

***Residency Program
Doctor of Medicine (MD)
Curriculum (Phase-B)***

Gastroenterology



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1. Introduction:

1.1. Overview of the specialty

Gastroenterology is a clinical specialty in the field of Medicine. It is a branch of internal medicine concerned with prevention, investigation and therapy of, and research into, diseases involving the gastrointestinal, hepatobiliary and pancreatic disease. Care of patients with gastroenterological disorders embraces a wide range of clinical activities and gastroenterologists need a broad view of the needs of individual patients and the communities in which they live including an understanding of any prevailing healthcare inequalities. This requires knowledge of not only the diagnostic and therapeutic modalities available, but also an appreciation of the importance of the epidemiology and potential for prevention of gastroenterological diseases.

Gastroenterologists need the ability to work as leaders of, or within, teams and systems involving other healthcare professionals in order to effectively provide optimal patient care. They generally work as hospital based specialists and need to integrate their work with not only community based primary care colleagues but also other hospital based physicians, e.g. cardiologists, diabetologists or nephrologists, as well as working closely with gastrointestinal and hepatobiliary surgeons, anesthesiologists and histopathologists and the imaging specialties, e.g. radiology and nuclear medicine. Subspecialization within gastroenterology has become a reality in areas such as luminal gastroenterology, hepatobiliary, pancreatology, interventional gastroenterology and gastrointestinal oncology. Gastroenterology is a rapidly developing specialty in medicine which requires an extensive supervised training and sound theoretical knowledge for acquiring competency in dealing with patients and to conduct academic activity and research. The

training has to be developed from a setting similar to apprenticeship meaning that the young doctors work in a clinical setting with more experienced colleagues who take the responsibility for their instruction and supervision.

1.1. Gastroenterology residency program

Residents will undertake a three year intensive phase B training after completion of phase A training in order to achieve the levels of knowledge, skills and expertise required for clinical practice in the field of gastroenterological medicine. The program encompasses a learner-centered approach to teaching and learning and, as such clearly places the responsibility of knowledge and skills acquisition upon the trainee as a mature adult learner. Through taking ownership of their own learning, trainees are able to identify, organize and manage the nature, focus and content of each and every phase of their learning pathway. The two years phase A training program is designed to introduce and develop the broad range of core knowledge, skills, attitude and behaviors to become a competent physician. The knowledge and skills acquired during phase A training are further focused and refined during phase B training, which is a three year specialty-specific training in gastroenterology.

The teaching, learning and assessment of the curriculum is facilitated by the provision of comprehensive, educationally oriented supervision and support, which is provided to all trainees across both the phases of the program.

2. Goals and objectives:

The purpose of the curriculum is to define the process of training and the competencies needing to be acquired for the award of specialist certification with MD in gastroenterology.

2.1. Overall goals:

- the course is aimed at producing a competent specialist in the field of gastroenterology which will include gastrointestinal, hepatobiliary and pancreatic disease
- to produce a good clinician with the ability to diagnose and treat acute and chronic diseases in this field
- to produce a good academician and researcher in this field to teach, train and supervise juniors, should be the end product of this course.
- emphasis will be laid on common diseases found in this part of the world and the candidate should be able to recognize, diagnose and manage rare diseases including infective and non infective disorders in this days of globalization and migration of patients as well as doctors.
- to prepare gastroenterologists who would be able to meet and respond to the changing healthcare needs and expectation of the society.
- to develop gastroenterologists who possess knowledge, skills and attitudes that will ensure that they are competent to practice safely and effectively.
- learn appropriateness of diagnostic testing modalities and how to interpret data gained from diagnostic studies.
- learn to interact with consultant staff, patients' families, nursing staff and aftercare coordinator.
- become adept at handling of consultations from the Emergency Department and other inpatient hospital services.

