Undergraduate Assessment Record

Anatomy

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 Anatomy

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 learners 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. The Assessment Record should be retained in the Department until the student completes the course

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Table of Contents

1. University Norms for Assessment of the Course

a. Formative / Internal Assessment

No	Type of Assessment	Methods of Assessment	Total Marks	Min Pass Mark
1	**Theory Component**			
a	Theory Tests (Average of 8 Tests)	MCQ, VSAQ, SAQ, LAQ	40	
b	Formative Assessment	Assignments	10*	
		Integrated Sessions		
		Self-Directed Learning		
	Total		**50**	
2	**Practical Component**			
a	Practical (Average of 4 tests)	PE, OSPE, DOPS, Viva	40	
b	Formative Assessment	Early Clinical Exposure	10*	
		AETCOM Learning		
	Total		**50**	
	Grand Total		**100**	**50**

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 ECE, 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. In 1.b*, Assignments, Integrated sessions and Self-Directed Learning will be assessed independently for 10 Marks each. Their average is computed for 10 marks.
4. In 2.b*, Early Clinical Exposure and AETCOM Learning will be assessed independently for 10 Marks each. Their average is computed for 10 marks.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.

10. 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.
11. Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

b. Summative Assessment - University Examination

University examinations will consist of

1. Theory: 2 papers of 100 marks each. (Total 200 marks)
2. Practical Exam + Viva: 100 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/Dissection Hall. The objective will be to assess proficiency and skills to conduct experiments, interpret data and form logical conclusion. Emphasis should be on candidate's capability to demonstrate skills, write a description, 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 investigative data, X-rays, identification of specimens, etc. is to be also assessed
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

These concepts have been incorporated from the "Competency Based Assessment Module for Undergraduate Medical Education-2019"

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:

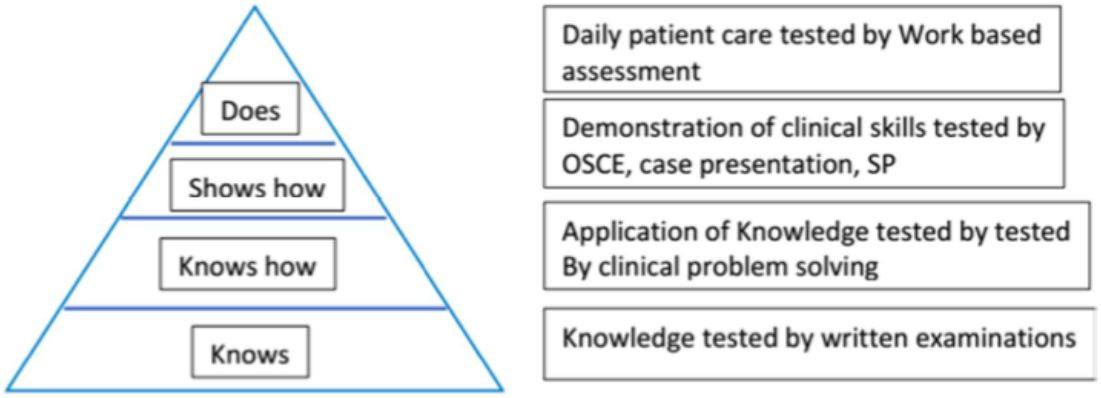

Figure 2. Assessment methods as per levels of competency (Adapted from Ramani) OSCE: Objective Structured Clinical Examination, SP: Standardised/ Simulated Patients

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: practical/clinical tests, Objective Structured Clinical Examination (OSCE)/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.

Assessment of Foundation Course should be included in formative assessment of first phase. Assessment of Early Clinical Exposure should be included in formative as well as in internal assessment in first phase subject-wise. 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 Learning

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 and 2 of 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 Dissection Module / Class: OSPE of 10-12minutes
3. End of Histology Class/Module: Spotting / OSPE

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

Topic	Competency No.	Grading Scale					Initial of Facilitator
		1	2	3	4	5	
Anatomical Terminologies	AN 1.1 and AN 1.2						
General features of bones	AN 2.1 to AN 2.4						
General features of Cartilage	AN 2.5 and AN 2.6						
General features of Muscle	AN 3.1 to AN 3.3						
General features of skin and fascia	AN 4.1 to AN 4.5						
General features of the Cardiovascular system	AN 5.1 to AN 5.8						
General features of lymphatic system	AN 6.1 to AN 6.3						
Introduction to nervous system	AN 7.1 to AN 7.8						
Upper limb bones	AN 8.1 to AN 8.6						
Pectoral region	AN 9.1 to AN 9.3						
Axilla	AN 10.1 to AN 10.7						
Shoulder and scapular region	AN 10.8 to AN 10. 13						
Arm and cubital fossa	AN 11.1 to AN 11.6						
Front of forearm	AN 12.1 and AN 12.2						

