Undergraduate Assessment Record

General Surgery

The TN Dr. M.G.R. Medical University
Chennai

The Tamil Nadu Dr. M.G.R. Medical University
Chennai

Under Graduate Assessment Record

Department of General Surgery

Preface

Competency based education implemented by this university is an outcome-based learning on a framework of competencies. The present system needs an ongoing and longitudinal assessment to identify the learning, enable learning opportunities and acquire the mandated competency. Consequently, this university is enabling this assessment record to decide if the learner has acquired the mandated competencies.

This assessment record is designed to collect and analyse data of a student's learning in relation to a required competency and the learner's stage of training, based on - use of knowledge, technical skills, clinical reasoning, communication, emotions, values and reflection continuously and consistently and not isolated to the final examination.

As given in the MCI document on "Competency Based Assessment Module for Undergraduate Medical Education-2019" - "Informal assessments should happen during teaching-learning activities with the express purpose of finding out the stage of the student and taking corrective action in teaching-learning methodology on an ongoing basis. During lectures, small groups or seminars, use of techniques like clickers, one-minute papers and muddiest point provide valuable information to check understanding and provide developmental feedback. Same can be done during practical/clinical teaching using one-minute preceptor (OMP) or SNAPPS technique (Summarize history and findings, Narrow the differential; Analyse the differential; Probe preceptor about uncertainties; Plan management; Select case-related issues for self- study). Many of these do not need to be considered for pass/fail decisions but are useful to aid learning and acquire competencies. These can be planned by the teachers on a day to day basis and modified depending on the tasks at hand.

This Assessment Record for the Undergraduates is to be maintained by the Faculty of the concerned Department and shall be shown to the student during the feedback sessions and at the end of the course period.

Table of Contents

1. University Norms for Assessment of the Course

a. Formative / Internal Assessment

Internal Assessment – Theory			
	Type of Assessment	Methods of Assessment	Total Marks
Formative Assessment	Theory Tests	MCQ, VSAQ, SAQ, LAQ	PCT 1 :100 PCT 2 : 100 Model Theory exam: 200 **Total : 400**
Continuous Internal Assessment – Theory		Home Assignments	15
		Continuous class test - LMS	30
	Self-Directed Learning	Seminar, Museum study, Library assignments	15+15+15 = 45
	Attendance theory		10
		Grand TOTAL	500
Internal Assessment - Practical			
Formative Assessment	Practical (Average of 2 PCTs and Model Practical tests)	Clinical case presentation, spotters, OSCE, exercises, Viva	PCT 1 :100 PCT 2 : 100 Model Practical : 200 **Total : 400**
Continuous Internal Assessment	Log Book/Academic Record	Certifiable skill based competencies through OSCE, Spotters, etc	100
		SVL (Simulated/Skill-based Virtual Lab) activity	40
		AETCOM Learning	40
		Research	20
		Journal (Record notebook/Portfolio)	40
		Attendance	10
		Grand Total	650

Note:

1. 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, integrated classes, participation in AETCOM, SDL, Projects.
2. Regular periodic examinations shall be conducted throughout the course. There shall be no less than 8 internal assessment examinations and no less than 4 practical examinations.
3. Day to day records and log book (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills. Colleges and teachers should try to build their valid assessment tools.

4. Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject. Internal assessment marks will reflect as separate head of passing at the summative examination.
6. Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.
7. Feedback should be provided to learners throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and learners must be sensitized to giving and receiving feedback.
8. The results of IA should be displayed on notice board within 2 weeks of the test and an opportunity provided to the learners to discuss the results and get feedback on making their performance better. Remedial measures for learners who are either not able to score qualifying marks or have missed on some assessments due to any reason(s) shall be allowed with a record.
9. It is also recommended that learners should sign with date whenever they are shown IA records in token of having seen and discussed the marks.
10. Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

a. Summative Assessment - University Examination

University examinations will consist of

1. Theory: 2 papers of 100 marks each. (Total 200 marks)
2. Practical Exam + Viva: 160+40= marks

Note:

1. Theory Examinations: Nature of questions will include different types such as structured essays (Long Answer Questions - LAQ), Short Answers Questions (SAQ) and objective type questions (e.g. Multiple-Choice Questions - MCQ). Marks for each part should be indicated separately. MCQs shall be accorded a weightage of not more than 20% of the total theory marks. In 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.
2. Practical/clinical examinations will be conducted in the laboratory/ clinics. The objective will be to assess proficiency and skills in History Taking, conduct physical examination, interpret data and form clinic social case diagnosis Emphasis should be on candidate's capability to demonstrate communication skills, analyse the case etc
3. Viva/oral examination should assess approach to problem solving, applied situations, attitudinal, ethical and professional values. Candidate's skill in interpretation of common factors associated with health and disease
4. Internal assessment marks are not to be added to marks of the University examinations and should be shown separately in the grade card.
5. Pass in University Exam will be 50% marks in theory and practical

