

# Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



## General Surgery Curriculum for Competency Based Curriculum

University logo	<b>Name of Medical College</b>	College Logo
	<b>DEPARTMENT OF SURGERY</b>	

**M.B.B.S Degree Program**

**General Surgery Competencies for MBBS (Phase-III )-Part ICMBE**

**CURRICULUM**

**2019-2020**

## **GENERAL SURGERY**

### **Total teaching hours for MBBS Third Professional year -Part 1**

<b>Subject</b>	<b>Lecture hours</b>	<b>Tutorials</b>	<b>Clinical Posting</b>	<b>SDL</b>
<b>General Surgery</b>	<b>25</b>	<b>35</b>	<b>4 weeks</b>	<b>5</b>

The clinical postings in third professional- part 1 shall be 18hours per week (3hours per day from Monday to Saturday)

### **General Surgery topics for MBBS Third Professional year - Phase 1**

<b>SL. NO.</b>	<b>TOPIC</b>	<b>Lecture Hours</b>
1.	Investigation of surgical patient	3
2.	Nutrition and fluid therapy	3
3.	Basic Surgical Skills	3
4.	Developmental anomalies of face, mouth and jaws	3
5.	Oropharyngeal cancer	3
6.	Disorders of salivary glands	3
7.	Endocrine General Surgery: Thyroid and parathyroid	4
8.	Cardio-thoracic General Surgery- Chest - Heart and Lungs	3

### Didactic lectures

Topics	Number	COMPETENCIES	Core	Didactic lectures	Assessment Method Written/Viva Voce
Investigation of surgical patient	SU9.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient	Y	3 Hours	LEQ SEQ MCQs
	SU9.2	Biological basis for early detection of cancer and multidisciplinary approach in management of cancer	Y		LEQ SEQ MCQs
	SU9.3	Communicate the results of surgical investigations and counsel the patient appropriately	Y		SEQ MCQs
Nutrition and fluid therapy	SU12.1	Enumerate the causes and consequences of malnutrition in the surgical patient	Y	3 Hours	LEQ SEQ SAQ MCQs
	SU12.2	Describe and discuss the methods of estimation and replacement of the fluid and electrolyte requirements in the surgical patient	Y		LEQ SEQ MCQs
	SU12.3	Discuss the nutritional requirements of surgical patients, the methods of providing nutritional support and their complications			LEQ SEQ MCQs
Basic Surgical Skills	SU14.1	Describe Aseptic techniques, sterilization and disinfection.	Y	3 Hours	LEQ SEQ SAQ MCQs
	SU14.2	Describe Surgical approaches, incisions and the use of appropriate instruments in Surgery in general.			
	SU14.3	Describe the materials and methods used for surgical wound closure and anastomosis (sutures, knots and needles)			
	SU14.4	Demonstrate the techniques of asepsis and suturing in a simulated environment			

Developmental anomalies of face, mouth and jaws	SU19.1	Describe the etiology and classification of cleft lip and palate	Y	3 Hours	SEQ MCQs
	SU19.2	Describe the Principles of reconstruction of cleft lip and palate	Y		LE Q SE Q SA Q MCQs
Oropharyngeal cancer	SU20.1	Describe etiopathogenesis of oral cancer symptoms and signs of oropharyngeal cancer.	Y	3 Hours	LE Q SE Q SA Q MCQs
	SU20.2	Enumerate the appropriate investigations and discuss the Principles of treatment.	Y		LE Q SE Q SA Q MCQs
Disorders of salivary glands	SU21.1	Describe surgical anatomy of the salivary glands, pathology, and clinical presentation of disorders of salivary glands	Y	3 Hours	LE Q SE Q SA Q MCQs
	SU21.2	Enumerate the appropriate investigations and describe the Principles of treatment of disorders of salivary glands	Y		SEQ SAQ MCQs
Endocrine General Surgery: Thyroid and parathyroid	SU22.1	Describe the applied anatomy and physiology of thyroid	Y	4 Hour	LE Q SE Q SA Q MCQs
	SU22.2	Describe the etiopathogenesis of thyroidal swellings			
	SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management			
	SU22.4	Describe the clinical features, classification and principles of management of thyroid cancer			
	SU22.5	Describe the applied anatomy of parathyroid			
Cardio-	SU26.1	Outline the role of surgery in the management of coronary heart disease, valvular heart diseases and	Y	3 Hour	SEQ MCQs

thoracic General Surgery- Chest - Heart and Lungs		congenital heart diseases			
	SU26.2	Describe the clinical features of mediastinal diseases and the principles of management			
	SU26.3	Describe the etiology, pathogenesis, clinical features of tumors of lung and the principles of management			