Palm	AN 12.3 to AN 12.10						
Back of forearm	AN 12.11 and AN 12.12						
Dorsum of hand	AN 12.13 to AN 12.15						
Dermatomes, Fascia, compartments, veins and lymphatic drainage of upper limb	AN 13.1 and AN 13.2						
Joints of upper limb	AN 13.3 and AN 13.4						
Radiology of upper limb	AN 13.5						
Bony landmarks of upper limb	AN13.6						
Surface marking of upper limb	AN 13.7						
Development of upper limb	AN 13.8						
Bones of lower limb	AN 14.1 to AN 14.4						
Front and medial aspect of thigh	AN 15.1 to AN 15.5						
Gluteal region and back of thigh	AN 16.1 to AN 16.6						
Hip joint	AN 17.1 to AN 17.3						
Anterior compartment of leg and dorsum of foot	AN 18.1 and AN 18.3						
Knee joint	AN 18.4 to AN 18.7						
Back of leg and sole	AN 19.1 to AN 19.7						
Joints of lower limb	AN 20.1 and AN 20.2						
Dermatomes, Fascia lata, venous drainage, lymphatic drainage, Retinacula of lower limb	AN 20.3 to AN 20.5						
Radiology of lower limb	AN 20.6						
Bony landmarks of lower limb	AN 20.7						
Surface marking of lower limb	AN 20.8 and AN 20.9						
Development of lower limb	AN 20.10						
Thoracic cage	AN 21.1 to AN 21. 11						
Pericardium	AN 22.1						

Heart	AN 22.2 to AN 22.7						
Mediastinum	AN 23.1 to AN 23.7						
Lungs and Trachea	AN 24.1 to AN 24.6						
Development of pleura, lung & heart	AN25.2						
Foetal circulation and changes occurring at birth	AN25.3						
Embryological basis of: 1) atrial septal defect, 2) ventricular septal defect, 3) Fallot's tetralogy & 4) tracheo-oesophageal fistula	AN25.4						
Developmental basis of congenital anomalies, transposition of great vessels, dextrocardia, patent ductus arteriosus and coarctation of aorta	AN25.5						
Development of aortic arch arteries, SVC, IVC and coronary sinus	AN25.6						
Radiology of thorax	AN 25.7 and AN 25.8						
Surface marking of thorax	AN 25.9						
Skull osteology	AN 26.1 to AN 26.7						
Scalp	AN 27.1 and AN 27.2						
Face and parotid region	AN 28.1 to AN 28.10						
Posterior triangle of neck	AN 29.1 to AN 29.4						
Cranial cavity	AN 30.1 to AN 30.5						
Orbit	AN 31.1 to AN 31.5						
Anterior triangle	AN 32.1 and AN 32.2						
Temporal and infratemporal region	AN 33.1 to AN 33.5						
Submandibular region	AN 34.1 and AN 34.2						
Deep structures of neck	AN 35.1 to AN 35.10						
Mouth, Pharynx and palate	AN 36.1 to AN 36.5						
Cavity of nose	AN 37.1 to AN 37.3						

Larynx	AN 38.1 to AN 38.3						
Tongue	AN 39.1 and AN 39.2						
Organs of hearing and equilibrium	AN 40.1 to AN 40.5						
Eyeball	AN 41.1 to AN 41.3						
Back of neck	AN 42.1 to AN 42.3						
Joints of head and neck	AN 43.1						
Development and developmental basis of congenital anomalies of face, palate, tongue, branchial apparatus, pituitary gland, thyroid gland & eye	AN 43.4						
Surface marking of head and neck	AN 43.5 and AN 43.6						
Radiology of head and neck	AN 43.7 to AN 43.9						
Anterior abdominal wall	AN 44.1 to AN 44.7						
Posterior abdominal wall and nerve plexuses	AN 45.1 to AN 45.3 and AN 47.12						
Male external genitalia	AN 46.1 to AN 46.5						
Abdominal cavity	AN 47.1 to 47.4						
Describe & demonstrate stomach under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects), Anatomical basis of lymphatic spread in carcinoma of stomach. Different types of Vagatomy	AN 47.5 and AN 47.6						
Describe & demonstrate spleen under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects). Anatomical basis of splenic notch, Accessory spleen	AN 47.5 and AN 47.6						