2. Curriculum Vitae

Name of Student											
Name of Parent/Guardian											
Date of Birth & Age											
Permanent Address											
Address for Postal Communication											
Landline Phone (Home)											
Mobile Phone (Parent/Guardian)											
Mobile Phone (Parent/Guardian)											
Mobile Phone (Student)											
Email ID (Parent/Guardian)											
Email ID (Student)											

Signature of Student

3. Understanding Competency Based Assessment

Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually. However, as stated earlier, using individual domain framework may not always result in making an accurate assessment of the specific competency. Therefore, efforts should be made to include competencies in the assessment process as much as possible. CBA is very useful to convey a message to the learners to structure their learning around competency framework.

- CBA operates within the framework of competencies. Assessment tools should align competencies/objectives.
- CBA should help to acquire competencies/objectives (Assessment for learning) and their certification (Assessment of learning).
- CBA is continuous and ongoing process with opportunities for providing developmental feedback.
- Direct observations of learners improve utility of CBA and feedback.
- Multiple assessors, multiple tools and multiple assessments improve the validity and reliability of CBA.

Formative & Internal Assessment (IA)

Formative assessment is an assessment conducted during the instruction with the primary purpose of providing feedback for improving learning. It also helps the teachers and learners to modify their teaching learning strategies. The feedback is central to formative assessment and is linked to deep learning, seeking to explore the educational literature and its pedagogical lessons for healthcare educational practice. It provides inputs to both learners and teachers regarding adequacy of teaching-learning. A variety of feedback principles and techniques can be used depending on the context.

Although there can be a debate on the summative or formative nature of IA, it still provides the best opportunities for formative purposes. IA is when assessment is done by the teachers who have taught the subject. It overcomes the limitations of day-to-day variability and allows larger sampling of topics, competencies and skills.

In competency-based curriculum, IA provides useful avenues for both formative and summative assessment. The IA focuses on the process of learning i.e. how the learners have learnt throughout the course. This assessment gives priority to psychomotor, communication and affective domains. These are those domains which are usually not assessed by the traditional assessment methods. It should involve all faculty members of a department (Senior Residents upwards) and not just one or two senior teachers. This helps to build the ownership of teaching-learning and assessment as well as provide 'hands-on' experience in assessment to all teachers. In that way, IA can be a very useful tool for assessing all competencies in any competency-based curriculum. IA should not be considered as an assessment without external controls and can be utilized in a manner to overcome some its perceived weaknesses. Utility of IA can be further improved by involving all teachers in the department and limiting the contribution of individual teacher, test or tool.

Designing a system of assessment

While designing an internal assessment, all domains of learning i.e. cognitive, psychomotor and affective should be taken into account and weightage should be assigned to these domains for assessment. We can divide various domains into smaller components and assign marks to each component. Make a blueprint of assessment, then circulate to few learners and faculty, take their comments/ views/feedback and revise as per the need. Miller's pyramid (figure 2) provides a

simple way to select appropriate tool for assessment. Efforts should be made to climb higher in the pyramid.6, 13 The following adapted example illustrates this:

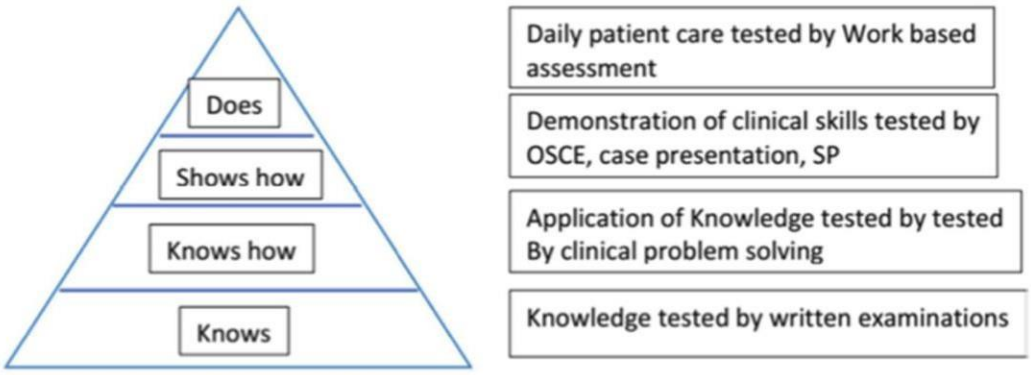

Figure 2. Assessment methods as per levels of competency (Adapted from Ramani) OSCE: Objective Structured Clinical Examination, SP: Standardised/ Simulated Patients

The key to building validity and to make CBA assessment useful is to align it with competencies/objectives. Including some aspects from competencies of other phases is useful to assess integration of concepts. Some examples of such alignment can be seen in the competency sheet given in Table1.