**Methods of Assessment:**

LAQ - Long essay Question

SAQ - Short essay Question

SEQ - Short answer

Questions MCQs

Draft

## Bedside Clinics in General Surgery for MBBS Third Professional year - Phase 1

Topics	Number	COMPETENCIES	Hours	Assessment Method
THYROID	SU22.2	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management	3 Hours	LOG BOOK/OSCE
BREAST	SU25.5	Demonstrate the correct technique to palpate the breast for breast lump on a patient	3 Hours	LOG BOOK/OSCE
Lymphatic system	SU27.8	Demonstrate the correct examination of the lymphatic system	3 Hours	LOG BOOK/OSCE
Disorders of salivary glands	SU21.2	Demonstrate and document the correct clinical examination of swelling in the submandibular region and discuss the differential diagnosis and management	3 Hours	LOG BOOK/OSCE

### **Clinical postings (4 WEEKS)**

OPD	Observe and record new and follow up cases in OPD(3hrs)
Post Admission day ward rounds	Follow up of assigned cases(1hr), Bedside clinics SGD,DOAP(1hr), SDL, Discussion and closure (1hr)
OT	Observe OT procedures and document in the logbook with Discussion(3hrs)
Ward	Follow up of assigned cases(1hr), Bedside clinics (SGD, DOAP(1hr), SDL, Discussion and closure (1hr)
Ward	Follow up of assigned cases(1hr), Bedside clinics (SGD, DOAP(1hr), SDL, Discussion and closure (1hr)
Ward	Follow up of assigned cases(1hr), Bedside clinics SGD, DOAP(1hr), SDL, Discussion and closure (1hr)

### **TUTORIALS (20 HRS)**

<b>SL NO.</b>	<b>COMPETENCY NO.</b>	<b>TOPIC</b>	<b>HOURS</b>
1.	SU21.2	Operative Procedure: Superficial Parotidectomy	2
2.	SU22.4	Specimen : Thyroid	2
3.	SU22.4	Operative Procedure: Thyroidectomy	2
4.	SU14.3	Instruments: Suture Materials And Needles	2
5.	SU14.3	Instruments: General Surgical Instruments	2
6.	SU12.3	Operative Procedure: Feeding Jejunostomy	2
7.	SU26.2	Chest X-Ray	2
8.	SU14.3	Instruments: Drains	2
9.	SU20.2	Operative Procedure: Modified Radical Neck Dissection	2
10.	SU26.4	Operative Procedure: Intercostal Drainage	2



**SEMINAR (10 Hours)**



SL NO.	COMPETENCY NO.	TOPIC	HOURS
1.	SU14.3	Surgical Wound Closure and Anastomosis(Sutures, Knots And Needles)	2
2.	SU19.2	Cleft Lip and Palate	2
3.	SU22.4	Thyroid Cancer	2
4.	SU22.6	Hyperparathyroidism	2
5.	SU26.1	Congenital Heart Diseases	2

**INTERGRATED TEACHING ( 5 Hours)**

SL NO.	COMPETENCY NO.	TOPIC	HOURS
1.	AN35.2 + PA8.1+ SU22.1	THYROID	1
2.	AN28.9 + SU21.1	SALIVARY GLAND	1
3.	IM13.14 + SU20.2	OROPHARYNGEAL MALIGNANCY	1
4.	IM22.2 + SU22.6	PARATHYROID	1
5.	AS9.3 + SU12.2	FLUID AND ELECTROLYTES	1

**SDL (5 HOURS)**

SL NO.	COMPETENCY NO.	TOPIC	HOURS
1.	SU9.1	Investigations In Surgical Patient	1
2.	SU12.2	Fluid And Electrolyte Management In Surgical Patient	1
3.	SU12.2/SU12.3	Nutritional Requirements Of Surgical Patient	1
4.	SU20.1/SU20.2	Oropharyngeal malignancies	1
5.	SU26.1	Surgical management of coronary heart disease	1