2.2. General objectives :

The educational and training process aims to produce medical specialists who will:

- apply appropriate knowledge and skill in the diagnosis and management of patients.
- establish a differential diagnosis for patients presenting with medical problems by the appropriate use of the clinical history, examination and investigations
- be competent to perform the core investigations and procedures required in gastroenterology
- develop clinical practice which is based on an analysis of relevant clinical trials and to have an understanding of their research methodologies
- be able to apply the knowledge of biological and behavioral sciences in clinical practice
- are able to identify and take responsibility for their own educational needs and attainment of these needs.
- have developed the skills of an effective teacher
- be able to act as safe independent practitioners whilst recognizing the limitation of their own expertise and are able to recognize their obligation to seek assistance of colleagues where appropriate.
- Be able to develop management plans for the "Whole patient" and maintain a knowledge in other areas of medicine which impinge on the specialty of gastroenterology.
- understand that more effective communication between them and their patients can lead to more effective treatment and care
- be honest and objective when assessing the performance of those they have supervised and trained
- be able to acquire and develop leadership and team working skills, especially with other healthcare professional, to deliver patient centered care.
- be aware of current thinking about ethical and legal issues.

3. Admission requirements for phase-B training:

- A. Residents who has passed phase-A final examination in Medicine and Allied are eligible for enrolment in the phase-B program.
- B. Candidates with FCPS/ MD or Equivalent degrees in Internal Medicine can be enrolled directly into phase-B of the residency program.
- C. Foreign students will be entitled to enter into the phase-B program according to the existing rule of the BSMMU.

4. Phase B curriculum structure:

The training is designed to develop both the generic and speciality-specific attributes necessary to practice independently as a consultant gastroenterologist. The aim is to train individuals to provide the highest standard of service to patients with gastroenterological disorders. This includes the development of positive attitudes towards lifelong learning and the ability to adopt future technological advances and the changing expectations of the society.

4.1. Phase B: gastroenterology specialty training:

Specialty training in gastroenterology consists of core general and higher specialty training. Generic skills curriculum outlines the broad concepts, related learning objectives and the associated theoretical knowledge, clinical skills, attitudes and behaviors required by, and commonly utilized by, all physicians regardless of their area of specialty. It focuses on the medical humanities and covers some fundamental non-clinical aspects of Medicine. All teaching, learning and assessment associated with the generic skills and competencies will be undertaken within the context of the trainee's every day clinical practice.

The curriculum and the associated teaching, learning, supervision, support and assessment strategies support all aspect of a trainee's learning journey. These provide trainees with a comprehensive outline of what they are required to learn and are complemented by a range of formative and summative assessment practices that are objective, open and transparent.

4.1.1. Expected outcomes at the completion of the program :

Trainees of this program will be equipped to function effectively within the current and emerging professional, medical and societal contexts. At the completion of the training program in gastroenterology, as defined by this curriculum, it is expected that a new gastroenterologist will have developed the clinical skills and have acquired the theoretical knowledge for competent gastroenterologist practice. It is expected that a new gastroenterologist will be able to :

- utilize effective communication with patients and their families and with professional colleagues
- be devoted to lifelong learning
- be equipped to manage both acute and chronic gastroenterological diseases
- identify the patho-physiology and manifestations of gastroenterological diseases, and modern therapeutics, which can be applied to patient diagnosis and management
- apply appropriate skills to perform necessary diagnostic and therapeutic decisions
- demonstrate a capacity to rationally analyze clinical data and published work
- demonstrate an understanding of and commitment to the role of research in advancing medical care of gastroenterological disease

- develop a commitment to compassionate, ethical professional behavior
- identify gastroenterological health issues of importance to the community and contribute constructively to debate about those issues
- apply primary and secondary prevention strategies in gastroenterological disease.

5. Teaching and learning methods:

It is important that the trainees work in 'a good learning environment' to maximize their learning opportunities. This includes encouragement for self-directed learning as well as recognizing the learning potential in all aspect of day to day work. There should be a positive attitude to training with learning from peers being encouraged. There should be active involvement in group discussion as this is an important way for doctors to share their understanding and experiences. A supportive open atmosphere should be cultivated and questions should be welcomed.