Table 1. Deriving assessment methods from objectives

Competency: An **observable** ability of a health professional, **integrating multiple components** such as knowledge, skills, values and attitudes.

PA42.3	**Identify** the etiology of meningitis based on given CSF parameters	K/S	SH	Y

Objective: Statement of what a learner should be able to do at the end of a specific learning experience

PA42.3.1	At the end of the session **the PII student** must be able to enumerate the most common causes of meningitis correctly	Short note or part of structured essay: Enumerate 5 causes of meningitis based on their prevalence in India
PA42.3.2	At the end of the session the PII student must be able to enumerate the components of a CSF analysis correctly	Short note or part of structured essay: Enumerate the components tested in a CSF analysis
PA4.3.3	At the end of the session the PII student must be able to **describe** the CSF features for a given etiologic of meningitis **accurately**	Short note or part of structured essay:Describe the CSF findings that are characteristic of tuberculous meningitis
PA4.3.4	At the end of the session the PII student must the able to identify the aetiology of meningitis correctly from a **given set of CSF parameters**	Short note / part of the structured essay/ Skill station/ Viva: Review the CSF findings in the following patient and identify (write or vocalise) the most likely ethology

Table 1. Deriving assessment methods from objectives

A useful approach, especially for affective, psychomotor and communication domains, is to adopt the concept of assessment toolbox. A toolbox is a listing of available tools (and rating forms, if required), which are suggested for a particular competency or sub-competency and aims at improving the value of assessment data.14 The listed tools are suggestions only and can be freely used either singly or in combination by teachers to suit particular requirements. Efforts should be made to use multiple tools even for a given competency to improve validity and reliability of assessment. While assessment will continue to be subject based, efforts must be made to ensure

that phase appropriate correlates are assessed to determine if the learner has internalised and integrated the concept and its application.

Internal Assessment

Scheduling of IA

A student who has not taken minimum required number of tests for IA each in theory and practical will not be eligible for University examinations. Proper records of the work should be maintained which will form the basis for the learners' internal assessment and should be available to the assessors at the time of inspection of the college by the Medical Council of India.

Components of IA

(i) Theory IA can include: theory tests, send ups, seminars, quizzes, interest in subject, scientific attitude etc. Written tests should have short notes and creative writing experiences.

(ii) Practical/Clinical IA can include: clinical case presentation, practical tests, Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), Mini Clinical Evaluation Exercise (mini-CEX), records maintenance and attitudinal assessment. Colleges and teachers should try to build capacity to use a variety of assessment tools. A number of tools are available in the form of assessment toolbox. The construct validity and predictive utility of internal assessment is high. Many of the tools mentioned for IA may appear subjective. However, by virtue of being high on validity and by conveying a message to the learners to not ignore skills, attitudes and communication (educational impact), they contribute to better learning. Since stakes at IA are low, the use of expert subjective assessments to cover areas which are not assessable by conventional objectivised assessment tools is appropriate. There is plenty of evidence in literature to suggest that expert subjective assessments can be as reliable as highly objective ones.

There should be at least one assessment based on direct observation of skills, attitudes and communication at all levels. Communication and attitudinal assessment should also be built in all assessments as far as possible.

Feedback in IA

Feedback should be provided to learners throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and learners must be sensitized to giving and receiving feedback. The results of IA should be displayed on notice board within 2 weeks of the test and an opportunity provided to the learners to discuss the results and get feedback on making their performance better. It is also recommended that learners should sign with date whenever they are shown IA records in token of having seen and discussed the marks. Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

(These concepts have been incorporated in the proposed Regulations in Graduate Medical Education, 2019 (GMER 2019) and are reproduced here.

4. Formative Assessment of Classroom / Clinical Training

The term "Classroom Learning" mentioned here includes any learning that happens within the ambit of the department as large group and small group teaching, demonstrations, dissection classes, practical classes, museum classes etc. The learning in the department predominantly fits into the Scale of 1 and2of the 5 level Blooms Taxonomy.

The Assessment Methods would include

1. End of Lecture Class/Module Assessment: 5-8 MCQ's solved over 5-8minutes
2. End of clinical training : OSCE of 10-12minutes
3. End of Practicals /Module: Spotting / OSCE/ Epidemiological exercises

For effective assessment and grading of performances a Likert's scale is given as under:

Grade	Characteristic
1	Score < 35% marks in the end of class assessments
2	Score 35%-50% marks in the end of class assessments
3	Score 50%-60% marks in the end of class assessments
4	Score 60%-75% marks in the end of class assessments
5	Score > 75% marks in the end of class assessments