	<b>Name of Institution</b>	
	<b>DEPARTMENT OF SURGERY</b>	

**M.B.B.S Degree Program**

**General Surgery Competencies for MBBS (Phase-III ) Part II CMBE**

**CURRICULUM**

**2019-2020**

## GENERAL SURGERY

### Total teaching hours for MBBS Third Professional year –Part 2

Subject	Lecture hours	Tutorials	Clinical Posting	SDL
General Surgery	70	125	8 + 4 (Electives) weeks	15

### General Surgery topics for MBBS Third Professional year – Part 2

SL. NO.	TOPIC	Lecture Hours
1.	Surgical Audit and Research	1
2.	Ethics	1
3.	Pre, intra and post- operative management.	2
4.	Anaesthesia and pain management	1
5.	Transplantation	2
6.	Minimally invasive General Surgery	2
7.	Trauma	5
8.	Adrenal glands	3
9.	Pancreas	3
10.	Breast	5
11.	Vascular diseases	4
12.	Abdomen	28
13.	Urinary System	9

14.	Penis, Testis and scrotum	4
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Topics	Number	COMPETENCIES	Core	Didactic lectures	Assessment Method Written/Viva Voce
Surgical Audit and Research	SU7.1	Describe the Planning and conduct of Surgical audit	Y	1 Hours	LEQ SEQ MCQ s
	SU7.2	Describe the principles and steps of clinical research in General Surgery	Y		LEQ SEQ MCQ s
Ethics	SU8.1	Describe the principles of Ethics as it pertains to General Surgery	Y	1 Hours	LEQ SEQ SAQ MCQ s
	SU8.2	Demonstrate Professionalism and empathy to the patient undergoing General Surgery	Y		LEQ SEQ MCQ s
	SU8.3	Discuss Medico-legal issues in surgical practice			
Pre, intra and post-operative management.	SU10.1	Describe the principles of perioperative management of common surgical procedures	Y	2 Hours	LEQ SEQ SAQ MCQ s
	SU10.2	Describe the steps and obtain informed consent in a simulated environment			
	SU10.3	Observe common surgical procedures and assist in minor surgical procedures; Observe emergency lifesaving surgical procedures.			
	SU10.4	Observe common surgical procedures and assist in minor surgical procedures; Observe emergency lifesaving surgical procedures.			
Anaesthesia and pain management	SU11.1	Describe principles of Preoperative assessment.	Y	2 Hours	SEQ MCQ s
	SU11.2	Enumerate the principles of general, regional, and local Anaesthesia.	Y		LEQ SEQ SAQ MCQ s
	SU11.4	Enumerate the indications and principles of day care General Surgery			

	SU11.5	Describe principles of providing post-operative pain relief and management of chronic pain.			
	SU11.6	Describe Principles of safe General Surgery			
Transplantation	SU13.1	Describe the immunological basis of organ transplantation	Y	2 Hours	LEQ SEQ SAQ MCQ s
	SU13.2	Discuss the Principles of immunosuppressive therapy.Enumerate Indications, describe surgical principles, management of organ transplantation	Y		LEQ SEQ SAQ MCQ s
	SU13.3	Discuss the legal and ethical issues concerning organ donation			
Minimally invasive General Surgery	SU16.1	Minimally invasive General Surgery: Describe indications advantages and disadvantages of Surgery	Y	2 Hours	LEQ SEQ MCQ s
Trauma	SU17.01	Describe the Principles of FIRST AID	Y	4 Hour	LEQ SEQ MCQ s
	SU17.02	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment			
	SU17.03	Describe the Principles in management of mass casualties			
	SU17.04	Describe Pathophysiology, mechanism of head injuries			
	SU17.05	Describe clinical features for neurological assessment and GCS in head injuries			
	SU17.06	Chose appropriate investigations and discuss the principles of management of head injuries			
	SU17.07	Describe the clinical features of soft tissue injuries. Chose appropriate investigations and discuss the principles of management.			
	SU17.08	Describe the pathophysiology of chest injuries.			