The bulk of learning occurs as a result of clinical experiences (experimental learning, on-the-job learning) and self-directed study. The degree of self-directed learning will increase as trainees become more experienced. Lectures and formal education sessions make up only a small part of the program. Learning opportunities to be utilized will include: experiential learning opportunities, training in practical procedures, small group learning opportunities, one-to-one teaching, formal training, personal study and teaching others.

5.1. Training period:

This program consists of 3 years competency-based training in the field of gastroenterology. In-depth speciality-specific

educational and training program will make the trainee competent and prepare them for the specialty qualification. It will provide educational program covering the specialty of gastroenterology, along with rotation specific clinical training.

5.2. Phase B training rotations:

There will be structured training program. The trainees are expected to learn in phasic manner starting with basic care progressing to advanced care management.

Gastroenterology in patients, outpatients and emergency department	2 years
Hands on endoscopy training	6 month
ICU	15 days
Paediatric gastroenterology and nutrition	1 month
Psychiatry and psychotherapy	15 days
Gastrointestinal and hepatobiliary surgery	15 days
Radiology and imaging	15 days
Preparation for examinations	3 month

6. Record of training:

6.1. Logbook: Residents are required to maintain a logbook in which entries of academic/ professional work done during the period of training should be made on a daily basis and signed by the supervisor. Completed and duly certified logbook will form a part of the application for appearing in phase B final examinations.

7. Development of research competency:

Development of research competency forms an integral part of the residency program curriculum as they are an essential set of skills for effective clinical practice. Undertaking research

helps to develop critical thinking and the ability to review medical literature. Clinical research also allows development of particular expertise in one area of gastroenterological medicine allowing more in depth knowledge and skills and helping to focus long term career aims and interests. Every resident shall carry out work on an assigned research project under the guidance of a recognized supervisor. The project shall be written and submitted in the form of a thesis/ research report.

8. Assessment:

The assessment for certification of the MD degree of the University is comprehensive, integrated and phase-centered attempting to identify attributes expected of specialists for independent practice and lifelong learning and covers cognitive, psychomotor and affective domains. It keeps strict reference to the components, the contents, the competencies and the criteria laid down in the curriculum. Assessment includes both **Formative Assessment and Summative (Phase final) Examinations.**

8.1. Formative Assessment:

Formative assessment will be conducted throughout the training phases. It will be carried out for tracking the progress of residents, providing feedback, and preparing them for final assessment (Phase completion exams).

There will be Continuous (day-to-day) and Periodic type of formative assessment.

- **Continuous (day-to-day) formative assessment** in classroom and workplace settings provides guide to a resident's learning and a faculty's teaching / learning strategies to ensure formative lesson / training outcomes.

- **Periodic formative assessment** is quasi-formal and is directed to assessing the outcome of a **block placement** or **academic module completion**. It is held at the end of Block Placement and Academic Module Completion. The contents of such examinations include **Block Units** of the Training Curriculum and **Academic Module Units** of the Academic Curriculum.

8.1.1. End of Block Assessment (EBA):

End of Block Assessment (EBA) is a periodic formative assessment and is undertaken after completion of each training block, assessing knowledge, skills and attitude of the residents. Components of EBA are written examination, structured clinical Assessment (SCA), medical record review, and logbook assessment. Unsatisfactory block training must be satisfactorily completed to be eligible for phase final examination

8.1.2. Formative assessment for Academic modules for Biostatistics and Research Methodology and Medical Education to be done in the first nine months of Phase B training. Residents getting unsatisfactory grade must achieve satisfactory grade by appearing the re-evaluation examination to be eligible for the Phase B Final Examination.

8.2. Summative Examination:

Assessment will be done in two broad compartments.

- a) **Compartment A:** Consist of 3 (three) components.
1. Written Examination (Consisting of 2 papers).
 2. Clinical Examination (One long and four short cases).
 3. SCA and Oral (10 stations SCA, Oral one board consisting of 2 examiners).

Every Resident must pass all the 3 components of compartment-A separately. Candidates will be declared failed if he/she fails in one or more component (s) of the examination. He/she then have to appear all the 3 components in the next Phase B Final Examination.