Number	COMPETENCY: The student should be able to	Level	Grading Scale					Initial of
			1	2	3	4	5	Facilitator
Topic: Metabolic response to injury								
SU1.1	Describe Basic concepts of homeostasis, enumerate the metabolicchanges in injury and their mediators.	KH						
SU1.2	Describe the factors that affect the metabolic response to injury.	KH						
SU1.3	Describe basic concepts of perioperative care.	KH						
Topic: Shock								
SU2.1	Describe Pathophysiology of shock, types of shock & principles of resuscitation including fluid replacement	KH						
SU2.2	Describe the clinical features of shock and its appropriate treatment.	KH						
SU2.3	Communicate and counsel patients and families about the treatment and prognosis of shock demonstrating empathy and care	SH						

Topic: Blood and blood components								
SU3.1	Describe the Indications and appropriate use of blood and blood products and complications of blood transfusion.	KH						
SU3.2	Observe blood transfusions.	SH						
SU3.3	Counsel patients and family/ friends for blood transfusion and blooddonation.	SH						
Topic: Burns								
SU4.1	Elicit document and present history in a case of Burns and performphysical examination. Describe Pathophysiology of Burns.	KH						
SU4.2	Describe Clinical features, Diagnose type and extent of burns andplan appropriate treatment.	KH						
SU4.3	Discuss the Medicolegal aspects in burn injuries.	KH						
SU4.4	Communicate and counsel patients and families on the outcomeand rehabilitation demonstrating empathy and care.	SH						
Topic: Wound healing and wound care								
SU5.1	Describe normal wound healing and factors affecting healing.	KH						
SU5.2	Elicit, document and present a history in a patient presenting withwounds.	SH						
SU5.3	Differentiate the various types of wounds, plan and observe management of wounds.	KH						
SU5.4	Discuss medico legal aspects of wounds	KH						
Topic: Surgical infections								
SU6.1	Define and describe the aetiology and pathogenesis of surgicalInfections	KH						
SU6.2	Enumerate Prophylactic and therapeutic antibiotics Plan appropriate management	KH						

Topic: Surgical Audit and Research								
SU7.1	Describe the Planning and conduct of Surgical audit	KH						
SU7.2	Describe the principles and steps of clinical research in GeneralSurgery	KH						
Topic: Ethics								
SU8.1	Describe the principles of Ethics as it pertains to General Surgery	KH						
SU8.2	Demonstrate Professionalism and empathy to the patient undergoing General Surgery	SH						
SU8.3	Discuss Medico-legal issues in surgical practice	KH						
Topic: Investigation of surgical patient								
SU9.1	Choose appropriate biochemical, microbiological, pathological,imaging investigations and interpret the investigative data in a surgical	KH						
SU9.2	Biological basis for early detection of cancer and multidisciplinaryapproach in management of cancer	KH						
SU9.3	Communicate the results of surgical investigations and counsel thepatient appropriately	SH						
Topic: Pre, intra and post- operative management.								
SU10.1	Describe the principles of perioperative management of commonsurgical procedures	KH						
SU10.2	Describe the steps and obtain informed consent in a simulated environment	SH						
SU10.3	Observe common surgical procedures and assist in minor surgicalprocedures; Observe emergency lifesaving surgical procedures.	KH						
SU10.4	Perform basic surgical Skills such as First aid including suturing andminor surgical procedures in simulated environment	P						

Topic: Anaesthesia and pain management								
SU11.1	Describe principles of Preoperative assessment.	KH						
SU11.2	Enumerate the principles of general, regional, and localAnaesthesia.	KH						
SU11.3	Demonstrate maintenance of an airway in a mannequin or equivalent	SH						
SU11.4	Enumerate the indications and principles of day care General Surgery	KH						
SU11.5	Describe principles of providing post-operative pain relief and management of chronic pain.	KH						
SU11.6	Describe Principles of safe General Surgery	KH						
Topic: Nutrition and fluid therapy								
SU12.1	Enumerate the causes and consequences of malnutrition in the surgical patient	KH						
SU12.2	Describe and discuss the methods of estimation and replacement ofthe fluid and electrolyte requirements in the surgical patient	KH						
SU12.3	Discuss the nutritional requirements of surgical patients, the methods of providing nutritional support and their complications	KH						
Topic: Transplantation								
SU13.1	Describe the immunological basis of organ transplantation	KH						
SU13.2	Discuss the Principles of immunosuppressive therapy.Enumerate Indications, describe surgical principles, management of organ transplantation	KH						
SU13.3	Discuss the legal and ethical issues concerning organ donation	KH						
SU13.4	Counsel patients and relatives on organ donation in a simulated environment	SH						
Topic: Basic Surgical Skills								
SU14.1	Describe Aseptic techniques, sterilization and disinfection.	KH						
SU14.2	Describe Surgical approaches, incisions and the use of appropriateinstruments in Surgery in general.	KH						