	SU17.09	Describe the clinical features and principles of management of chest injuries.			
Adrenal glands	SU23.1	Describe the applied anatomy of adrenal glands	Y	3 Hour	SEQ MCQ s
	SU23.2	Describe the etiology, clinical features and principles of management of disorders of			

		adrenal gland			
	SU23.3	Describe the clinical features, principles of investigation and management of Adrenal tumors			
Pancreas	SU24.1	Describe the clinical features, principles of investigation, prognosis and management of pancreatitis.	Y	3 HOURS	LEQ SEQ MCQ s
	SU24.2	Describe the clinical features, principles of investigation, prognosis and management of pancreatic endocrine tumours			
	SU24.3	Describe the principles of investigation and management of Pancreatic disorders including pancreatitis and endocrine tumors.			
Breast	SU25.1	Describe applied anatomy and appropriate investigations for breast disease	Y	5 Hours	LEQ SEQ MCQ s
	SU25.2	Describe the etiopathogenesis, clinical features and principles of management of benign breast disease including infections of the breast			
	SU25.3	Describe the etiopathogenesis, clinical features, Investigations and principles of treatment of benign and malignant tumours of breast.			
	SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast			

	SU25.5	Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin or equivalent			
Vascular diseases	SU27.1	Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease.	Y	5 hours	LEQ SEQ MCQ s
	SU27.3	Describe clinical features, investigations and principles of management of vasospastic			

		disorders			
	SU27.4	Describe the types of gangrene and principles of amputation			
	SU27.5	Describe the applied anatomy of venous system of lower limb			
	SU27.6	Describe pathophysiology, clinical features, Investigations and principles of management of DVT and Varicose veins			
	SU27.7	Describe pathophysiology, clinical features, investigations and principles of management of Lymphomas			
Abdomen	SU28.01	Describe pathophysiology, clinical features, Investigations and principles of management of Hernias	Y	27 hours	LEQ SEQ MCQ s
	SU28.03	Describe causes, clinical features, complications and principles of mangament of peritonitis			
	SU28.04	Describe pathophysiology, clinical features, investigations and principles of management of Intra-abdominal abscess, mesenteric cyst, and retroperitoneal tumors			
	SU28.05	Describe the applied Anatomy and physiology of esophagus			
	SU28.06	Describe the clinical features, investigations and principles of management of benign and malignant disorders of esophagus			



SU28.07	Describe the applied anatomy and physiology of stomach		
SU28.08	Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinoma stomach		
SU28.10	Describe the applied anatomy of liver. Describe the clinical features, Investigations and principles of management of liver abscess, hydatid disease, injuries and		

	tumors of the liver		
SU28.11	Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenic injuries. Describe the post-splenectomy sepsis - prophylaxis		
SU28.12	Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system		
SU28.13	Describe the applied anatomy of small and large intestine		
SU28.14	Describe the clinical features, investigations and management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome		
SU28.15	Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications.		

	SU28.16	Describe applied anatomy including congenital anomalies of the rectum and anal canal			
	SU28.17	Describe the clinical features, investigations and principles of management of common anorectal diseases			
Urinary System	SU29.1	Describe the causes, investigations and principles of management of Hematuria	Y	9 hours	LEQ SEQ MCQs
	SU29.2	Describe the clinical features, investigations and principles of management of congenital anomalies of genitourinary system			
	SU29.3	Describe the Clinical features, Investigations and principles of management of urinary tract infections			

	SU29.4	Describe the clinical features, investigations and principles of management of hydronephrosis			
	SU29.5	Describe the clinical features, investigations and principles of management of renal calculi			
	SU29.6	Describe the clinical features, investigations and principles of management of renal tumours			
	SU29.7	Describe the principles of management of acute and chronic retention of urine			
	SU29.8	Describe the clinical features, investigations and principles of management of bladder cancer			
	SU29.9	Describe the clinical features, investigations and principles of management of disorders of prostate			
	SU29.11	Describe clinical features, investigations and management of urethral strictures			

Penis, Testis and scrotum	SU30.1	Describe the clinical features, investigations and principles of management of phimosis, paraphimosis and carcinoma penis.	Y	4 hours	LEQ SEQ MCQs
	SU30.2	Describe the applied anatomy clinical features, investigations and principles of management of undescended testis.			
	SU30.3	Describe the applied anatomy clinical features, investigations and principles of management of epididymo-orchitis			
	SU30.4	Describe the applied anatomy clinical features, investigations and principles of management of varicocele			
	SU30.5	Describe the applied anatomy, clinical features, investigations and principles of management of Hydrocele			
	SU30.6	Describe classification, clinical features, investigations and			

		principles of management of tumours of testis			
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**Methods of Assessment:**