- b) **Compartment B:** Thesis and Thesis defense.

8.2.1. Written Examination:

Two Papers: Contents of written papers listed in Annexure II

Question type and marks:

- Two Papers (Paper I and Paper II); 100 marks each; Time 3 hrs for each paper. Pass marks-60% of total of 2 papers.
- **Each paper will consist of Two Groups:**
- **Group A:**
 - 10 short questions (5 marks each)
 - These will assess the knowledge of different level and its application
- **Group B:**
 - 5 scenario based problem solving questions (10 marks for each).
 - The questions should focus to assess the capability of handling clinical problem independently and comprehensively as a specialist.
 - Suggested format:-
 - A scenario followed by question(s).
 - Questions may include diagnosis, differential diagnosis, investigation plan, treatment, follow up and patient education.

8.2.2. Clinical Examination: Long case and Short case:

- There will be one long case and four short cases.

i) Long case: Marks-100

- Directly observed
- Two examiners for each examinee.
- History taking and examination by the examinee – 30min.
- Discussion on the case 20 min.(presentation 6min, crossing 6x2min and decision 2min).
- Examiners will not ask any question nor stop the examinee in any way during history taking and physical examinations.
- Discussion should be done preferably as per structured format and proper weightage on different segments of clinical skills.

ii) Short cases : Marks-100

- Four in number
- Time 20-30 min. (Time will be equally divided for each short case)
- Crossing should be done with proper weightage on different segment of clinical skills.

iii) Pass marks: 60% of total of Long and Short Cases**8.2.3. Structured Clinical Assessment (SCA): Marks-100**

- 10 stations : 5 min each

8.2.4. Oral Examination: Marks-100

- One board consisting of 2 examiners.
- 20 minutes (9+9+2).

8.2.5. Pass marks in SCA and Oral: 60% of total (SCA and Oral.)**8.3. Thesis Evaluation:**

- **Marks: Thesis writing-200; Defense-100: Marks for acceptance-60% of total.**
- To be evaluated by 3 (three) evaluators:- 2 subject specialists and one academician preferably involve in research and teaching research methodology.
- Among the subject specialists one should be external.
- Evaluators should be in the rank of Professor/Associate Professor.
- Supervisor will attend the defense as an observer and may interact only when requested by the evaluators.
- Thesis must be submitted to the controller of Exam not later than 27 months of enrolment in Phase-B.
- Thesis must be sent to the evaluators 2 (Two) weeks prior to assessment date.
- Evaluation will cover Thesis writing and its defense.
- For thesis writing evaluator will mark on its structure, content, flow, scientific value, cohesion, etc.
- For defense – Candidate is expected to defend, justify and relate the work and its findings.
- Assessment must be completed in next 3 months.
- Outcome of the assessment shall be in 4 categories – “Accepted”, “Accepted with minor correction”, “Accepted with major correction” and “Not Accepted”.

8.3.1. Description of terms:

- **Accepted:** Assessors will sign the document and resident will bound it and submit to the Controller of Examinations by 10 days of the examination.
- **Accepted with minor correction:** Minor correction shall include small inclusion/exclusion of section; identified missing references, correction of references and typographical and language problem. This should be corrected and submitted within 2 weeks.

- **Accepted with major correction:** Task is completed as per protocol with acceptable method but some re-analysis of result and corresponding discussion are to be modified.
 - To be corrected, confirmed by Supervisor and submit within 3 (Three) weeks.
- **Not Accepted:** When work is not done as per protocol or method was faulty or require further inclusion or confirmation of study.
 - To complete the suggested deficiencies and reappear in defense examination during its next Phase Final Examination.
 - Candidate has to submit his/her thesis and sit for examination and pay usual examination fess for the examination.

8.3.2. Residents must submit and appear Thesis defense at notified date and time. However non- acceptance of the Thesis does not bar the resident in appearing the written, clinical and oral exam.