SU14.3	Describe the materials and methods used for surgical wound closure and anastomosis (sutures,	KH						
SU14.4	Demonstrate the techniques of asepsis and suturing in a simulatedenvironment	SH						
Topic: Biohazard disposal								
SU15.1	Describe **c**lassification of hospital waste and appropriate methods ofdisposal.	KH						
Topic: Minimally invasive General Surgery								
SU16.1	Minimally invasive General Surgery: Describe indications advantages and disadvantages of Minimally invasive GeneralSurgery	K						
Topic: Trauma								
SU17.1	Describe the Principles of FIRST AID	KH						
SU17.2	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment	SH						
SU17.3	Describe the Principles in management of mass casualties	KH						
SU17.4	Describe Pathophysiology, mechanism of head injuries	KH						
SU17.5	Describe clinical features for neurological assessment and GCS inhead injuries	KH						
SU17.6	Chose appropriate investigations and discuss the principles of management of head injuries	KH						
SU17.7	Describe the clinical features of soft tissue injuries. Choseappropriate investigations and discuss the principles of management.	KH						
SU17.8	Describe the pathophysiology of chest injuries.	KH						
SU17.9	Describe the clinical features and principles of management ofchest	KH						
SU17.10	Demonstrate Airway maintenance. Recognize and manage tension pneumothorax, hemothorax and flail chest in simulated environment.	SH						

Topic: Skin and subcutaneous tissue								
SU18.1	Describe the pathogenesis, clinical features and management ofvarious cutaneous and subcutaneous infections.	KH						
SU18.2	Classify skin tumors Differentiate different skin tumors and discuss their management.	KH						
SU18.3	Describe and demonstrate the clinical examination of surgical patient including swelling and order relevant investigation for diagnosis. Describe and discuss appropriate treatment plan.	SH						
Topic: Developmental anomalies of face, mouth and jaws								
SU19.1	Describe the etiology and classification of cleft lip and palate	KH						
SU19.2	Describe the Principles of reconstruction of cleft lip and palate	KH						
Topic: Oropharyngeal cancer								
SU20.1	Describe etiopathogenesis of oral cancer symptoms and signs of oropharyngeal cancer.	KH						
SU20.2	Enumerate the appropriate investigations and discuss the Principlesof treatment.	K						
Topic: Disorders of salivary glands								
SU21.1	Describe surgical anatomy of the salivary glands, pathology, andclinical presentation of disorders of salivary glands	KH						
SU21.2	Enumerate the appropriate investigations and describe the Principles of treatment of disorders of salivary glands	KH						
Topic: Endocrine General Surgery: Thyroid and parathyroid								
SU22.1	Describe the applied anatomy and physiology of thyroid	KH						
SU22.2	Describe the etiopathogenesis of thyroidal swellings	KH						
SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discus the differential diagnosis and theirmanagement	SH						

SU22.4	Describe the clinical features, classification and principles of management of thyroid cancer	KH						
SU22.5	Describe the applied anatomy of parathyroid	KH						
SU22.6	Describe and discuss the clinical features of hypo - and hyperparathyroidism and the principles of their management	KH						
Topic: Adrenal glands								
SU23.1	Describe the applied anatomy of adrenal glands	KH						
SU23.2	Describe the etiology, clinical features and principles of management of disorders of adrenal gland	KH						
SU23.3	Describe the clinical features, principles of investigation and management of Adrenal tumors	KH						
SU24.1	Describe the clinical features, principles of investigation, prognosisand management of pancreatitis.	KH						
SU24.2	Describe the clinical features, principles of investigation, prognosisand management of pancreatic endocrine tumours	KH						
SU24.3	Describe the principles of investigation and management of Pancreatic disorders including pancreatitis and endocrine tumors.	KH						
Topic: Breast								
SU25.1	Describe applied anatomy and appropriate investigations for breast disease	KH						
SU25.2	Describe the etiopathogenesis, clinical features and principles of management of benign breast disease including infections of thebreast	KH						
SU25.3	Describe the etiopathogenesis, clinical features, Investigations andprinciples of treatment of benign and malignant tumours of breast.	KH						
SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast	SH						

SU25.5	Demonstrate the correct technique to palpate the breast for breastswelling in a mannequin or equivalent	SH						
Topic: Cardio-thoracic General Surgery- Chest - Heart and Lungs								
SU26.1	Outline the role of surgery in the management of coronary heartdisease, valvular heart diseases and congenital heart diseases	K						
SU26.3	Describe the clinical features of mediastinal diseases and the principles of management	K						
SU26.4	Describe the etiology, pathogenesis, clinical features of tumors oflung and the principles of management	K						
Topic: Vascular diseases								
SU27.1	Describe the etiopathogenesis, clinical features, investigations andprinciples of treatment of occlusive arterial disease.	KH						
SU27.2	Demonstrate the correct examination of the vascular system andenumerate and describe the investigation of vascular disease	SH						
SU27.3	Describe clinical features, investigations and principles ofmanagement of vasospastic disorders	KH						
SU27.4	Describe the types of gangrene and principles of amputation	KH						
SU27.5	Describe the applied anatomy of venous system of lower limb	K						
SU27.6	Describe pathophysiology, clinical features, Investigations andprinciples of management of DVT and Varicose veins	KH						
SU27.7	Describe pathophysiology, clinical features, investigations and principles of management of Lymph edema, lymphangitis andLymphomas	KH						
SU27.8	Demonstrate the correct examination of the lymphatic system	SH						
Topic: Abdomen								
SU28.1	Describe pathophysiology, clinical features, Investigations andprinciples of management of Hernias	KH						
SU28.2	Demonstrate the correct technique to examine the patient withhernia and identify different types of hernias.	SH						
SU28.3	Describe causes, clinical features, complications and principles of mangament of peritonitis	K						