Describe & demonstrate duodenum under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects)	AN 47.5 and AN 47.6						
Describe & demonstrate pancreas under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects)	AN 47.5 and AN 47.6						
Describe & demonstrate liver under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects) Anatomical basis of liver biopsy	AN 47.5 and AN 47.6						
Describe & demonstrate Extra hepatic biliary apparatus under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects). Anatomical basis of cholecystitis, obstructive jaundice, clinical importance of Calot's triangle	AN 47.5 to AN 47.7						
Describe & demonstrate small and large intestine and appendix under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects) Anatomical basis of radiating pain around umbilicus	AN 47.5 and AN 47.6						

Describe & demonstrate kidney under following headings (anatomical position, external and internal features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and applied aspects). Anatomical basis of radiating pain of kidney to umbilicus	AN 47.5 and AN 47.6						
Portal vein, Inferior vena cava and renal vein	AN 47.8, AN 47.10 and AN 47.11						
Abdominal Aorta and its branches	AN 47.9						
Thoracoabdominal diaphragm	AN 47.13 and AN 47.14						
Pelvic wall – muscles of pelvic diaphragm, blood vessels and sacral plexus	AN 48.1, AN 48.3 and AN 48.4						
Describe & demonstrate the position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of urinary bladder	AN 48.2, AN 48.5 and AN 48.6						
Describe & demonstrate the position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of prostate	AN 48.2, AN 48.5, AN 48.7 and AN 48.8						
Describe & demonstrate the position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of uterus	AN 48.2, AN 48.5 and AN 48.8						
Describe & demonstrate the position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of rectum	AN 48.2, 48.5 and AN 48.8						
Describe & demonstrate the position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of anal canal	AN 48.2, 48.5 and AN 48.8						
Perineum	AN 49.1 to AN 49.5						

Vertebral column	AN 50.1 to AN 50.4						
Sectional Anatomy of Abdomen and pelvis	AN 51.1 and AN 51.2						
Development of anterior abdominal wall	AN 52.4						
Development and congenital anomalies of Diaphragm	AN 52.5						
Development and congenital anomalies of: Foregut, Midgut & Hindgut	AN 52.6						
Development of Urinary system	AN 52.7						
Development of male & female reproductive system	AN 52.8						
Lumbar vertebrae, sacrum, bony pelvis and coccyx	AN 53.1 to AN 53.4						
Radiology of abdomen and pelvis	AN 54.1 to AN 54.3						
Surface marking of abdomen and pelvis	AN 55.1 and AN 55.2						
Meninges and CSF	AN 56.1 and AN 56.2						
Spinal cord	AN 57.1 to AN 57.5						
Medulla oblongata	AN 58.1 to AN 58.4						
Pons	AN 59.1 to AN 59.3						
Cerebellum	AN 60.1 to AN 60.3						
Midbrain	AN 61.1 to AN 61.3						
Cranial nerve nuclei with its functional component	AN 62.1						
Cerebrum – surfaces, sulci, gyri, poles and functional areas	AN 62.2						
White matter of cerebrum	AN 62.3						
Basal ganglion and limbic lobe	AN 62.4						
Diencephalon	AN 62.5						
Circle of Willis	AN 62.6						
Ventricular system	AN 63.1 and AN 63.2						
Development of Neural tube, spinal, medulla oblongata, pons, midbrain, cerebral hemisphere and cerebellum	AN 64.2 and AN 64.3						
Chromosomes	AN 73.1 to AN73.3						
Patterns of Inheritance	AN 74.1 to AN 74.4						
Principle of Genetics, Chromosomal Aberrations & Clinical Genetics	AN 75.1 to AN 75.5						

Introduction to embryology	AN 76.1 and AN 76.2						
Gametogenesis and fertilisation	AN 77.1 to AN 77.6						
Second week development	AN 78.1 to AN 78.5						
3rd to 8th week of development	AN 79.1 to 79.6						
Foetal membranes	AN 80.1 to 80.7						
Prenatal diagnosis	AN 81.1 to AN 81.3						
Ethics in Anatomy	AN 82.1						