LAQ - Long essay Question  
 SAQ - Short essay Question  
 SEQ - Short answer Questions  
 MCQs

**Bedside Clinics in General Surgery for MBBS Third Professional year - Part 2**

Topics	Number	COMPETENCIES	Hours	Assessment Method
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ABDOMEN	SU28.9	Demonstrate the correct technique to examine the patient with disorders of stomach	3 Hours	OSCE
ABDOMEN	SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatment plan	3 Hours	OSCE
THYROID	SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management	3 Hours	OSCE
VASCULAR DISEASES	SU27.2	Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease	3 Hours	OSCE
Penis, Testis and scrotum	SU30.5	Describe the applied anatomy, clinical features, investigations and principles of management of Hydrocele	3 Hours	OSCE
BREAST	SU25.5 SU25.4	Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin or equivalent Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast	3 Hours	OSCE
ABDOMEN	SU28.2	Demonstrate the correct technique to examine the patient with hernia and identify different types of hernias	3 Hours	OSCE

**Clinical postings (8+4\*WEEKS)**

OPD	Observe and record new and follow up cases in OPD(3hrs)
Post Admission day ward rounds	Follow up of assigned cases(1hr), Bedside clinics SGD,DOAP(1hr), SDL, Discussion and closure (1hr)
OT	Observe OT procedures and document in the logbook with Discussion(3hrs)
Ward	Follow up of assigned cases(1hr), Bedside clinics (SGD, DOAP(1hr), SDL, Discussion and closure (1hr)
Ward	Follow up of assigned cases(1hr), Bedside clinics (SGD, DOAP(1hr), SDL, Discussion and closure (1hr)
Ward	Follow up of assigned cases(1hr), Bedside clinics SGD, DOAP(1hr), SDL, Discussion and closure (1hr)

\*ELECTIVES

**TUTORIALS (60 HRS)**

SL NO.	COMPETENCY NO.	TOPIC	HOURS
11.	SU 25.1	Specimen: Carcinoma Breast	2
12.	SU 25.3	Operative procedure: Modified Radical Mastectomy	2
13.	SU 25.3	X-Ray: Mammogram	2
14.	SU 28.15	Specimen: Appendix	2
15.	SU 28.15	Operative procedure: Appendectomy	2
16.	SU 28.15	X-Ray: Erect Abdomen	2
17.		Instruments: Retractors	2
18.		Instruments: Dissecting instruments	2
19.	SU 30.6	Specimen: Testicular tumor	2
20.	SU 30.6	Operative procedure: Orchidectomy	2
21.	SU 28.10	Specimen: Hydatid cyst	2
22.	SU 28.12	Specimen: Gall stones	2
23.	SU 29.5	Specimen: Urinary calculi	2
24.	SU 29.5	X-Ray: KUB	2
25.	SU 28.13	Specimen: Carcinoma colon	2
26.	SU 28.13	Operative procedure: Hemi colectomy	2
27.	SU 28.13	X-Ray: Intestinal obstruction	2
28.	SU 28.17	Specimen: Carcinoma Rectum	2
29.	SU 28.17	Operative procedure: APR	2
30.	SU 28.8	Specimen: Carcinoma Stomach	2
31.	SU 28.8	Operative procedure: Billroth 2	2
32.	SU 28.8	X-Ray: Hollow viscus perforation	2
33.	SU 28.8	Instruments: intestinal clamps	2
34.	SU 28.8	Specimen: Trichobezoar	2
35.	SU 28.8	Operative procedure: Gastrostomy	2
36.	SU 29.4	Specimen: Hydronephrosis	2
37.	SU 29.9	Operative procedure: TURP	2
38.	SU 29.4	X-Ray: IVP	2
39.	SU 29.6	Specimen: RCC	2
40.	SU 30.5	Operative procedure: Jaboulay's procedure	2