SU28.4	Describe pathophysiology, clinical features, investigations and principles of management of Intra-abdominal abscess, mesentericcyst, and retroperitoneal tumors	K						
SU28.5	Describe the applied Anatomy and physiology of esophagus	K						
SU28.6	Describe the clinical features, investigations and principles of management of benign and malignant disorders of esophagus	K						
SU28.7	Describe the applied anatomy and physiology of stomach	KH						
SU28.8	Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinomastomach	KH						
SU28.9	Demonstrate the correct technique of examination of a patient withdisorders of the stomach	SH						
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	KH						
SU28.11	Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenicinjuries. Describe the post-splenectomy sepsis - prophylaxis	KH						
SU28.12	Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management ofdiseases of biliary system	KH						
SU28.13	Describe the applied anatomy of small and large intestine	KH						
SU28.14	Describe the clinical features, investigations and principles of management of disorders of small and large intestine includingneonatal obstruction and Short gut syndrome	KH						
SU28.15	Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications.	KH						

SU28.16	Describe applied anatomy including congenital anomalies of therectum and anal canal	KH						
SU28.17	Describe the clinical features, investigations and principles of management of common anorectal diseases	KH						
SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatmentplan	SH						
Topic: Urinary System								
SU29.1	Describe the causes, investigations and principles of managementof Hematuria	KH						
SU29.2	Describe the clinical features, investigations and principles of management of congenital anomalies of genitourinary system	KH						
SU29.3	Describe the Clinical features, Investigations and principles of management of urinary tract infections	KH						
SU29.4	Describe the clinical features, investigations and principles ofmanagement of hydronephrosis	KH						
SU29.5	Describe the clinical features,investigations and principles ofmanagement of renal calculi	KH						
SU29.6	Describe the clinical features, investigations and principles ofmanagement of renal tumours	KH						
SU29.7	Describe the principles of management of acute and chronicretention of urine	KH						
SU29.8	Describe the clinical features, investigations and principles ofmanagement of bladder cancer	KH						
SU29.9	Describe the clinical features, investigations and principles ofmanagement of disorders of prostate	KH						
SU29.10	Demonstrate a digital rectal examination of the prostate in amannequin or equivalent	SH						
SU29.11	Describe clinical features, investigations and management ofurethral strictures	KH						

Topic: Penis, Testis and scrotum								
SU30.1	Describe the clinical features, investigations and principles of management of phimosis, paraphimosis and carcinoma penis.	KH						
SU30.2	Describe the applied anatomy clinical features, investigations andprinciples of management of undescended testis.	KH						
SU30.3	Describe the applied anatomy clinical features, investigations andprinciples of management of epidydimo-orchitis	KH						
SU30.4	Describe the applied anatomy clinical features, investigations andprinciples of management of varicocele	KH						
SU30.5	Describe the applied anatomy, clinical features, investigations andprinciples of management of Hydrocele	KH						
SU30.6	Describe classification, clinical features, investigations andprinciples of management of tumours of testis	KH						
Topic: Anesthesiology								
AS1.1	Describe the evolution of Anaesthesiology as a modern specialty	K						
AS1.2	Describe the roles of Anaesthesiologist in the medical profession (including as a peri-operative physician, in the intensive care and high dependency units, in the management of acute and chronic pain, including labour analgesia, in the resuscitation of acutely ill)	K						
AS1.3	Enumerate and describe the principle of ethics as it relates to Anaesthesiology	K						
AS1.4	Describe the prospects of Anaesthesiology as a career	K						
Topic: Cardiopulmonary resuscitation								
AS2.1	Enumerate the indications, describe the steps and demonstrate in a simulated environment, Basic Life Support in adults, children and neonates	K/S						
AS2.2	Enumerate the indications, describe the steps and demonstrate in a simulated environment, Advanced Life Support in adults and children	S						