COMPETENCIES FOR GENERAL HISTOLOGY

TOPIC	COMPETENCY NUMBER	GRADES					INITIALS OF FACILITATOR
		1	2	3	4	5	
Epithelium	AN65.1						
Connective tissue	AN66.1						
Skeletal muscle	AN67.1						
Cardiac muscle	AN67.1						
Smooth muscle	AN67.1						
Autonomic ganglia	AN68.1						
Spinal ganglia	AN68.1						
Peripheral nerve	AN68.1						
Elastic artery	AN69.1						
Muscular artery	AN69.1						
Large vein	AN69.1						
Serous acini	AN70.1						
Mucous acini	AN70.1						
Mixed acini	AN70.1						
Lymph node	AN70.2						
Spleen	AN70.2						
Thymus	AN70.2						
Tonsil	AN70.2						
Bone	AN71.1						
Hyaline cartilage	AN71.2						
Elastic cartilage	AN71.2						
Fibrocartilage	AN71.2						
Skin	AN72.1						

COMPETENCIES FOR SYSTEMIC HISTOLOGY

TOPIC	COMPETENCY NUMBER	GRADES					INITIALS OF FACILITATOR
		1	2	3	4	5	
Stomach – Pylorus	AN52.1						
Duodenum	AN52.1						
Jejunum	AN52.1						
Ileum	AN52.1						
Large intestine	AN52.1						
Appendix	AN52.1						
Liver	AN52.1						
Gall bladder	AN52.1						
Pancreas	AN52.1						
Kidney	AN52.2						
Ureter	AN52.2						
Urinary bladder	AN52.2						
Testis	AN52.2						
Epididymis	AN52.2						
Vas deferens	AN52.2						
Prostate	AN52.2						
Penis	AN52.2						
Ovary	AN52.2						
uterus	AN52.2						
Uterine tube	AN52.2						
Cervix	AN52.2						
Placenta	AN52.2						
Mammary gland	AN9.2						
Umbilical cord	AN52.2						
Tongue-Cirumvallate papillae	AN43.2						
Tongue- Filiform papillae	AN43.2						
Tongue – foliate papillae	AN43.2						
Tongue-Fungiform papillae	AN43.2						
Serous salivary gland	AN43.2						

Mucous salivary gland	AN43.2						
Mixed salivary gland	AN43.2						
Trachea	AN25.1						
Lung	AN25.1						
Pineal gland	AN43.3						
Pituitary gland	AN43.2						
Thyroid gland	AN43.2						
Parathyroid gland	AN43.2						
Suprarenal gland	AN43.2						
Cornea	AN43.2						
Retina	AN43.2						
Spinal cord -cervical	AN64.1						
Spinal cord -Thoracic	AN64.1						
Spinal cord- lumbar	AN64.1						
Spinal cord -Sacral	AN64.1						
Medulla oblongata-pyramidal decussation	AN58.2						
Medulla oblongata-Sensory decussation	AN58.2						
Medulla oblongata-Mid -olivary level	AN58.2						
Pons-lower part	AN59.2						
Pons-upper part	AN59.2						
Mid brain-inferior colliculi	AN61.2						
Mid brain-Superior colliculi	AN61.2						
Cerebrum	AN64.1						
Cerebellum	AN64.1						

5. Formative Assessment of Assignments

Note:

1. Formative Assessment involves various methods of which out of class assignments are an important instrument.
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.

No	Title of Assignment	Marks	Initial of Facilitator
1			
2			
3			
4			
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9			
10			
11			
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20			

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,

No	Topic of Integrated Session	Marks	Initial of Facilitator
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

7. Formative Assessment of Early Clinical Exposure

Note:

1. Formative Assessment of ECE sessions involves assessment of student level of learning through assessment of the synopsis and reflection
2. The student shall submit the same at the end of the session. This can be both in the offline and online modes.

No	Assigned ECE session	Marks	Initial of Facilitator
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

8. 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.

No	Assigned SDL Topic	Marks	Initial of Facilitator
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

9. Formative Assessment of AETCOM Learning

Note:

1. Formative Assessment of AETCOM sessions involves assessment of student level of learning through DOPS, OSPE sessions

No	Assigned AETCOM Topic	Marks	Initial of Facilitator
1			
2			
3			
4			
5			
6			
7			
8			

10. Formative Feedback Record

Note:

1. 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.
2. The feedbacks need to be structured and the faculty and learners must be sensitized to giving and receiving feedback.
3. 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.
4. The learner should sign with date whenever they are shown IA records in token of having seen and discussed the marks.
5. The learner Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination
6. Some suggestions for handling the Feedback process
    a. Start with the learner's agenda for the session
    b. Evaluate the performance of the learner in the previous sessions and outcomes the learner is trying to achieve
    c. Enquire about problems faced by the learner in the process of learning in the classroom, at home and during the assessments.
    d. Encourage the learner to think about goal setting
    e. Encourage self-assessment and self-solving problems
    f. Offer space for the learner to make suggestions, to generate solutions
    g. Be non-judgmental and specific, prevent vague generalisation, provide balanced feedback
    h. Offers suggestions and alternatives, make suggestions rather than prescriptive comments. Be valuing and supportive
    i. Structure and summarise the session to ensure that learner has some specifics to take home.