8.4. Qualifying for MD/MS Degree:

On passing both the compartments, the candidate will be conferred the degree of MD/MS in the respective discipline. If any candidate fails in one compartment he/she will appear in that compartment only in the subsequent Phase-B exam.

9. Supervision and training monitoring:

Training should incorporate the principle of gradually increasing responsibility, and provide each trainee with a sufficient scope, volume and variety of experience in a range of setting that include inpatients, outpatients, emergency and intensive care. All elements of work in training rotation must be supervised with the

level of supervision varying depending on the experience of the trainee and the clinical exposure. Outpatient and referral supervision must routinely include the opportunity to personally discuss all cases. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient. Trainees will at all times have a named supervisor, responsible for overseeing their education and training.

Supervisors are responsible for supervision of learning throughout the program to ensure patient safety and service delivery as well as the progress of the resident with learning and performance. They set the lesson plans based on the curriculum, undertake appraisal, review progress against the curriculum, give feedback on both formative and summative assessments as well as sign the logbook and portfolio. The residents are made aware of their limitations and are encouraged to seek advice and receive help at all times.

The course coordinator of each department coordinates all training and academic activities of the program in collaboration with the **course manager**. The **course director** of each faculty directs, guides and manages curricular activities under his/ her jurisdiction and is the person to be reported to for all events and performances of the residents and the supervisors.

10. Curriculum implementation, review and updating:

Both trainers and trainees are expected to have a good knowledge of the curriculum and should use it as a guide for their training program.

Since gastroenterology is a rapidly developing specialty the need for review and up-dating of curriculum is evident. The curriculum is specifically designed to guide an educational process and will continue to be the subject of active redrafting, to reflect changes in both educational theory and practice.

Residents and supervisors are encouraged to discuss the curriculum and to feedback on content and issue regarding implementation at residency course director. Review will be time tabled to occur annually for any minor changes to the curriculum. The curriculum will be reviewed with input from the faculty of gastroenterology, BSMMU.

11. Phase B syllabus:

The syllabus for the curriculum integrates basic medical sciences and clinical knowledge. The aim of the syllabus is to set out for trainees a comprehensive description of the breadth and depth of knowledge, skills and attitudes expected from them. The syllabus will be revised and upgraded periodically. The examination will not test areas that are not explicitly or implicitly included in the syllabus, but it should be noted that research and change in the environment might sometimes lead to changes in scientific theory and clinical practice before the syllabus is updated to reflect them. Trainees will be expected to keep abreast of such developments by reading appropriate literatures.

A. Common clinical competencies :

- a. History taking
- b. Clinical examination
- c. Therapeutics and safe prescribing

B. Core clinical syllabus :

GATROINTESTINAL SYMPTOMS:

- 1. Acute abdominal pain
- 2. Chronic abdominal pain
- 3. Symptoms of esophageal disease
- 4. Dyspepsia

- 5. Nausea and vomiting
- 6. Diarrhea
- 7. Intestinal gas
- 8. Fecal incontinence
- 9. Constipation
- 10. Jaundice
- 11. Nutritional deficiency and management of the malnourished patient
- 12. Eating disorders
- 13. Obesity
- 14. Food allergies
- 15. Oral disease and oral-cutaneous manifestations of gastrointestinal and liver disease

GASTROINTESTINAL DISORDER:

- 1. Gastroesophageal reflux disease and its complications
- 2. Esophageal disorders caused by medications, trauma, and infection
- 3. Tumours of the esophagus
- 4. Helicobacter pylori infection
- 5. Gastritis and gastropathy
- 6. Gastrointestinal bleeding
- 7. Abdominal hernias and gastric volvulus
- 8. Foreign bodies and Bezoars
- 9. Maldigestion and malabsorption
- 10. Short bowel syndrome
- 11. Celiac sprue and refractory sprue
- 12. Tropical malabsorption and tropical diarrhea
- 13. Whipple's disease
- 14. Crohn's disease
- 15. Ulcerative colitis
- 16. Ileostomy, colostomy and pouches