**SEMINAR (40 Hours)**

SL NO.	COMPETENCY NO.	TOPIC	HOURS
6.	SU30.6	TESTICULAR TUMORS	2
7.	SU30.1	CARCINOMA PENIS	2
8.	SU29.9	BENIGN PROSTATIC HYPERTROPHY	2
9.	SU29.9	CARCINOMA PROSTATE	2
10.	SU29.6	RENAL TUMORS	2
11.	SU28.17	ANO RECTAL DISEASES	2
12.	SU28.15	APPENDICITIS	2
13.	SU28.12	BILIARY DISORDERS	2

14.	SU28.8	PEPTIC ULCER DISEASE	2
15.	SU28.8	CARCINOMA STOMACH	2
16.	SU28.2	INGUINAL HERNIA	2
17.	SU25.3	CARCINOMA BREAST	2
18.	SU25.2	BENIGN BREAST DISEASE	2
19.	SU24.1	PANCREATITIS	2
20.	SU13.2	ORGAN TRANSPLANTATION	2
21.	SU29.8	CARCINOMA BLADDER	2
22.	SU29.5	UROLITHIASIS	2
23.	SU28.10	HEPATOCELLULAR CARCINOMA	2
24.	SU27.1/27.2	OCCLUSIVE ARTERIAL DISEASE	2
25.	SU27.3	VARICOSE VIENS	2

### **INTERGRATED TEACHING ( 25 Hours)**

SL NO.	COMPETENCY NO.	TOPIC	HOURS
6.	AN20.5+SU27.5	VARICOSE VEINS	2
7.	AN46.4+SU30.5	SCROTUM	2
8.	AN47.3+SU28.3	PERITONITIS	2
9.	AN47.10+SU28.11	PORTAL HYPERTENSION	2
10.	IM5.8+SU28.12	CHOLELITHIASIS	2
11.	IM5.18+SU13.2	LIVER TRANSPLANTATION	2
12.	PA32.6+SU24.2	PANCREATIC CARCINOMA	2
13.	IM15.15+SU28.8	PEPTIC ULCER DISEASE	2
14.	PA19.6+SU28.11	SPLEENOMEGALY	2
15.	PA24.4+SU28.8	CARCINOMA STOMACH	2
16.	PA29.1+SU30.6	TESTICULAR TUMORS	2
17.	PA29.2+SU30.1	CARCINOMA PENIS	2
18.	PA24.6+SU+IM16.15	INFLAMMATORY BOWEL DISEASE	2

### **SDL (15 HOURS)**

SL NO.	COMPETENCY NO.	TOPIC	HOURS
6.	SU28.4	RETROPERITONEAL TUMORS	3
7.	SU28.5	CARCINOMA ESOPHAGUS	3
8.	SU27.4	AMPUTATIONS	3
9.	SU28.14	NEONATAL OBSTRUCTION AND SHORT GUT SYNDROME	3
10.	SU28.11	TROPICAL SPLEENOMEGALY	3

## Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in General Surgery

### Course content

The course content been given in detail in the above Table, which includes competencies, the suggested Teaching-Learning methods and assessment methods both formative and summative. The competencies have been developed by an expert group nominated by NMC, T-L methods and assessments methods have written by the expert committee constituted by Rajiv Gandhi University of Health Sciences.

### Teaching-Learning methods and Time allotted

	Lectures (hours)	Small group discussion (hours)	Self-directed learning (hours)	Total hours	Clinical postings (weeks)
2 <sup>nd</sup> MBBS	25			25	4weeks First posting in 3-4 <sup>th</sup> terms (15hours/week)
3 <sup>rd</sup> MBBS Part 1	25	35	5	65	4weeks Second posting in 6-7 <sup>th</sup> terms (18hours/week)
3 <sup>rd</sup> MBBS Part 2	70	125	15	210	8+4weeks 3 <sup>rd</sup> &4 <sup>th</sup> posting (18hours/week)
<b>Total</b>	120	160	20	300	20weeks

Time allotted excludes time reserved for internal / University examinations, and vacation.

25% of allotted time (non-clinical time) of third Professional shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects.