Topic: Preoperative evaluation and medication								
AS3.1	Describe the principles of preoperative evaluation	KH						
AS3.2	Elicit, present and document an appropriate history including medication history in a patient undergoing Surgery as it pertains to apreoperative anaesthetic evaluation	SH						
AS3.3	Demonstrate and document an appropriate clinical examination in apatient undergoing General Surgery	SH						
AS3.4	Choose and interpret appropriate testing for patients undergoingSurgery	SH						
AS3.5	Determine the readiness for General Surgery in a patient based onthe preoperative evaluation	SH						
AS3.6	Choose and write a prescription for appropriate premedications for patients undergoing surgery	SH						
Topic: General Anaesthesia								
AS4.1	Describe and discuss the pharmacology of drugs used in induction and maintenance of general anaesthesia (including intravenous and inhalation induction agents, opiate and non-opiate analgesics, depolarising and non depolarising muscle relaxants, anticholinesterases)	KH						
AS4.2	Describe the anatomy of the airway and its implications for general anaesthesia	KH						
AS4.3	Observe and describe the principles and the practical aspects of induction and maintenance of anesthesia	KH						
AS4.4	Observe and describe the principles and the steps/ techniques in maintenance of vital organ functions in patients undergoing surgical procedures	KH						
AS4.5	Observe and describe the principles and the steps/ techniques in monitoring patients during anaesthesia	KH						
AS4.6	Observe and describe the principles and the steps/ techniques involved in day care anesthesia	KH						
AS4.7	Observe and describe the principles and the steps/ techniques involved in anaesthesia outside the operating room	KH						
Topic: Regional anaesthesia								
AS5.1	Enumerate the indications for and describe the principles of regional anaesthesia (including spinal, epidural and combined)	KH						

AS5.2	Describe the correlative anatomy of the brachial plexus, subarachnoid and epidural spaces	KH						
AS5.3	Observe and describe the principles and steps/ techniques involved in peripheral nerve blocks	KH						
AS5.4	Observe and describe the pharmacology and correct use of commonly used drugs and adjuvant agents in regional anesthesia	KH						
AS5.5	Observe and describe the principles and steps/ techniques involved in caudal epidural in adults and children	KH						
AS5.6	Observe and describe the principles and steps/ techniques involved in common blocks used in Surgery(including brachial plexus blocks)	KH						
Topic: Post-anaesthesia recovery								
AS6.1	Describe the principles of monitoring and resuscitation in the recovery room	KH						
AS6.2	Observe and enumerate the contents of the crash cart and describe the equipment used in the recovery room	KH						
AS6.3	Describe the common complications encountered by patients in therecovery room, their recognition and principles of management	KH						
Topic: Intensive Care Management								
AS7.1	Visit, enumerate and describe the functions of an Intensive Care Unit	KH						
AS7.2	Enumerate and describe the criteria for admission and discharge of a patient to an ICU	KH						
AS7.3	Observe and describe the management of an unconscious patient.	KH						
AS7.4	Observe and describe the basic setup process of a ventilator	KH						
AS7.5	Observe and describe the principles of monitoring in an ICU	KH						
Topic: Pain and its management								
AS8.1	Describe the anatomical correlates and physiologic principles of pain	KH						
AS8.2	Elicit and determine the level, quality and quantity of pain and its tolerance in patient or surrogate	KH						

AS8.3	Describe the pharmacology and use of drugs in the management of pain	KH						
AS8.4	Describe the principles of pain management in palliative care	KH						
AS8.5	Describe the principles of pain management in the terminally ill	KH						
Topic: Fluids								
AS9.1	Establish intravenous access in a simulated environment	KH						
AS9.2	Establish central venous access in a simulated environment	KH						
AS9.3	Describe the principles of fluid therapy in the preoperative period	KH						
AS9.4	Enumerate blood products and describe the use of blood products in the preoperative period	KH						
Topic: Patient safety								
AS10.1	Enumerate the hazards of incorrect patient positioning	KH						
AS10.2	Enumerate the hazards encountered in the perioperative period and steps/techniques taken to prevent them	KH						
AS10.3	Describe the role of communication in patient safety	KH						
AS10.4	Define and describe common medical and medication errors in anaesthesia	KH						
Topic: Radiodiagnosis								
RD1.1	Define radiation and the interaction of radiation and importance of radiation protection	KH						
RD1.2	Describe the evolution of Radiodiagnosis. Identify various radiological equipments In the current era	SH						
RD1.3	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorder of ENT	SH						
RD1.4	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorder in Ob & Gy	SH						

RD1.5	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorder in internal medicine	SH						
RD1.6	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorderls in surgery	SH						
RD1.7	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorder in Pediatrics	SH						
RD1.8	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to common malignancies	SH						
RD1.9	Describe the role of Interventional Radiology in common clinical conditions	KH						
RD1.10	Describe the role of Emergency Radiology, miscellaneous & applied aspects, interaction with clinical departments	KH						
RD1.11	Describe preparation of patient for common imaging procedures	KH						
RD1.12	Describe the effects of radiation in pregnancy and the methods of prevention/ minimization of radiation exposure	KH						
RD1.13	Describe the components of the PC & PNDT Act and itsmedicolegal implications	KH						

