences

Residents must undergo the following core rotations:

- Liver Transplantation
- Gastroenterology and Hepatology



- Endoscopy / Mobility
- Inflammatory Bowel Disease (IBD) & Nutrition
- General Medicine / Geriatric Medicine

*Residents may undergo research or clinical elective rotations as part of their 3 years training programme.*

In the event of a protracted outbreak that prevent cross-institution rotations, the residency program must attempt to address the training needs on site, and to be supplemented by additional hybrid or fully virtual sessions.

#### Learning Methods and Approaches: Scholarly / Teaching Activities

Residents must complete the following scholarly activities by end of residency year:

- Evidence Based Medicine (EBM) Workshop
- Research or improvement or audit project (minimum 1)
- Abstract presentation at local or international meeting (minimum 1)

*Residents are strongly encouraged to work with faculties on projects that can be published in peer reviewed journals.*

*Continuity plan: Organisers of the EBM workshops should consider conducting via a virtual platform in the event of a protracted outbreak whereby face-to-face on-site meeting is disallowed and cross institution movement is restricted.*

#### Learning Methods and Approaches: Documentation of Learning

Residents must observe / perform and log the following procedures:

Procedures	Minimum Numbers to be Observed
Oesophageal dilation / Luminal Stenting	5
Percutaneous liver biopsy	5
Endoscopic Retrograde and Cholangiopancreatography (ERCP)	5
Endoscopic ultrasound	5
Oesophageal motility / pH studies	5
Endoscopic mucosal resection (EMR) / Endoscopic submucosal dissection (ESD)	5

Procedures	Minimum Numbers to be Performed
Colonoscopy with polypectomy	200 supervised colonoscopy & 20 supervised polypectomies
Percutaneous endoscopic gastrostomy	5 supervised
Nonvariceal haemostasis (upper and lower)	20 supervised cases including 10 active bleeders
Variceal haemostasis	20 supervised cases including 5 active bleeders
Oesophagogastroduodenoscopy	200
Capsule endoscopy	10

### Summative Assessments

	Summative assessments	
	Clinical, patient-facing, psychomotor skills etc.	Cognitive, written etc.
<b>SR3</b>	<b>Viva: Exit Examination</b> 4 case-based structured questions (15 minutes each)	<b>Written: European Specialty Examination in Gastroenterology &amp; Hepatology (ESEGH) for Exit Examination</b> (2 papers: 100 MCQs, 3 hours each) <i>*ESEGH can be taken at R5 or R6</i>
<b>SR2</b>	Nil	
<b>SR1</b>	Nil	Nil
<b>R3</b>	Internal Medicine Junior Residency	
<b>R2</b>		
<b>R1</b>		

S/N	<u>Learning outcomes</u>	<u>Summative assessment components</u>	
		ESEGH (can be taken from R5 onwards)	Viva Voce
1	EPA 1: Managing common acid-peptic related disorders	✓	✓
2	EPA 2: Managing common functional gastrointestinal disorders (FGID)	✓	✓

3	EPA 3: Managing common gastrointestinal (GI) motility disorders	✓	✓
4	EPA 4: Managing common liver diseases	✓	✓
5	EPA 5: Managing common complications of cirrhosis	✓	✓
6	EPA 6: Performing upper and lower endoscopic evaluation of the luminal gastrointestinal (GI) tract for screening, diagnosis and intervention	✓	✓
7	EPA 7: Performing endoscopic procedures for the evaluation and management of gastrointestinal bleeding	✓	✓
8	EPA 8: Managing common biliary disorders	✓	✓
9	EPA 9: Managing common pancreatic diseases	✓	✓
10	EPA 10: Managing common gastrointestinal (GI) infections in non-immunosuppressed and immunocompromised populations	✓	✓
11	EPA 11: Identifying and managing patients with common non-infectious gastrointestinal (GI) luminal disease	✓	✓
12	EPA 12: Managing common gastrointestinal (GI) and liver malignancies and associated extraintestinal cancers	✓	✓
13	EPA 13: Assessing nutritional status and developing and implementing nutritional therapies in health and disease	✓	✓