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. The integration allows the student to understand the structural basis of General Surgery problems, their management and correlation with function, rehabilitation, and quality of life

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

**Newer T-L method like Learner-doctor method (Clinical clerkship)** should be mandatorily implemented, from 1<sup>st</sup> clinical postings in General Surgery itself.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part



of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1<sup>st</sup> clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

<b>Curriculum Focus of Learner - Doctor programme</b>	
<b>Posting 1</b>	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
<b>Posting 2</b>	History taking, physical examination, assessment of change in clinical status, communication and patient education
<b>Posting 3</b>	All of the above and choice of investigations, basic procedures and continuity of care
<b>Posting 4</b>	All of the above and decision making, management and outcome

### ***Attitude, Ethics & Communication Module (AETCOM module)***

The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, systems-based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship. MBBS Phase 3 Part 2, has to complete 8 modules of 5hours each. The Surgery faculty will have the responsibility of conducting 2-3 modules as per the decision and logistics of each institution.

### **Assessment**

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

### **Attendance**

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in General Surgery.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3<sup>rd</sup> professional year 3 part 2.

### **Internal Assessment**

**Internal Assessment examination:** Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained. There shall be no less than three theory internal assessment (One each in 2<sup>nd</sup> MBBS and 3<sup>rd</sup> MBBS Part1 and Two in 3<sup>rd</sup> MBBS Part2) excluding the prelims in General Surgery. An end of posting clinical assessment shall be conducted for each of the clinical postings in General Surgery. There will be one Theory and Clinical preliminary exams before the student is eligible for university exams.

### **Marks Theory: 50 marks**

One internal assessments (IA) will be conducted during 3<sup>rd</sup> MBBS Part1 for 50 marks. Two theory internal

assessments should be held during 3<sup>rd</sup> MBBS Part 2 for 50 marks each and one prelims for 100marks at the end of the year. Average marks of all three notified theory internal assessment examinations (IAE) is taken into consideration along with prelims marks for calculating the final internal assessment marks. Please note: Prior to submission to the University, the marks for each of the three internal examination theory assessments must be calculated out of 25 marks, regardless of the maximum marks.

Type of Questions	Number of questions	Marks for each question	Total
Multiple Choice Questions	10	1	10
Long Essay Questions	1	10	10
Short Essay Questions	4	5	20
Reasoning Questions / Short Answer Questions	5	3	15
<b>Total marks</b>			<b>45</b>

**Note:**

- Case Based Questions: 20% of total marks.
- Two questions based on integration (AITo) in Internal Assessment Examination
- A student who has not taken minimum required number of tests for Internal Assessment, each in theory and practical will not be eligible for University examinations.
- The results of Internal Assessment should be displayed on notice board within 2 weeks of the test and an opportunity to be provided to the students to discuss the results and get feedback on making their performance better.
- Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

**Practical/Viva: 30 Marks**

One clinical assessment at the end of posting in 3<sup>rd</sup> MBBS Part1 and Two clinical assessments at the end of the two postings in 3<sup>rd</sup> MBBS Part 2, should be held, 50marks reduced to 25 marks for each clinical assessment. In addition there should be one prelims Clinical examination for 100marks. The average of all the clinical examination should be taken into account to calculate final internal assessment marks. The marks obtained for Logbook, Record Book and Professionalism will be added to practical IAE marks. Objective Structured Clinical Examination or traditional long and short cases can be the method of assessment in Internal Assessment and Summative examination. . Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Obstetrics and Gynaecology to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and General Surgery logbook entry completed to be eligible for appearing at the final university examination.

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences,

(b) OSCE based clinical scenarios / viva voce.

## University examinations

### Eligibility to appear for Professional examinations

The performance in essential components of training are to be assessed, based on:

#### A. ATTENDANCE

1. Attendance requirements are 75% in theory and 80% in practical /clinical for eligibility to appear for the examinations in that subject. In subjects that are taught in more than one phase – the learner must have **75% attendance in theory and 80% in practical in each phase of instruction in that subject.**
2. **If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting.**
3. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.

#### B. Internal Assessment: Internal assessment shall be based on day-to-day assessment.

It shall relate to different ways in which learners participate in learning process including assignments, preparation for seminar, clinical case presentation, preparation of clinical case for discussion, clinical case study/problem solving exercise, participation in project for health care in the community, proficiency in carrying out a practical or a skill in small research project, a written test etc.