17. Intestinal ischemia
18. Caustic injury to the upper gastrointestinal tract
19. Protein-losing gastroenteropathy
20. Gastrointestinal lymphomas
21. Gastrointestinal stromal tumors (GISTs)
22. Gastrointestinal carcinoid tumors and the carcinoid syndrome
23. Ulcers of the small and large intestine
24. Appendicitis
25. Diverticular disease of the colon
26. Irritable bowel syndrome
27. Intestinal obstruction and ileus
28. Acute And chronic pseudo-obstruction
29. Small intestinal neoplasms
30. Colonic polyps and polyposis syndromes
31. Malignant neoplasms of the large intestine
32. Other disease of the colon and rectum
33. Disease of the anorectum
34. A bio psychosocial understanding of gastrointestinal illness and disease
35. Gastrointestinal manifestations of systemic diseases
36. Vascular lesions of the gastrointestinal tract
37. Gastrointestinal disorders in the pregnant patient
38. Radiation injury to the gastrointestinal tract
39. Complications of gastrointestinal endoscopy

PANCREATIC, HEPATOBILIARY AND NUTRITIONAL DISORDER:

1. Acute pancreatitis
2. Chronic pancreatitis
3. Pancreatic cancer, cystic pancreatic neoplasm, and other nonendocrine pancreatic tumors

4. Endocrine tumors of the pancreas and gastrointestinal tract
5. Hereditary, familial, and genetic disorders of the pancreas and pancreatic disorders in childhood
6. Biliary tract motor function and dysfunction
7. Gallstone disease
8. Treatment of gallstone disease
9. Acalculous cholecystitis, cholesterosis, adenomyomatosis and polyps of the gallbladder
10. Sclerosing cholangitis and recurrent pyogenic cholangitis
11. Tumors of the gallbladder, bile ducts and ampulla
12. Endoscopic and radiologic treatment of biliary disease
13. Hemochromatosis
14. Wilson disease
15. Other inherited metabolic disorders of the liver
16. Hepatitis A
17. Hepatitis B and D
18. Hepatitis C
19. Hepatitis E
20. Hepatitis caused by other viruses
21. Bacterial, parasitic and fungal infections of the liver, including liver abscess
22. Vascular disease of the liver
23. Alcoholic liver disease
24. Nonalcoholic fatty liver disease
25. Liver disease caused by drugs
26. Liver disease caused by anesthetics, toxins and herbal preparations
27. Autoimmune hepatitis
28. Primary biliary cirrhosis
29. Hepatic manifestations of systemic diseases
30. Hepatic disorders in the pregnant patient
31. Hepatic tumors and cysts
32. Liver transplantation

TASK ON TRAINING IN GASTROINTESTINAL RADIOLOGY

1. Recognize normal anatomy of the alimentary tract and related organs
2. Interpret plain film radiography, barium studies, computed tomography, ultrasound, magnetic resonance imaging, gastrointestinal vascular and interventional studies, scintigraphy and positron emission transaxial tomography (PET)
3. Understand logical sequence of using these techniques in the evaluation of gastrointestinal problems
4. Appreciation for and understanding of the costs for different radiological studies
5. Understanding indications and contraindications for radiological interventional studies.

TASK ON TRAINING IN GASTROINTESTINAL AND HEPATIC PATHOLOGY

1. Recognize patterns of histopathologic change in gastrointestinal and hepatic disorders
2. Biopsy technique and submit adequate samples
3. Description of endoscopic findings and clinical information to aid the pathologist for interpretation of biopsy specimens
4. Know the value and limitation of exfoliative and aspiration cytology
5. Understand the mechanism and the usefulness of new techniques, such as flow cytometry, immunohistochemistry and tests based on molecular biology (i.e. PCR, in situ hybridization)
6. Have an overview of special techniques and special stains as diagnostic aids in gastrointestinal and hepatic pathology (in situ hybridization, immunohistochemistry, etc.)