Formative Feedback Session	1
Date	

Type of Assessment	
Topic of Assessment	

Feed Back received from Student
Feed Back given to the Student
Remedial Action Suggested

Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session	2
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session	3
Date	

Type of Assessment	
Topic of Assessment	

Feed Back received from Student
Feed Back given to the Student
Remedial Action Suggested

Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			4
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			5
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			6
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			7
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			8
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			9
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			10
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			11
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			12
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			13
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			14
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			15
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			16
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			17
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			18
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			19
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			20
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

Formative Feedback Session			21
Date			
Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		Signature of Student	

11. Certification of Skills

Note:

1. Certification of Skills (COS) 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 for the student 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.
3. The results of assessment for 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 maximum of 5 remedial sessions may be offered beyond which he shall not be certified for the current academic session. The university and MCI regulations will be mandatory.
6. Example:

AN25.1	Identify, draw and label a slide of trachea and lung

Type of Skill	AN 25.1A: Identify, draw and label a slide of Trachea AN 25.1B: Identify, draw and label a slide of Lung	
Type of Assessment	A1: OSPE: Identify the histology slide (Trachea) placed in the microscope. A2: DOPS: Draw and label the histology of Trachea B1: OSPE: Identify the histology slide (Lung) placed in the microscope. B2: DOPS: Draw and label the histology of Lung	
Performance of Student	A1: OSPE: Fails to identify A2: DOPS: Wrong drawing B1: OSPE: Fails to identify B2: DOPS: Wrong drawing	
Feed Back of Learner	The learner "Mr.AXR" stated that the day these slides were given in the lab he was having fever and did not attend the class	
Feed Back of Facilitator	Facilitator reassures the learner. "Mr.AXR" is adviced to view the slide again. The facilitator explains the key points to identify the histology of both lung and trachea and the structures to be labelled. The learner is shown a line drawing of the structure in H&E and asked to draw the same at home and submit the same next working day.	
Remedial Action Suggested	"Mr.AXR" is adviced to repeat the assessments 10days later	
Remedial Assessment	1	A1: OSPE: Identify the structures in histology slide (Trachea) placed in the microscope. A2: DOPS: Draw and Label the histology of Trachea B1: OSPE: Identify the structures in histology slide (Lung) placed in the microscope. B2: DOPS: Draw and Label the histology of Lung
Performance of Student	A1: OSPE: Identifies correctly A2: DOPS: Correct drawing B1: OSPE: Identifies correctly B2: DOPS: Correct drawing	
Certification of Skill	Certified that the learner has successfully completed the certification of the Skill for competency AN 25.1	
Date of COS	25.3.2019	
Signatures		
	Learner	Facilitator

Certification of Skills - Competency AN:			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

Certification of Skills - Competency AN:.....			
Type of Skill			
Type of Assessment			
Performance of Student			
Feed Back of Learner			
Feed Back of Facilitator			
Remedial Action Suggested			
Remedial Assessment	1	**Date**	
Performance of Student			
Remedial Assessment	2	**Date**	
Performance of Student			
Remedial Assessment	3	**Date**	
Performance of Student			
Remedial Assessment	4	**Date**	
Performance of Student			
Remedial Assessment	5	**Date**	
Performance of Student			
Certification of Skill	Certified / Not Certified		
Date of COS			
Signatures			
	Learner	Facilitator	

12A. Record of Internal Assessment Tests-Theory

No	Topic of Assessment	Type of Assessment	Max Mark	Mark Given	% Mark	Initials of FIC

12B. Record of Internal Assessment Tests-Practical

No	Topic of Assessment	Type of Assessment	Max Mark	Mark Given	% Mark	Initials of FIC

13. ATTENDANCE RECORD

Details	**Percent of Attendance**
Foundation Course (Common for all 3 departments)	
Theory	
Practicals	
Early Clinical Exposure	
Self Directed learning	
AETCOM	