**General Surgery including Anaesthesia, Dentistry, Radiotherapy and Radiodiagnosis:**

University examinations in Third Professional Part II shall be held at end of 12 months of training in the subjects of Medicine, Surgery including Orthopedics, Obstetrics and Gynecology and Pediatrics.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

#### Marks allotted

Obstetrics and Gynecology	Theory	Clinical examination
<b>Total marks</b>	2 papers of 100 marks each for General Surgery The pattern of each question paper is given below	200 marks
	Long essay 2X10= 20	Long case 60 marks
	Short essay 8x5=40 marks	Two short cases 30+30=60 marks Ortho two short cases 20+20=40
	Short answer question 10x3=30marks	Viva-voce for 40 marks. General Surgery 4 stations (30marks) Ortho 2 stations (10marks)

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs ( Multiple Choice Questions). Marks for each part should be indicated separately. All the question papers to follow the suggested **blueprint (APPENDIX 1)**. It is **desirable** that the marks allotted to a particular topic are adhered to.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

**One main essay question** to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

**There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination. There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.**

**The discipline of Orthopedics will constitute 30% of the total theory marks incorporated as Section-B in Paper II of General Surgery. Anesthesiology, Dentistry, Radiotherapy and Radiodiagnosis will be part of General Surgery Section-A of Paper II**

#### EXAMINATION SCHEDULE

<b>Third Professional Part – II</b>		
General Medicine - 2 papers	200	200
General Surgery - 2 papers	200	200

Pediatrics – 1 paper	100	100
Obstetrics & Gynaecology - 2 papers	200	200

**Note: At least one question in each paper of the clinical specialties should test knowledge - competencies acquired during the professional development programme (AETCOM module); Skills competencies acquired during the Professional Development programme (AETCOM module) must be tested during clinical, practical and viva.**

**n subjects that have two papers, the learner must secure at least 40% marks in each of the papers with minimum 50% of marks in aggregate (both papers together) to pass in the said subject.**

Criteria for passing in a subject: A candidate shall obtain 50% marks in University conducted examination separately in Theory and Practical (practical includes: practical/ clinical and viva voce) in order to be declared as passed in that subject.

#### **Pass criteria**

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

#### **Appointment of Examiners**

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation

External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.

#### **Suggested Books**

1. Short Practice of Surgery, Bailey & Love. 27<sup>th</sup> Edition

2. A Manual on Clinical Surgery, S.Das. 13<sup>th</sup> Edition

References

1. Textbook of Surgery, Sabiston, 20<sup>th</sup> Edition
2. Hamilton Bailey's Demonstrations of Physical signs in Clinical surgery
3. Kirks General Surgical Operations

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## MARKS DISTRIBUTION FOR Final MBBS General Surgery

### PAPER I

S.NO	QUESTION	NUMBER X MARKS	TOTAL
1	LONG ESSAY (LEQ)	2X10	20
2	SHORT ESSAY (SEQ)	6X5	30
3	SHORT ANSWER (SAQ)	10X3	30
4	MULTIPLE CHOICE QUESTIONS(MCQ)	20X1	20
			=100

### PAPER II-Section A

S.NO	QUESTION	NUMBER X MARKS	TOTAL
1	LONG ESSAY (LEQ)	1X10	10
2	SHORT ESSAY (SEQ)	3X5	15
3	SHORT ANSWER(SAQ)	5X3	15
4	MULTIPLE CHOICE QUESTIONS	10X1	10
			=50

### PAPER II Section B (Orthopaedics)

### CLINICAL(PRACTICAL)EXAMINATION

S.NO	CLINICAL(PRACTICAL)EXAMINATION	MARKS
<b>GENERAL SURGERY</b>		
1	OSCE (including AETCOM)	90
2	INTERNAL ASSESSMENT	20
3	LOG BOOK	05
4	RECORD	05
	<b>TOTAL</b>	<b>120</b>
5	ORTHOPAEDICS	40
	<b>TOTAL</b>	<b>160</b>

S.NO	VIVA-VOCE	MARKS
1	GENERAL SURGERY	30
2	ORTHOPAEDICS	10
	<b>TOTAL</b>	<b>40</b>

### Suggested Books

1. Short Practice of Surgery, Bailey & Love. 27<sup>th</sup> Edition
2. A Manual on Clinical Surgery, S.Das. 13<sup>th</sup> Edition

### References

1. Textbook of Surgery, Sabiston, 20<sup>th</sup> Edition
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