7. Recognition of opportunistic infections with HIV.
8. Recognize the usefulness and limitations of endoscopic biopsy in distinguishing different forms of microscopic colitis
9. Dysplasia surveillance in chronic inflammatory diseases of the gastrointestinal tract
10. Indication and appropriate sites for gastric biopsy.

TASK ON TRAINING IN GASTROINTESTINAL ENDOSCOPY

1. Know the indications, contraindications, and diagnostic/therapeutic alternatives of endoscopy.
2. Ability to perform a upper and lower gastrointestinal procedures safely, completely and expeditiously.
3. Interpret endoscopic findings correctly
4. Understand the risk factors attendant to endoscopic procedures and to be able to recognize and manage complication

OTHER PROCEDURE:

1. Abdominal ultrasonogram
2. Endoscopic ultrasonogram
3. Liver biopsy
4. FNAC
5. Liver abscess drainage
6. Oesophageal P^H monitoring

TASKS IN TRAINING IN SURGERY

1. Be able to judge whether surgery is necessary and what kind of operation is indicated and when it should be performed
2. Be familiar with common complications and their management
3. Be familiar with long-term consequences of surgical treatment of gastrointestinal diseases

Residency Program

Gastroenterology

Specific procedures with which the residents should be familiar include

1. Ulcer operations
2. Hepatobiliary operations
3. Portosystemic shunts
4. Surgery for liver abscess and liver tumour
5. Pancreatic procedures for benign and malignant disease
6. Surgery for IBD of the small and large bowel
7. Surgery for gastrointestinal and hepatobiliary malignancy
8. Colonic procedures for diverticular disease or cancer
9. Various anorectal operations
10. Laparoscopic vs. open procedures

TASK ON TRAINING IN PEDIATRIC GASTROENTEROLOGY

1. Manifestation of commonly encountered entities (i.e. abdominal pain, constipation, gastrointestinal bleeding, diarrhea, cystic fibrosis)
2. Liver disease in children
3. IBD in children

Residency Program

Gastroenterology

Block 1							
Months	1	2nd	3rd	4th	5th	6th	E
Educational Program	Global burden of GI disease , Applied anatomy and Physiology, Principles of molecular GI and HB disease, Genetic basis of GI and HB disease, Basic Course : Biostatistics, Research Methodology, Basics of Medical Education						O
Clinical Training RotationsInpatient, outpatient.....						B
Thesis work	Proctol development/ submission/IRB Clearance			Patient enrolment, intervention and data collection			A

Block 2							
Months	7 th	8th	9 th	10 th	11th	12th	E
Educational Program							O
Clinical Training Rotations	Inpatient, outpatient- 5 month Paed Gastro & Nutrition- 1 month						B
Thesis work	Patient enrolment, intervention and data collection						A

Residency Program

Gastroenterology

Block 3							
Months	13 th	14 th	15 th	16 th	17 th	18 th	E
Educational Program	All educational program on contents of syllabus as per routine						O
Clinical Training Rotations	Gastro in and out patient- 5 months Psychiatry and psychotherapy-15 days GI Imaging- 15days,						B A
Thesis work	Patient enrolment, intervention and data collection						

Block 4							
Months	19 th	20 th	21 th	22 nd	23 rd	24 th	E
Educational Program	All educational program on contents of syllabus as per routine						O
Clinical Training Rotations	Gastro in and out patient- 5months GI and HB Surgery- 15days , ICU- 15days						B A
Thesis work	Patient enrolment, intervention and data collection						

Block 5							
Months	25 th	26 th	27 th	28 th	29 th	30 th	E
Educational Program	All educational program on contents of syllabus as per routine						O
Clinical Training Rotations	Gastro in and out patient Hands-on training on endoscopy & other procedures						B A
Thesis work	Data processing an analysis						

Residency Program

Gastroenterology

Block 6						
Months	31 th	32 nd	33 rd	34 th	35 th	36 th
Educational Program	All educational program on contents of syllabus per routine			E O B	Preparation for final examination	
Clinical Training Rotations	Gastro in and out patients Hands-on training on endoscopy and other procedures			A		
Thesis work	Report writing and submission					