5. Formative Assessment of Assignments

Note:

1. Formative Assessment involves various methods of which out of class assignments are important instruments.
2. The structure for the assignment should be clear mentioned at the start. The structure should include an introduction, main body of the assignment and a conclusion if it is an essay work. Illustrations, flow charts, tables and graphs should be part of the submission where ever necessary.
3. Plagiarism should be discouraged.
4. The grading of the assignment shall be done by the faculty team as follows

Faculty Decision	Grade
Poor content & presentation	1
Below Average content & presentation	2
Average content & presentation	3
Above Average content & presentation	4
Excellent content & presentation	5

No	Title of Assignment	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

6. Formative Assessment of Integrated Sessions

Note:

1. Formative Assessment of integrated teaching sessions involves assessment of student level of sessional learning.
2. The student shall be given a 15-20 MCQ test at the end of the session. This can be both in the offline and online modes,
3. The grading of the same shall be done by the faculty team as follows:

   Scale

   1 : End of Session Assessment <35%
   2 : End of Session Assessment 35-50%
   3 : End of Session Assessment 50-60%
   4 : End of Session Assessment 60-75%
   5 : End of Session Assessment >75%

No	Topic of Integrated Session	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

7. Formative Assessment of Self-Directed Learning

Note:

1. Formative Assessment of SDL sessions involves assessment of student level of learning through assessment of the synopsis and biblliography
2. The student shall submit the same at the end of the session. This can be both in the offline and online modes.
3. The grading of the same shall be done by the faculty team as follows:

Scale

Faculty Decision	Grade
Poor content & presentation	1
Below Average content & presentation	2
Average content & presentation	3
Above Average content & presentation	4
Excellent content & presentation	5

No	Assigned SDL Topic	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

8. Formative Assessment of AETCOM Learning

Note:

1. Formative Assessment of AETCOM sessions involves assessment of student level of learning through DOPS, OSPE sessions
2. The grading of the same shall be done by the faculty team as follows:

   Scale

   1 : End of Session Assessment <35%
   2 : End of Session Assessment 35-50%
   3 : End of Session Assessment 50-60%
   4 : End of Session Assessment 60-75%
   5 : End of Session Assessment >75%

No	Competency The student should be able to	Level (K/KH/SH)	1	2	3	4	5	Initial of Facilitator
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

9. Certification of Skills

Note:

1. certification of skills should be provided to learners at all points of the course so that they are aware of their performance and remedial action can be initiated well in time to achieve the goal of obtaining a certified skill..
2. The feedbacks need to be structured and the faculty and learners must be sensitized to giving and receiving feedback.
2. The results of assessment of COS should be discussed at the end of the assessment and an opportunity provided to the learners to discuss the results and get feedback on making their performance better.
4. The learner should be given a date for remedial session wherein they will be reassessed.
5. A mximum of 5 remedial sessions may be offered beyond which he/she shall not be certified for the current academic session.

Certification of skills :competency no. Basic wound care		
Type of skill		
Type of assessment		
Performance of student		
Feedback of learner		
Feedback of Facilitator		
Certification of skill	Certified/Non certified	
Date of COS		
Signatures	Learner	Facilitator

Certification of skills :competency no. Basic suturing		
Type of skill		
Type of assessment		
Performance of student		
Feedback of learner		
Feedback of Facilitator		
Performance of student		
Certification of skill	Certified/Non certified	
Date of COS		
Signatures	Learner	Facilitator

Certification of skills :competency no. Basic bandaging		
Type of skill		
Type of assessment		
Performance of student		
Feedback of learner		
Feedback of Facilitator		
Performance of student		
Certification of skill	Certified/Non certified	
Date of COS		
Signatures	Learner	Facilitator

Certification of skills :competency no. Incision and drainage of superficial abscess		
Type of skill		
Type of assessment		
Performance of student		
Feedback of learner		
Feedback of Facilitator		
Performance of student		
Certification of skill	Certified/Non certified	
Date of COS		
Signatures	Learner	Facilitator

Certification of skills :competency no. early mangemnet of trauma and life support		
Type of skill		
Type of assessment		
Performance of student		
Feedback of learner		
Feedback of Facilitator		
Performance of student		
Certification of skill	Certified/Non certified	
Date of COS		
Signatures	Learner	Facilitator

11 A. Record of Internal Assessment Tests-Theory

No	Year of assessment	Type of Assessment	Max Mark	Mark Given	% Mark	Initals of FIC
1						
2						
3						
4						
5						
6						
7						
8						

11B. Record of Internal Assessment Tests-Practical

No	Year of Assessment	Type of Assessment	Max Mark	Mark Given	% Mark	Initals of FIC
1						
2						
3						
4						

12. Attendance Record

Details	Attendance Percent		
	Second Professional MBBS	Third Professional MBBS Part I	Third Professional MBBS Part II
Theory			
Practicals			